BIOMÉRIEUX

2019 UNIVERSAL REGISTRATION DOCUMENT

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AFR

2019
UNIVERSAL REGISTRATION DOCUMENT

including the annual financial report

(hereafter called URD)

BIOMÉRIEUX

French joint stock company (société anonyme) with share capital of €12,029,370
Registered office: Marcy l'Etoile (69280)
Registered in Lyon, France under number 673 620 399

Code ISIN: FR0013280286
N° LEI: 549300AK8Y0LBIQ4T071

AUTORITÉ DES MARCHÉS FINANCIERS
AMF

The French language version of the Universal Registration Document was filed on March 20,2020 with the AMF, as competent authority under Regulation (EU) 2017/1129, without prior approval pursuant to Article 9 of the said regulation. The Universal Registration Document may be used for the purposes of an offer to the public of securities or admission of securities to trading on a regulated market if completed by a securities note and, if applicable, a summary and any amendments to the Universal Registration Document.
The whole is approved by the AMF in accordance with Regulation (EU) 2017/1129.

A FAMILY COMMITMENT TO THE FIGHT AGAINST INFECTIOUS DISEASES

bioMérieux is first and foremost a human and scientific adventure that began more than 55 years ago. Its expertise and its commitment to expand the frontiers of knowledge in biology are grounded in an entrepreneurial adventure that has been ongoing for more than one century.

In 1897, Marcel Mérieux, who had studied with Louis Pasteur, founded a laboratory in Lyon where he developed the first anti-tetanus sera.
This first Institut Mérieux laid the foundations for a bio-industrial structure that was to leave its mark on vaccinology then the diagnosis of infectious diseases on a global scale.

bioMérieux, whose registered office is located in Marcy l'Etoile, France, was created in 1963 by Alain Mérieux and today employs around 12,000 people.
bioMérieux is present in 44 countries and serves more than 160 countries with the support of a large network of distributors. It generates over 90% of its revenue internationally.

Since 2014, Alexandre Mérieux, the great-grandson of Marcel, has taken over the helm of the family company as Chief Executive Officer. In December 2017, he was appointed Chairman and Chief Executive Officer by the Board of Directors.

An Institut Mérieux Company

bioMérieux is 59% owned by Institut Mérieux. Within the scope of a global, long-term vision, Institut Mérieux contributes its experience in industrial biology to improving medicine and public health across the globe.

To fight against infectious diseases and cancers, it designs and develops new approaches in the fields of diagnostics, immunotherapy, food safety, and nutrition.

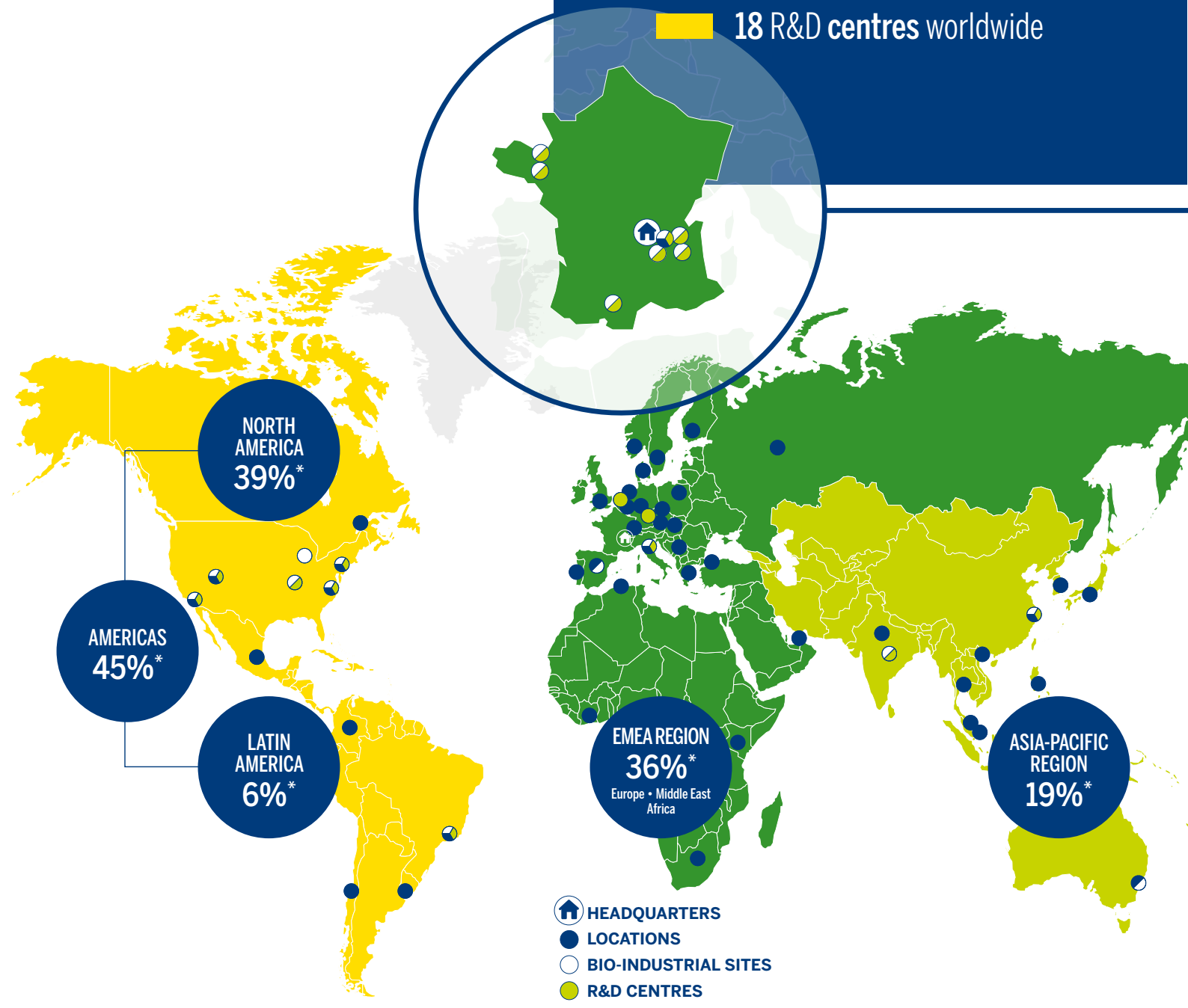
Its three bio-industrial companies, bioMérieux, Transgene and Mérieux NutriSciences, working closely with its entities devoted to innovation, including Mérieux Développement and ABL Inc., have contributed to major advances in medicine and public health.

Institut Mérieux employs over 20,000 people worldwide.

It is present in over 44 countries.

A global player in the field of *in vitro* diagnostics

- **≈ 12,000** employees
- **Present in 44 countries**
- **Serves more than 160 countries** *via* a large distributor network
- **18** bio-industrial **sites**
- **18** R&D **centres** worldwide



* Percentage of bioMérieux 2019 total sales.

THE IMPORTANCE OF DIAGNOSTICS

DIAGNOSTICS ARE A FUNDAMENTAL SOURCE OF MEDICAL, ECONOMIC AND SOCIAL VALUE.

They are an essential link in the healthcare chain. Between 60% and 70% of healthcare decisions are based on diagnostic test results*.

bioMérieux, a major player for *in vitro* diagnostics and world leader in clinical microbiology and industrial microbiological control, contributes to the quality of patient care and the protection of consumer health.

bioMérieux develops and produces *in vitro* diagnostic solutions (systems, reagents, software and services) for private and hospital laboratories, primarily for the diagnosis of infectious diseases. The results obtained with samples taken from the patient (blood, urine, stool, cerebrospinal fluid, saliva, etc.) provide clinicians with information to help in medical decision-making.

For more than 25 years, bioMérieux has also been putting its expertise in clinical applications to the service of industrial microbiological control, helping manage the risks of contamination of food products, pharmaceuticals or cosmetics throughout the production chain.

* The Lewin Group: "The value of diagnostics, innovation, adoption and diffusion into health care", 2005. This figure concerns all diagnostic tools: *in vitro* diagnosis tests and medical imaging examinations.

A history of mergers and acquisitions

An original innovation model based on partnerships with international research and joint research laboratories: a multidisciplinary approach to develop the diagnostic solutions of tomorrow.

1986
API Systems, France

1988
VITEK (McDonnel Douglas), United States

2001
Organon Teknika, Netherlands

2004
Initial public offering
Bacterial Barcodes, United States

2007
Biomedics, Spain
BTF, Australia

2010
Meikang Biotech, China
Shanghai Zenka Biotechnology, China

API® | **VITEK®** | **VIDAS®** | **BACT/ALERT®** | **ETEST®**




FOR IMPROVED PATIENT CARE

Diagnostic tests have a major influence on the quality of patient care, as well as on early diagnosis:

- For diagnosis and prognosis, particularly in the case of infectious diseases, in order to identify the causative pathogen and the antimicrobial resistance profile.
- For therapeutic decisions and treatment monitoring.
- For screening in the context of the prevention of certain diseases.
- For early diagnosis, that is, at the early stages of a disease when symptoms are still very mild.

A MAJOR ASSET FOR HEALTHCARE SYSTEMS

Spending on medical biology represents only between 2% and 3% of healthcare expenditure*. This cost is limited when weighed against the medical value of diagnostics and the savings it can generate – both by reducing over-prescription of treatments and by shortening the onset of care and the length of hospital stays.

Diagnostics is also a valuable instrument of healthcare policy, in particular for epidemiological monitoring and control.

MICROBIOLOGY APPLICATIONS IN INDUSTRIAL PRODUCTION

Microbiological control tests make it possible to meet the quality demands of the agri-food, pharmaceutical and cosmetic industries. Performed along the entire production chain and for the environmental control of production zones, such tests ensure product sterility, the absence of disease-causing bacteria and the enumeration of bacterial flora that indicate the quality of food products.

VETERINARY APPLICATIONS: A CONTINUUM FROM ANIMALS TO HUMANS

The "One Health" concept, an integrated approach advocated by international organisations, is based on the principle of the continuum between animals and humans when it comes to the transmission of infectious agents and antimicrobial resistance. Since 2011, bioMérieux has provided its microbiology expertise to professionals of animal health, in particular to make progress in the fight against antimicrobial resistance, animal diseases and emerging zoonoses.

* French Directorate of Research, Studies, Evaluation and Statistics (DREES) and Court of Auditors, 2011.

2011 **AES,** France **ARGENE,** France

2012 **RAS,** India

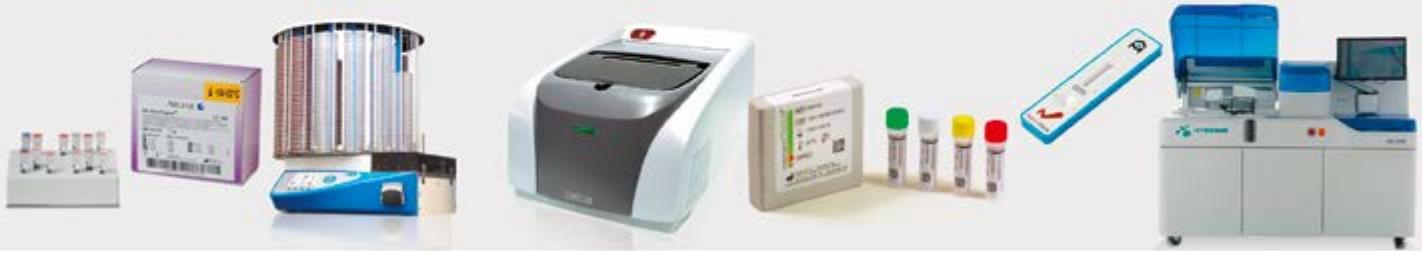
2014 **BioFire,** United States **Ceeram, Advencis,** France

2016 **Applied Maths,** Belgium **Hyglos,** Germany

2018 **Astute Medical,** United States **Hybiome,** China

2019 **Invisible Sentinel,** United States

CHEMUNEX® **AES BLUE LINE™** **FILMARRAY®** **CEERAM®** **NEPHROCHECK®** **HYBIOME AE-240**



SOLUTIONS FOR HEALTH PROFESSIONALS AND INDUSTRIAL PLAYERS

bioMérieux's research teams are engaged throughout the world in the development of diagnostic applications with high medical value in order to meet challenges to public health and respond to the needs of laboratories.

THREE KEY *IN VITRO* DIAGNOSIS TECHNOLOGIES:

Microbiology

Microbiology is based on culturing biological samples, identifying microorganisms and measuring their resistance to antibiotics.

Immunoassays

Immunoassays use an immunological reaction to identify or quantify the presence of antigens and/or antibodies in a sample.

Molecular biology

Molecular biology is based on the detection of the DNA or RNA genetic sequences that characterise a disease agent in order to detect bacteria, viruses, yeast and parasites.

ANTIMICROBIAL RESISTANCE
A global health emergency

Every 45 seconds, a person dies from an infection caused by bacteria that have become resistant to antibiotics*.
Diagnostic tests contribute to reducing the improper use of antibiotics and help ensure they remain effective for the treatment of bacterial infections in humans and in animals.

Taking a global health approach, the Company develops innovative solutions for clinical diagnostics, industrial microbiological control – particularly in the agri-food sector, environmental monitoring, and veterinary diagnostics.
bioMérieux's offering is the most comprehensive on the market, providing solutions for microbial identification and resistance detection to help clinicians with their therapeutic decisions.

* Based on the 700,000 deaths caused annually by antimicrobial resistance according to "Antimicrobial Resistance: Tackling a crisis for the health and wealth of nations", Jim O'Neill, December 2014.

THE FIGHT AGAINST SEPSIS
Early detection, the first line of defence

Sepsis affects around 27 million people each year. Establishing a diagnosis as quickly as possible is crucial for patients. The rate of survival is 60% when they receive the right treatment two hours after being accepted for treatment. It drops to 30% if it is given four hours later*.

bioMérieux has the most comprehensive offering on the market for the diagnosis of sepsis, based both on the host response and on the detection, identification and characterisation of the pathogen responsible for the infection.

* Kumar *et al.*, Crit Care Med 2006, vol. 34:p. 1589-1596.

MULTIPLE TARGETS WITH A SINGLE TEST
Syndromic panels to combat infectious diseases

For most patients with an infectious disease, the first symptoms are not specific to the cause of infection: fever, diarrhoea, coughing, headache, etc. The syndromic approach, based on using the BIOFIRE® FILMARRAY® multiplex molecular biology system, is especially valuable for this reason.

In about one hour, the BIOFIRE® FILMARRAY® panels allow the simultaneous detection, in a single test and from a single sample, of bacteria, viruses, fungi or parasites that can cause an infectious disease.

PROVIDING CARE IN EMERGENCY SITUATIONS
Improved patient management

In emergency rooms, healthcare professionals need to initiate patient care as quickly and efficiently as possible. Tests with high medical value for the diagnosis of bacterial infections and severe sepsis, myocardial infarction and pulmonary embolism provide rapid results to clinicians and contribute to improving patient care.

THE EFFICIENCY OF MICROBIOLOGY LABS
The most complete offering on the market

Automation is extremely important for microbiology laboratories because it allows them to optimise workflows, standardise analyses, ensure traceability and speed up time to results. Arising from a strategic partnership that brings together Copan's unique expertise in automation and the pre-analytical field, and bioMérieux's leadership in microbiological diagnosis, this offering allows all steps of microbiological analysis to be automated and standardised. It complements bioMérieux's range of automated products for blood cultures, bacterial identification and antibiotic susceptibility testing.

PROTECTION OF CONSUMER HEALTH
Microbiological control for industrial customers

Putting its expertise in clinical microbiology at the service of industrial production channels, bioMérieux offers a wide range of solutions for industrial microbiological control, ranging from sample preparation to the identification of disease-causing organisms.

MANAGING THE RISK OF EPIDEMICS DUE TO EMERGING PATHOGENS
Adapting our response to meet the needs of affected countries

True to its public health mission, bioMérieux responds to health emergencies caused by emerging and re-emerging pathogens, such as the epidemic of Ebola virus disease in West Africa in 2014, and the outbreak of bubonic plague in Madagascar in 2017. In this context, the Company conducts studies to assess new rapid, automated molecular diagnostic tests. bioMérieux also develops further its *in vitro* diagnostic tests in response to emergency situations when new viruses appear, such as MERS-CoV or SARS-CoV-2, the cause of the COVID-19 pandemic.

PIONEERING DIAGNOSTICS

TO ADDRESS PUBLIC HEALTH CHALLENGES

ANTIMICROBIAL RESISTANCE
SEPSIS
EMERGING PATHOGENS
PROTECTING CONSUMER HEALTH

HUMAN
- 12,000 employees
- 44 countries
- Diversity and multiculturalism

FINANCIAL
- Stable family shareholder structure
- Mutual trust with financial partners (investors and banks)
- Solid cash flow generation

IN INNOVATION
- 14% of sales
- 1,800 employees
- 18 sites

INDUSTRIAL
- 18 bio-industrial sites
- < 4,000 employees
- < 12,000 suppliers
- Policy of sustained investments

ENVIRONMENTAL
- Careful, responsible consumption of natural resources and primary raw materials
- 658,000 m^3 water
- 225 GWh energy, including 14% renewable energy
- 68 kt CO_2e

CORPORATE CULTURE
- Humanist corporate commitment
- Quality social dialogue
- Global Code of Conduct
- Ties to local stakeholders

OUR RESOURCES

CLINICIANS

BIOLOGISTS • HOSPITALS LABORATORIES

HEALTH OF PATIENTS AND CONSUMERS

1894 - Marcel Mérieux studies with Louis Pasteur

1897 - Marcel Mérieux founds the Institut Mérieux

1937 - Dr Charles Mérieux take up the reins

PHARMA INDUSTRY
BIOTECH • COSMETICS

AGRI-FOOD
INDUSTRY

OUR VALUE CREATION

SUPPORT THE SUCCESS AND COMMITMENT OF OUR WORKFORCE

- 21 hours of training per employee
- Access to training rate: 89%
- 7.3% internal mobility
- Employee share ownership plan

ACHIEVE RESULTS THAT GUARANTEE OUR INDEPENDENCE

- Increase in sales: +8% CAGR 2016-2019
- Net income: +15% CAGR 2016-2019
- Free cash flow: €150 million in 2019
- Dividends: +14% (2016-2019)

STRENGTHEN THE MEDICAL AND ECONOMIC VALUE OF DIAGNOSTICS

- Open innovation (joint research laboratories, public/private partnerships)
- Product quality and product safety
- Medical-economic studies: the positive impact of diagnostics on health systems

SUSTAIN AND DEVELOP OUR INDUSTRIAL ACTIVITY

- Local purchasing policies
- 9 sites certified OHSAS 18001 / ISO 45001
- Extensive industrial know-how
- Responsible purchasing commitment to our suppliers

REDUCE OUR ENVIRONMENTAL FOOTPRINT

- 9 sites certified ISO 14001
- 2020 targets exceeded with 20% reduction in energy & water consumption and greenhouse gas emissions
- Product eco-design approach

COMMITTED TO PEOPLE AND LOCAL COMMUNITIES

- 70 agreements in 5 years with labour unions in France
- Code of Conduct training for all employees
- Responsible tax policy consistent with local business activity
- bioMérieux employee involvement in local communities
- 3.5‰ of sales allocated to philanthropy, including the Mérieux Foundation and Fondation Christophe et Rodolphe Mérieux

1963 - Alain Mérieux founds bioMérieux

2015 - Alexandre Mérieux becomes CEO and then Chairman and CEO in 2017

4 GENERATIONS DEDICATED TO PUBLIC HEALTH

A FAMILY COMPANY WITH A LONG TERM VISION

A HUMANISTIC CORPORATE OUTLOOK

The commitment to improve global public health by fighting against infectious diseases brings with it a unique responsibility, upheld by all the Institut Mérieux companies. As an extension of its public health mission, bioMérieux has always been mindful of the importance of its social responsibility.

OUR EMPLOYEES: OUR PRIORITY

bioMérieux's employees are the prime architects of the Company's success. bioMérieux places great importance on ensuring that their working environment fosters their career development while respecting the balance between their professional and personal lives. Each employee is also expected to behave ethically and with integrity within the Company and in relations with external partners.

bioMérieux believes in its human capital and promotes internal mobility within the Company. With an eye on the future, the Company is engaged in responding both to the changes in the profession over the short term and to requirements relating to its long-term development.

MÉRIEUX UNIVERSITÉ

A POWERFUL TRAINING LEVER

Mérieux University was created in 2012 to support the professional development of Institut Mérieux company employees, encourage innovation, promote the expression of talent and contribute to employee engagement.

It deploys its training product in France, China, the United States and Brazil, ensures the transmission of a strong, clear entrepreneurial culture and helps build bridges within the Group.

FONDATION MÉRIEUX

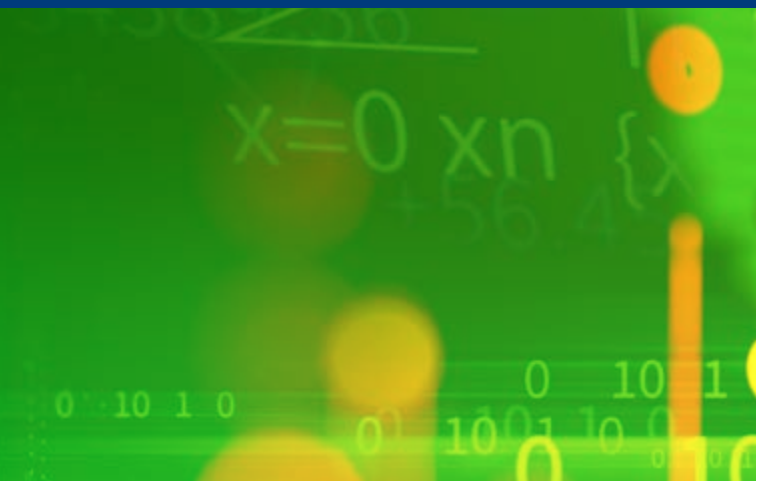
FONDATION
CHRISTOPHE & RODOLPHE MÉRIEUX
SOUS L'ÉGIDE DE L'INSTITUT DE FRANCE

FIGHTING INFECTIOUS DISEASES THROUGH FOUNDATIONS

As part of its sponsorship activities, bioMérieux supports the actions of the Fondation Mérieux and the Fondation Christophe and Rodolphe Mérieux.

Thanks to the commitment of bioMérieux and other partners, these two independent family foundations fight against infectious diseases that affect developing countries by increasing their diagnostic capacities.

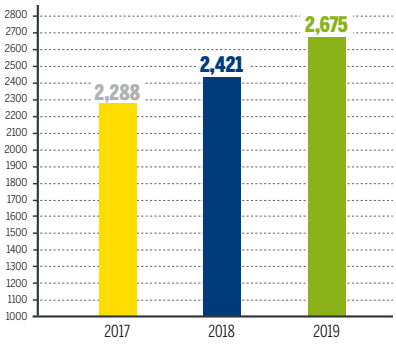
2019 KEY FIGURES



SALES

(in millions of euros)

In 2019, sales amounted to €2,675 million versus €2,421 million in 2018, an increase of 7.2% at constant exchange rates and scope of consolidation.

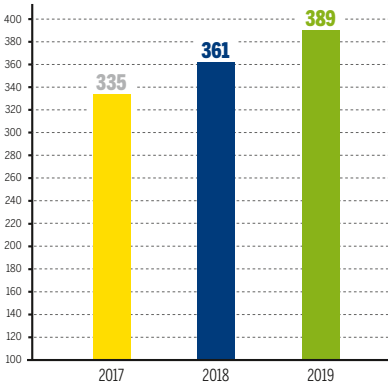


CONTRIBUTIVE OPERATING INCOME BEFORE NON-RECURRING ITEMS*

(in millions of euros)

Contributive operating income reached €389 million, representing 14.5% of sales.

It increased by nearly 7% compared to 2018, in line with annual targets.

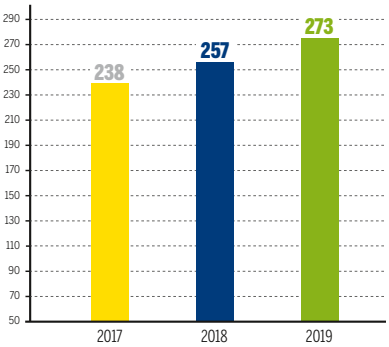


* Contributive operating income before non-recurring items corresponds to operating income before non-recurring BioFire acquisition and integration costs and before accounting entries relating to the company's purchase price allocation.

NET INCOME ATTRIBUTABLE TO THE PARENT COMPANY

(in millions of euros)

Net income amounted to €273 million, up by 6.2% compared to 2018, representing 10.2% of sales.

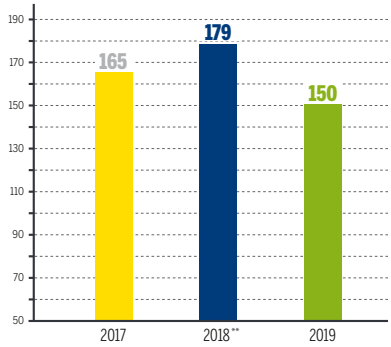


FREE CASH FLOW*

(in millions of euros)

Free cash flow came to €150 million in 2019, compared to around €179 million in 2018.

This drop may be explained by an increase in investments, both in industrial capacity and the installed instrument base for customers. In addition, working capital requirements increased due to a rise in inventories.



* Cash Flow before acquisitions of companies, divested operations, share buyback programs and dividends.
** Comparative data for 2018 have been restated to reflect the application of the IFRS 9 standard.

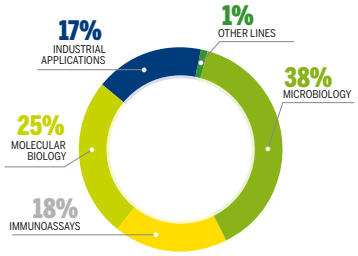
BREAKDOWN OF SALES

by application

Approximately 60% of sales were generated in clinical and industrial microbiology, two areas where bioMérieux is the world leader.

In 2019, sales growth in molecular biology continued to be driven by the success of the BIOFIRE® FILMARRAY® line (+20%).

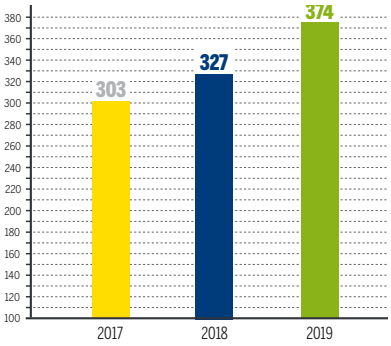
Supported by the commercial strength of the VITEK® and BACT/ALERT® lines, microbiology represented 38% of revenue, a rise of more than 5%.



R&D EXPENSES

(in millions of euros)

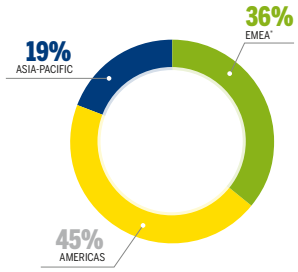
The Group invested €374 million in R&D expenses, representing 14% of sales, as part of an ongoing drive to foster innovation. This increase of around 9% at constant exchange rates and scope of consolidation reflects the faster pace of development in microbiology and the intensification of activity to support the BIOFIRE® FILMARRAY® line.



BREAKDOWN OF SALES

by geographical region

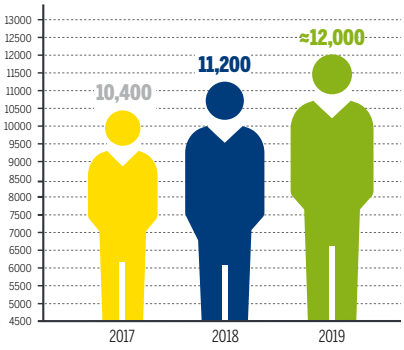
The Group's growth was chiefly driven by strong sales in the Asia-Pacific region, as well as microbiology and molecular biology lines, in particular BIOFIRE®



* Europe, Middle East, Africa.

WORKFORCE AS AT DECEMBER 31*

Changes in the workforce in 2019 mainly reflect the strengthening of BioFire Diagnostics' industrial and commercial teams to support the growth of the BIOFIRE® FILMARRAY® line, as well as the acquisition of Hybiome in Asia Pacific and Invisible Sentinel in the United States.

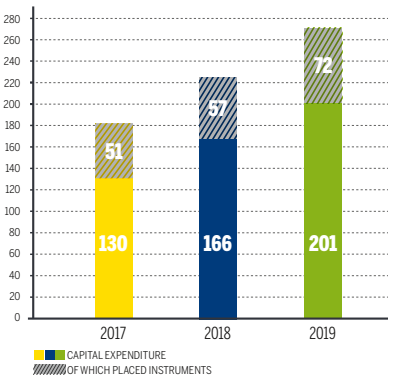


* Full-time equivalent.

CAPEX

(in millions of euros)

Capital expenditure outlays for the year represented €273 million, the result of the industrial investment strategy primarily intended to boost BIOFIRE® production capacity in Salt Lake City. The total capital expenditures for the year represented around 10% of sales.

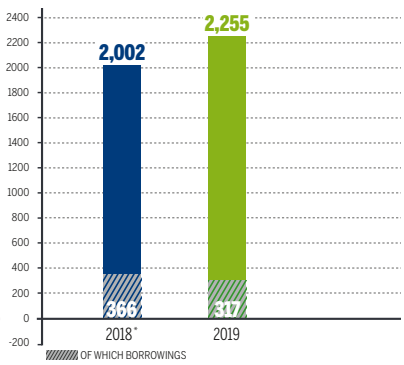


CHANGES IN THE FINANCIAL POSITION

(in millions of euros)

Net debt stood at €317 million at the end of the year, representing only 14% of equity.

This leaves a high degree of flexibility to promote the Group's strategic ambitions.



* Comparative data for 2018 have been restated to reflect the application of the IFRS 9 standard.


BIOMÉRIEUX

1

BIOMÉRIEUX, PIONEERING DIAGNOSTICS TO SERVE PUBLIC HEALTH

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1.1 History and development of bioMérieux

1.1.1 bioMérieux and the Institut Mérieux

bioMérieux's commitment to public health and its expertise in biology are rooted in its unique history of the Mérieux family. In 1897, Marcel Mérieux, a student of Louis Pasteur, founded a medical analysis laboratory in Lyon, which became the Institut Mérieux. It was the beginning of an extraordinary adventure in the fields of biology and industry.

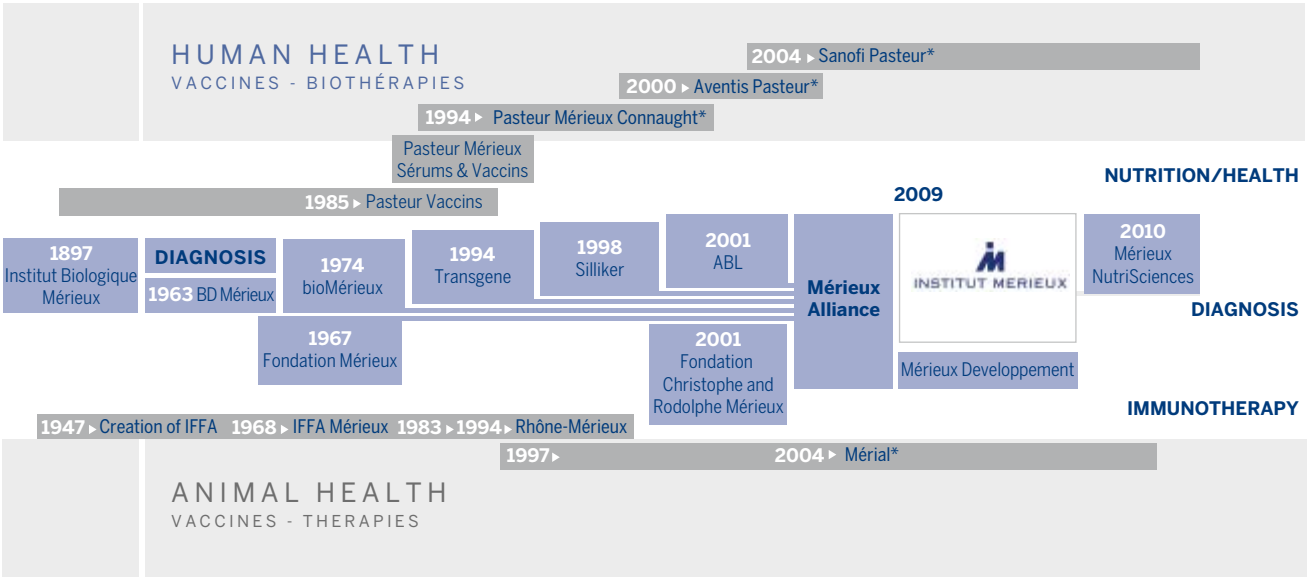
In 1937, Marcel Mérieux's son, Doctor Charles Mérieux, took charge of the laboratory. During the 1940s, he introduced a technique developed by the Dutch professor Frenkel – *in vitro* culture – which revolutionised the manufacture of vaccines and led to the production of reagents for *in vitro* diagnostic tests.

The Institut Mérieux became a worldwide leader in the field of human and veterinary vaccines.

Simultaneously with these activities, Alain Mérieux, the grandson of Marcel Mérieux, in 1963 founded the company B-D Mérieux, which became bioMérieux, dedicated to *in vitro* diagnostics.

The Institut Mérieux gave rise to numerous companies which formed part of the Mérieux family scope until 1994, the date of disengagement of the family from vaccinology activities.

These companies are still major players in the field of public health: in human medicine, Pasteur Mérieux Connaught, which became Aventis Pasteur and then Sanofi Pasteur; and in veterinary medicine, IFFA (*Institut Français de Fièvre Aphteuse*), which became Rhône Mérieux, then Mérial.



** Companies exited from the Mérieux family scope in 1994.*

1.1.2 Development of bioMérieux

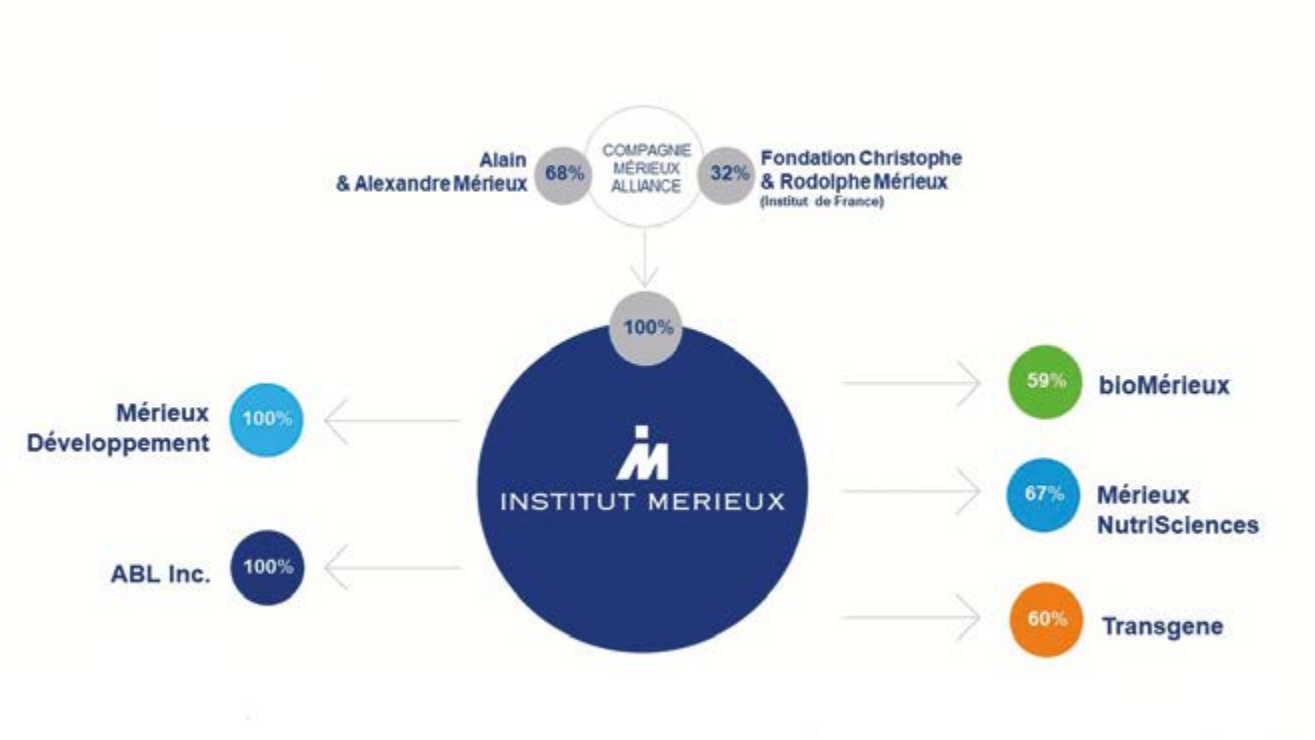
** On March 21, 1987, bioMérieux merged with API SA, a company incorporated in 1967. bioMérieux, which had been established in 1963, was absorbed by API SA. Following this transaction, API SA took on the name bioMérieux.*

1.2 Organisation chart

1.2.1 Organisation chart within the Institut Mérieux Group

Institut Mérieux holds, in particular:

- 100% of the capital of SGH, the holding company of Mérieux NutriSciences.
  Mérieux NutriSciences is an American company specialised in analysis, audit and consulting services for ensuring the safety and quality of food, the environment, and consumer goods affecting the health of consumers;
- 100% of the capital of TSGH, the holding company controlling Transgene SA and Advanced Bioscience Laboratories Inc. (ABL).
  Transgene is a biotechnology company listed on Euronext, specialised in immune therapies based on viral vectors, including therapeutic vaccines and oncolytic viruses, for the treatment of cancers and infectious diseases. ABL is an American laboratory for research and production under contract;
- 100% of the capital of Mérieux Développement.
  Mérieux Développement is a development/innovation capital company in the fields of health and nutrition.



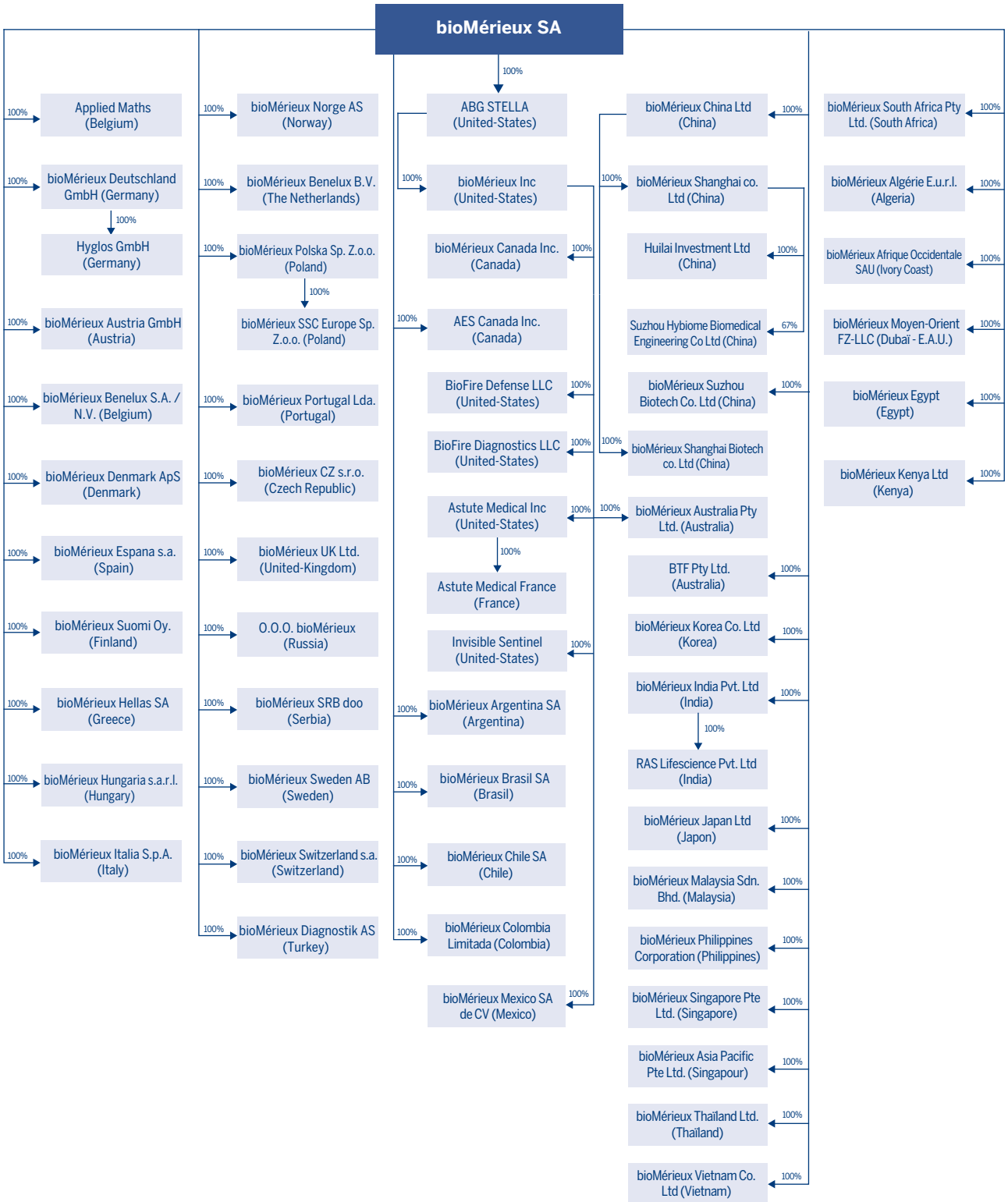
The percentage holdings are rounded to the next higher unit.

1.2.2 Subsidiaries, branches and equity investments

1.2.2.1 Legal organisation chart of the bioMérieux group at December 31, 2019

The diagram below represents the organisation chart of the main companies held by the Issuer (in percentage of capital and voting rights). The great majority of the subsidiaries mentioned below have a distribution activity (see Section 1.3.2.4); some of them also have an R&D activity (see Section 1.6) and/or a production activity (see Section 1.7).

Also, Note 3.3.3 of Section 6.2.2 shows the list of subsidiaries.



The percentage holdings are rounded to the next higher unit.

1.2.2.2 Miscellaneous information concerning the subsidiaries and equity investments

Equity investments taken and disposed of during the 2019 financial year

On February 7, 2019, bioMérieux acquired 100% of the shares in Invisible Sentinel Inc., based in Philadelphia (United States). This company develops, manufactures and markets solutions for molecular diagnostics to identify disease-causing organisms and other contaminants in foodstuffs and beverages.

In November 2018, bioMérieux acquired 54.4% of the capital of Suzhou Hybiome Biomedical Engineering Co. Ltd. An additional 12.52% was acquired in June 2019, increasing the shareholding percentage to 67%. This Chinese company specialises in automated immunoassay tests.

In December 2019, bioMérieux acquired a non-controlling interest in the capital of Specific Diagnostics (Mountain View, CA, United States). This company has developed a new technology allowing a faster analysis of bacteria's sensitivity to antibiotics through the detection of volatile organic compounds that they emit during their growth.

New subsidiaries

bioMérieux created two subsidiaries in 2019 in the Philippines and Egypt.

Branches and representative offices

bioMérieux does not hold any subsidiaries directly. It did not open any new branch offices in 2019. bioMérieux has branch offices in Egypt, Saudi Arabia, and the Philippines.

Equity investments

Note 3.3.3 in Section 6.2.2 and Note 34 in Section 6.1.2 give the list of equity investments.

The portfolio of listed assets held by the Company is presented in Note 7.2 of Section 6.1.2 and is not significant.

1.3 Overview of bioMérieux's activities

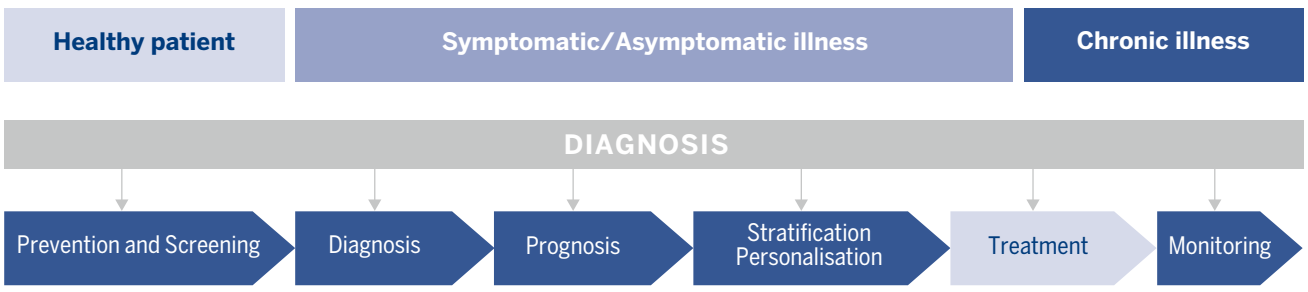
1.3.1 The *in vitro* diagnostics industry

There are currently few official statistics on the *in vitro* diagnostic market. The Company has therefore conducted its own internal analyses on the basis of reports prepared by financial analysts, studies carried out by independent specialist consultants and information published by other companies in the sector, as well as its own knowledge of the market, through its internal experts.

The sources used to estimate the market (size, growth and split), as well as the Company's competitive position relative to its competitors, are mentioned in the corresponding paragraphs.

1.3.1.1 General description

In clinical applications, *in vitro* diagnostics is an essential part of patients care process, with a role to play at all stages of a disease:



In vitro diagnostic tests are used to determine the origin of an infection, make a correct diagnosis, propose the most appropriate therapy, monitor patient care, avoid costly complications and evaluate pathology's evolution. Thus, today, between 60% and 70% of medical decisions involve the result of a diagnostic test. In addition, some diseases such as HIV and early-stage cancers can only be detected through analysis of samples taken from the patient: for these diseases, medical decisions are 100% reliant on *in vitro* diagnostic tests.

The analyses are performed on samples taken from patients, rather than on the patients themselves. They are generally carried out at the request of a physician, in private-sector or public medical biology laboratories belonging to hospitals or commercial entities, blood banks and physicians' offices. The results are then sent to the physician who can use them to confirm or establish a diagnosis (often in combination with other examinations such as a medical examination or imaging). In some countries, the physician or patients themselves perform certain analyses.

In the industrial market, *in vitro* diagnostic technologies are used to monitor the microbiological quality of food and veterinary products, pharmaceuticals and cosmetics. These microbiological tests (sterility of products, absence of pathogenic bacteria, etc.) are conducted throughout the production line, from raw materials to the finished product, as well as in the manufacturing environment (air, water and surfaces).

***In vitro* diagnostics** is part of the healthcare sector. It is distinct from the pharmaceutical market. It benefits from a more flexible regulatory environment than that applicable to pharmaceutical products, although this is becoming more and more stringent, as well as from a more stable customer base, principally due to the significant costs (investments and training expanditures and the costs of connecting platforms to laboratories' information systems) incurred by diagnostics customers. The *in vitro* diagnostic market also has more stable revenue growth mainly due to:

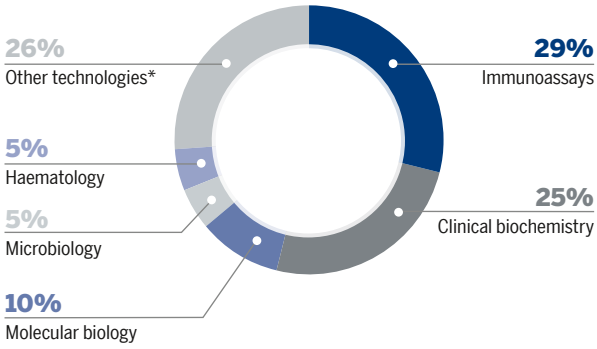
- the significant proportion of *in vitro* diagnostics revenues accounted for by reagent sales, because of the "closed" nature of most systems, which function only with reagents developed and marketed by the manufacturers of these systems (captive market);
- the obligation to offer customers a wide selection of reagents per instrument, which leads to a distribution of the *in vitro* diagnostics companies' activities across a large number of products, in contrast to pharmaceutical groups that are often dependent on blockbusters;
- relatively steady changes in demand in the diagnostics market, in contrast with sales of drugs, which can vary widely, due, in particular, to changes in the regulatory environment and competition from generic drugs.

1.3.1.2 A market determined by technologies

In vitro diagnostics covers all techniques, systems and products used on samples of biological liquids or human tissue within clinical laboratories. It therefore covers all analytic techniques used after sampling which guide the decisions of the doctor in the light of the results obtained. The market for *in vitro* diagnostics is based on several types of technologies:

- clinical chemistry, which can measure the basic components of the body and is a very important technology, particularly concerning tests for monitoring diabetes;
- immunoassays: technology based on the principle of an antigen-antibody reaction, is used in the detection or assay of infectious agents (such as bacteria, viruses and parasites) and pathological markers;
- microbiology: culture of biological samples in a medium allowing any bacteria present to grow. Bacteria detected are then identified and tested for susceptibility to antibiotics;
- molecular biology: technology based on the detection of genetic sequences of DNA or RNA that are characteristic of a bacterium, virus, protein or cell. In the field of infectious diseases, the process consists of extracting nucleic acids (extraction), multiplying (amplifying) them, marking the resulting copies of this amplification and detecting a signal, in order to determine the presence and quantity of infectious agents in the original sample;
- haematology, which covers the techniques for studying components of the blood (platelets, red and white cells, etc.).

The image below shows an estimated breakdown by technology of the world market for clinical *in vitro* diagnostics in 2019:



** This section includes flow cytometry, histology and cytology, hemostasis, the analysis of blood electrolytes and gases, capillary electrophoresis, etc.*
Source: EAC estimates on behalf of bioMérieux based on data from the third quarter of 2019.

In vitro diagnostic techniques were traditionally performed manually but have progressively been automated, incorporating scientific and biological advances and innovations in technology and IT. They have made it possible for laboratories to standardise the processes, obtain more reliable and pertinent results in a shorter time period, ensure the traceability of analyses and increase the number of examinations that can be carried out simultaneously. The degree of automation is not consistent from one laboratory to another, however. The Company believes that microbiology laboratories are currently less automated than other laboratories, which opens up the prospect growth in this market.

Molecular biology has added a new dimension to *in vitro* diagnostic techniques. Most often, it does not substitute for traditional techniques, but supplements the diagnostic offer by providing performance that is better than traditional techniques (sensitivity and/or speed). Molecular biology has cleared the way for a new approach to infectious diseases: the syndromic approach. Numerous infectious diseases have a similar clinical profile but may be caused by different organisms, including viruses, bacteria, fungi or parasites. The syndromic approach is based on the simultaneous analysis of multiple pathogens which may cause this illness. The syndromic approach improves patient care.

At the same time, new techniques are emerging. Technological progress has enabled the development of next-generation sequencing (NGS), which enables high-flow analyses on a much greater scale than traditional sequencing techniques and at lower cost. The use of NGS solutions is becoming more common in clinical laboratories, particularly for cancer and neonatal screening. This technology is also creating new possibilities for the epidemiological monitoring of infectious bacterial diseases, and ultimately, their diagnosis.

Point-of-care analyses have also developed as instruments are miniaturised. Diagnostic orientation tests are, for example, now available to doctors or nurses, in pharmacies or in certain emergency services.

Also, *in vitro* diagnostic tests have evolved. In addition to traditional tests, high medical value tests are now having a significant impact on therapy choices, improvements in patient health and healthcare system cost savings. These tests can be integrated at every level of care for patients, to improve or confirm a diagnosis, enhance treatment strategy, monitor the effects of prescribed treatments and, often, avoid costly complications.

Over the medium to long-term, the "theranostics" or companion diagnostics market, combining a diagnostic test and treatment, is likely to grow. This approach enables the analysis of one or more biomarkers to stratify the patients or pathologies and develop more targeted and thus more effective medicines.

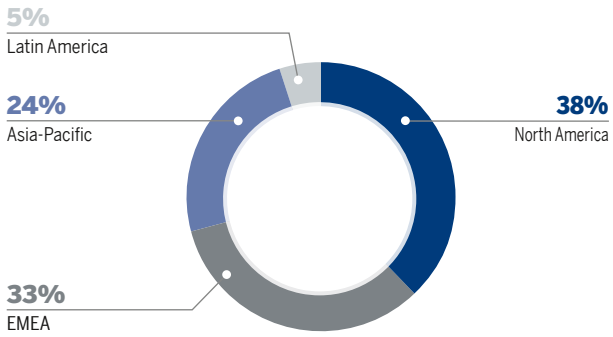
Driven by new technologies and scientific advances, the medical value of *in vitro* diagnostics is increasingly recognised, and *in vitro* diagnostic tests play an increasingly decisive role in the treatment process. By providing earlier, more reliable, and more precise diagnoses and better monitoring of therapeutic response, these tests help to improve the quality of care, while optimising and reducing healthcare spending.

1.3.1.3 A worldwide market

The global market for *in vitro* diagnostics was estimated in 2019 at €60 billion (US$67 billion) for clinical applications and approximately €2.8 billion (US$3 billion) for industrial applications. The market for for clinical applications is concentrated at approximately 80% in the mature countries (mainly North America, Europe and Japan). For the company, the breakdown of its revenues by geographic area and by application is presented in Section 5.1.1.

Since the end of the 1990s, the clinical *in vitro* diagnostic market has experienced a period of growth due to the increased recognition its medical value, as explained in the previous chapter.

A 2019 estimate of the geographical breakdown of this market is:



Source: EAC estimates on behalf of bioMérieux based on data from the third quarter of 2019.

1.3.1.4 Market trends and growth prospects

The trends presented below are for illustrative purposes and may vary significantly for the reasons indicated in section 2 (Risk factors).

Several structural factors explain growth in the *in vitro* diagnostic market:

- in developed countries, **demographic and lifestyle changes** favour a rapid, but also preventative and predictive, diagnosis:
  - the ageing of the population, in developed countries, as well as the majority of developed countries, is a reality. Longer life expectancy is a determining factor. For example, whereas in 2004, 22% of the French population was over 60, that rate will probably reach 35% in 2040 (source: *Institut National d'Etudes Démographiques* - French Institute for Demographic Studies). This will lead to an increase in chronic diseases and age related disorders, such as cardiovascular diseases, neurodegenerative diseases, respiratory infections and certain cancers,
  - lifestyles (inactivity, stress, etc.) and new eating habits contribute to the development of diseases such as diabetes and food allergies;
- in developing countries, there is vigorous **demand for improved healthcare** and public health systems due to:
  - rapid population growth and urbanisation, recent pollution problems, and changing lifestyle and eating habits, which foster the development of infectious and chronic diseases,
  - rising living standards, the introduction of ambitious health reforms and new or renovated infrastructure, which are also stimulating an increase in demand, particularly for widely accessible medicines. Furthermore, medical expenses still represent only 5% to 9% of GDP (compared to approximately 17% in the United States and about 9% in Western Europe, according to statistics from the OECD – OECDStat), thus giving these countries some degree of margin for manoeuvre to invest in health systems;

- **the emergence or reemergence of disease-causing organisms** imposes the need to develop new diagnostic tests:
  - microorganisms that are resistant to antibiotics and antivirals are emerging and impose better management of the therapeutic arsenal. In 2014, the WHO published its first report on global antimicrobial resistance, including resistance to antibiotics, noting that this serious threat was no longer a prediction, but a reality in every region in the world and that everyone, irrespective of age or country, was at risk. Since 2015, several national or international initiatives were put in place (United States, China, France, United Nations), notably to highlight the importance of increased monitoring of the emergence of resistant bacteria, or the necessity of rapid diagnostics in order to better control the prescription of antibiotics,
  - disease-causing organisms are appearing, emerging, reemerging and spreading worldwide. As an example, the World Health Organisation (WHO) has qualified as a "worldwide threat to public health" two recent epidemics: in 2014, the Ebola virus epidemic, the most deadly since the discovery of the virus in 1976 and, in February 2016, the Zika virus epidemic, associated with increasing cases of microcephaly in babies whose mothers were infected during pregnancy,
  - the proliferation of healthcare-associated infections, has led to the need to detect carriers of multi-resistant bacteria before they become self-contaminating or infect other patients. Furthermore, the high cost of treatment of these infections (estimated in Europe at €7 billion per year, according to MedTech Europe) argues in favour of screening tests for the carriers of these bacteria, to put in place appropriate hygiene measures. Furthermore, an actual or suspected hospital contamination requires conducting epidemiological studies to understand how the disease-causing organism was transmitted and to implement appropriate hygiene measures to contain and stop its dissemination;
- **reducing health expenditure** is an economic necessity:
  - the continuing economic difficulties experienced by developed countries are leading governments to optimise and even reduce their health spending. Diagnosis only accounts for approximately 2 to 3% of healthcare spending, but is used in most treatment decisions, and provides better care for patients: because of its effectiveness at every stage of an illness, it can make a significant contribution to healthcare spending optimisation,
  - reimbursement for medical care is increasingly organised by pathology and not by examination. In this context, hospitals bear the cost of patient treatment and monitoring, which gives them an incentive to conduct diagnostic tests to select the most appropriate treatment and avoid hospitalisation wherever possible;
- *in vitro* diagnostic is medically important to the healthcare process through its incorporation into **4P** (preventative, predictive, personalised and participative) medicine:
  - progress in medical know-how leading to the discovery of innovative new biomarkers that can result in the development of *in vitro* diagnostic tests improving patient care,
  - technological developments, especially those relating to analysis techniques for proteins and genetic sequences, extend the scope of *in vitro* diagnostics to cardiac diseases, cancers, and autoimmune and neurodegenerative diseases,
  - the development of "theranostics", which combines diagnostic tests with treatment decisions, helps the physician to choose the most appropriate treatment and avoid those that are ineffective,
  - bio-informatics and Big Data could change *in vitro* diagnostics by gradually eliminating the border between the services offered by clinical laboratories and the solutions marketed by *in vitro* diagnostics companies, as well as by giving laboratories access to more precise data so that patients can benefit from better informed clinical decisions;
- **the structure of laboratories** is evolving:
  - new technologies are contributing to the development of new diagnostic systems, improving the medical value of each diagnosis along with laboratory workflows and efficiency,
  - a growing shortage of qualified personnel, greater consolidation among laboratories and the need to standardise analyses and improve operational efficiency, particularly in clinical microbiology, have led to the automation of laboratories and increased needs for services such as training, maintenance, accreditation assistance, laboratory productivity optimisation,
  - the development of molecular biology is leading to faster and more accurate new diagnoses (see section 1.3.1.2). Expertise in this area has resulted in the development of easier to use integrated platforms,
  - demand is increasing in hospitals, particularly in the emergency and intensive care departments, for diagnostic solutions leading to the faster selection of treatment for patients and resulting in Point-of-Care (POC) tests and decentralised analyses. Also, the Company estimates that only just over 50% of American hospitals are equipped to carry out molecular biology tests in their internal laboratories,
  - developments to the technology are also opening up new fields to *in vitro* diagnostic instruments outside the laboratory. Thus, certain tests can be decentralised and carried out in consulting rooms or pharmacies,
  - advances in communication technologies are impacting *in vitro* diagnostics, as devices must now increasingly be connected to laboratory information systems. In addition, with new generation connected tools, results can be communicated quickly *via* smartphone to medical professionals and, in certain cases and for certain applications, to patients themselves. More and more, patients want to play an active role in their own healthcare and health decisions, creating a need for better access to medical information and to faster, more precise and easier to understand analysis results,
  - the Obama administration's health care reform in the United States is extending medical insurance to people who did not have adequate health care coverage. The number of doctors' visits and the prescription of diagnostic tests have increased. Faced with this increased activity, laboratories had to become more automated in order to optimise their workflow and productivity;

- **demand in industrial applications** is boosted by structural factors:
  - there are more and more quality control obligations in food, pharmaceutical and cosmetics applications,
  - food, pharmaceutical and cosmetics companies are looking to protect their trademarks and reputations, while also being able to improve test automation, enabling the faster release of production batches and thereby encouraging the development of technologies such as cytometry,
  - changing eating habits (such as increasing meat consumption in emerging countries) are stimulating demand in the food industry,
  - the development of new "on demand" personalised medicine or short series treatments is stimulating demand in the biopharmaceutical industry due to the need for more regular and quicker checks,
  - veterinary laboratories are increasingly having to deal with microbial resistance in animals and diagnose infertility and emerging animal diseases in livestock, at a time when new regulations are restricting the use of antibiotics on farms,
  - emerging markets want to protect their consumers and export their own food production. As a result, they are strengthening their food safety testing requirements,
  - end consumers are demanding increasingly higher standards when it comes to the quality of the food, pharmaceuticals and cosmetics that they buy.

Conversely, **some economic factors may impact growth in the market**:

- the economic situation in Western Europe could remain structurally difficult, with mixed dynamics specific to each country;
- chronic deficits, excessive debt levels of healthcare systems, and economic and monetary crises are leading to austerity measures (lower reimbursements, reduced capital expenditure, streamlining of the management of reagent inventories, etc.) and limiting users' ability to increase consumption;
- increased demand for diagnostic tests could put downward pressure on the prices paid by medical laboratories for their reagents. In 2015, certain Lab Developed Tests also known as "homebrew" tests have been delisted in the United States. In 2017, the US administration implemented a health reform known as PAMA (Protect Access to Medicare Act of 2014) which aims to reduce reimbursements for *in vitro* tests for outpatients. Although these developments do not directly affect producers of *in vitro* diagnostics systems, they could weigh on the *in vitro* diagnostic market over the longer term;
- the introduction of new tests and their reimbursement requires an evaluation of their cost/benefit ratio. These evaluation processes are still complex and rather informal, and represent an opportunity to better demonstrate the value of *in vitro* diagnostic tests;
- the emerging countries are traditionally markets for equipment, for which revenues are more irregular, and are characterised by a growing consumption of reagents; furthermore, these countries are becoming more price-sensitive. These countries can also experience significant currency fluctuations;
- for several years, the consolidation of medical laboratories, both in hospitals and commercial laboratories, has been becoming a reality. This movement has been developing at different rates depending on the country. It is already very advanced in North America and Japan and, to a lesser extent, in Europe.

  This consolidation strengthens the negotiating power of customers and brings new interlocutors into the process of purchasing an *in vitro* diagnostic system, such as hospital managers and specialised buyers, which could negatively impact the level of prices charged by market players;
- the regulatory requirements are increasingly important (see section 2.3.2).

Estimated growth in the *in vitro* diagnosis market, excluding blood sugar tests, was approximately 5% in 2019, at constant exchange rates. The Company remains confident that this market will continue to grow in the medium term.

1.3.1.5 The main players

Increasing R&D costs related to innovation, the consolidation of the customer base, the need for broader product lines, as well as critical mass considerations are encouraging continued consolidation in the *in vitro* diagnostic market. In addition, this market has attracted several new players.

The *in vitro* diagnostic market remains highly concentrated. The Company estimates that the 10 largest players in the market for *in vitro* diagnostics currently constitute 75% of the worldwide market, including diabetes tests. These are the large pharmaceutical groups (Roche, Abbott) or diversified conglomerates (Becton Dickinson, Thermo Fisher, Danaher and Siemens Healthineers), or specialised companies (bioMérieux, Bio-Rad, Sysmex, and Qiagen).

Based on its 2019 revenues, the Company ranks itself in sixth place in the *in vitro* diagnostic market. This ranking reflects its specialised positioning: it is not present in diabetes testing and has little activity in clinical chemistry testing.

1.3.2 bioMérieux, a specialist player in the field of *in vitro* diagnostics

1.3.2.1 General presentation and areas of expertise

bioMérieux designs, develops, produces and markets systems that are used in two fields:

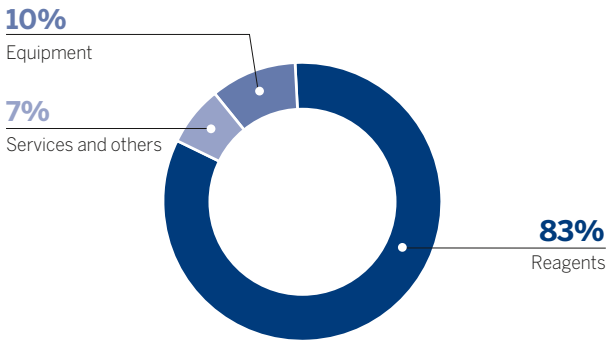
- **in clinical applications**, these systems can, from a biological sample (blood, saliva, urine, etc.), be used to diagnose infectious diseases, cardiovascular pathologies and certain cancers. Clinical applications represent 83% of the Company's revenues. As a specialised player, bioMérieux ranks sixth worldwide in *in vitro* diagnostics, but is the world leader in clinical microbiology and molecular syndromic diagnosis of infectious diseases. The Group's historic and priority activity focuses on diagnosis of infectious diseases: bacterial (such as staphylococcus), parasitic (such as toxoplasmosis) and viral infections (such as HIV). Diagnosis of infectious diseases represented nearly 90% of its revenues in 2019;
- **in the industrial field**, these systems enable microbiological analyses of manufacturing and of its environment, chiefly in the food, pharmaceutical, cosmetics and veterinary sectors. Industrial applications represent 17% of the Company's revenue. bioMérieux is the worldwide leader in this sector. Since 2011, bioMérieux has been making its expertise in microbiology available to healthcare professionals in animal health, notably with the aim of contributing to the fight against microbial resistance, epizootics and emerging zoonoses. This forms part of the "One Health" approach promoted by international organisations, and based on the principle of a continuum from animal to man in the transmission of infectious agents and resistance to antibiotics.

bioMérieux differentiates these fields within two different departments: a Clinical unit and an Industrial unit, the managers of which sit on the Executive Committee.

The Group's diagnostic systems consist of several elements:

- reagents and disposables used to carry out biological tests, in order to perform screening, diagnostic assistance, prognosis and treatment monitoring;
- instruments (or platforms or automated analysers) used for automated testing at high or low throughputs;
- software to process analyses and expert systems to interpret test results; and
- related services such as the installation and maintenance of instruments, user training or the audit of laboratory workflows.

bioMérieux's business therefore involves integrating highly diversified technologies covering biology, instrumentation and engineering, as well as IT and data processing. This can often be complex, as it entails verifying the essential compatibility of the various components, monitoring overall coherence, adhering to the different standards applicable in each field and respecting quality and cost objectives and deadlines.



The largest part of the Company's revenues comes from the sale of reagents, which represented 83% of revenue in 2019. The Group mainly markets closed systems, which enable only the use of reagents developed specifically for these instruments.

Thus, 80% of sales in 2019 were related to closed instruments, the balance coming from manual products and open systems.

Instruments are either sold (10% of consolidated revenues in 2019), or provided to customers for use on their premises under an agreement to purchase a minimum volume of reagents and disposables, on terms designed to cover the depreciation and the financing of the instrument. If the customer fails to fulfil its obligations, the Company is contractually entitled to repossess the instrument. In certain markets, instruments may also be leased to customers.

Any required systems management **software** is provided with the instruments and updated regularly.

Instruments that are sold or provided to customers are accompanied by services which include the installation and servicing of the instrument, as well as user training. The Company will continue to grow this business. The invoicing of services, including R&D collaborations, represented 6% of the Company's revenues in 2019.

Given the current market, the Company believes that it is important to master three complementary techniques in order to successfully compete in the targeted areas:

- microbiology, which is based on culturing biological samples, identifying microorganisms and measuring their antimicrobial resistance;
- immunoassays, based on the principle of immunological reaction, to identify or quantify the presence of antigens and/or antibodies in a sample;
- molecular biology, which is based on the detection of genetic sequences of DNA or RNA characteristic of a pathogen to identify bacteria, viruses, fungi and parasites.

Lastly, bioMérieux is a company that is geographically diversified: the Group operates in over 160 countries, through establishment in 44 of them and a wide network of distributors (see section 1.3.2.4).

1.3.2.2 Competition

Clinical market

In the infectious diseases segment, which accounts for more than 20% of the market for *in vitro* diagnostics (according to the estimates of the Company and its knowledge of the market), and which represents 90% of the Group's clinical sales, the Company is one of the rare players to have all of the technologies used (microbiology, immunoassay and molecular biology). As a result, it faces different competitors depending on the technology used. The Company believes that its expertise in all complementary technologies gives it a significant competitive advantage:

- in clinical microbiology, as estimated internally and by an independent consultant specialised in *in vitro* diagnostics, the Company's market share is around 40%, putting it in the leading position worldwide. This market is estimated at about €3 billion, growing by about 5% a year at constant exchange rates. Other significant players in this market include Becton Dickinson, Danaher and Thermo Fisher. In automated microbiology, new technologies are emerging, such as mass spectrometry, which is also marketed by Bruker, and competition has heightened since Becton Dickinson's takeover of Kiestra. In addition, the line between technologies is becoming increasingly porous: start-ups offering identification technologies and/or rapid antibiotic susceptibility tests at the molecular biology level are emerging, and players in the field of molecular biology are increasingly offering tests for rapid bacterial identification;
- in immunoassay, large and diversified pharmaceutical groups (Roche, Abbott, Siemens Healthineers and Danaher) are dominant. Among specialised players, the main competitors include Bio-Rad and DiaSorin. According to its internal estimates, the Company has a market share of about 3%. It is strengthening its position as a specialised player thanks to VIDAS® 3, the most recent generation of its VIDAS® automated system, to its range of high medical value tests and its establishment in emerging countries;
- in molecular biology, the market leader is Roche. The other significant players are Hologic, Qiagen, Becton Dickinson, Danaher (Cepheid), Abbott and Siemens. In this market, bioMérieux made a major strategic move in 2014 with the acquisition of the American company BioFire, whose BIOFIRE® FILMARRAY® system provides a new standard in the diagnosis of infectious diseases. This innovative diagnostic approach is tending to develop, driven by bioMérieux, while competitors are starting to emerge, such as Genmark Diagnostic and Luminex which acquired Nanosphere in 2016, or Qiagen which acquired StatDx in 2018. Furthermore, it is present in the extraction field with EMAG®, the new generation of its automated system NUCLISENS® EASYMAG®. Now, bioMérieux holds about 15% of this market;

Industrial market

In the industrial market, which remains relatively fragmented, the Company considers itself the world leader, Based on its internal studies, it evaluates its market share at about 20% in 2019. The other significant players are Merck Millipore, 3M, Thermo Fisher, Becton Dickinson and a number of smaller companies in niche segments.

1.3.2.3 Customers of the Group

In clinical applications, the organisation of the *in vitro* diagnostics sector varies considerably from country to country, depending on the structure of the healthcare system itself. Essentially, it may be part of the public or the private sector, or combine them both. The Company mainly sells its products to hospital and commercial laboratories. It estimates that these two types of customers represent approximately two-thirds of the *in vitro* diagnostic market, with hospital laboratories alone accounting for approximately half the market. To a lesser extent, the Group's customers include distributors, blood banks, the Point-of-Care market (including hospital emergency rooms) and physicians (physician office laboratories or POLs). The Group does not sell products to patients themselves.

France, where the Group made 7% of its sales in 2019, has a mixed health organisation, associating private and public laboratories. As an approximation, private laboratories represented 31% of sales in 2019, while hospitals totalled 34% of the Company's sales. Industrial customers represented 34% of sales in 2019.

In the United States, the largest market for the Group, public or private hospitals represented 76% of sales in 2019 and commercial laboratories represented 10%. Also, less than 2% of sales were made with other customers in clinical applications, including POL and University hospitals. Industrial customers represented 13% of sales.

The Company's clinical microbiology offer includes systems of various capacity and is based on the concept of microbiology laboratory automation. It is therefore perfectly in line with this shift toward the previously described consolidation. By integrating services, in particular, the solution's commercial offering is also expanding with a focus on introducing comprehensive solutions with high added value (medical or cost). However, in immunoassay, VIDAS®, a low-throughput platform, is not adapted to routine tests in large laboratories.

In industrial applications, Group customers are the quality control laboratories of large industrial food, pharmaceutical and cosmetics groups, independent laboratories to which such industrial quality control is outsourced, or veterinary laboratories. In addition, with the development of the fight against healthcare associated diseases, the Company is beginning to target hospitals as industrial customers for the installation of disinfection and monitoring systems. Similarly, blood banks have, in some cases, become industrial customers with the development of bacteriological sterility monitoring of platelets.

In spite of the global movement towards the concentration of its customers, bioMérieux does not consider that it has a concentrated customer base; as an illustration of this, the largest customer represents about 1% of the total revenues of the Group.

1.3.2.4 Distribution network

The Company markets its products in over 160 countries through a network of international subsidiaries and distributors. One of the Company's priorities is to further enhance its customer focus.

Product distribution is based mainly on its subsidiaries, which devote their efforts to selling, promoting and/or maintaining the Group's products.

Group subsidiaries have specialised sales and marketing forces for clinical and industrial microbiological control customers. In the most developed and mature markets, such as the United States, most European markets and Japan, sales forces in clinical applications are specialised by product line. Likewise, the industrial applications sales forces are becoming increasingly specialised in the pharmaceuticals and food sectors. Conversely, in smaller countries, sales forces are pooled.

In addition to its subsidiaries, the Company possesses a strong presence on all continents through independent distributors. The Company's determination to achieve strong product recognition, along with legal requirements regarding traceability and customer support services (technical personnel, training, availability of spare parts) direct the choice of local partners. They are generally major players in the health field in their countries and are often exclusive in the diagnostic field, subject to the applicable laws. They are also selected by the Company on the basis of their knowledge of local healthcare market players, and their material and human resources. The Company ensures that its distributors have adequate financial resources to fund the instruments provided to end-customers.

Furthermore, in particularly large emerging countries such as China, Russia and India, the Company's subsidiaries can be the driving force behind a network of local distributors. This organisational structure is consistent with local distribution practices and allows the Company to market its product lines across large parts of these countries, with a limited number of distributors. On the other hand, using intermediaries can, in certain cases, make it harder to understand how the market is evolving.

1.3.2.5 Suppliers and purchasing policy

In order to adapt the purchasing policy for raw materials and various components to the specific requirements of each line of instruments and reagents, the Group has set up an overall system that encourages:

- early involvement of purchasing in new projects;
- globalisation of initiatives and volumes;
- increased responsiveness.

bioMérieux also looks to diversify its supplier base in order to foster both security and competitiveness. Producing certain raw materials in house and entering into partnerships with various suppliers have resulted in both technical and economic benefits.

Faced with product specificity which is not always consistent with procurement flexibility, the Company endeavours to secure its critical supplies. Such security can take the form of supply agreements, diversified sourcing, buffer stocks and the development of in house production, or the assumption by the Company of liability for the regulatory compliance of certain specific components manufactured by a supplier.

Since a large part of bioMérieux's activity is devoted to manufacturing, purchasing plays a key role for the Company. The associated risks are described in Chapter 2 "Risk Factors" (see section 2.2.2).

bioMérieux seeks to involve its suppliers in a sustainable growth and ethical strategy (see section 3.6.1).

1.3.3 The Group's products

The Company has implemented a global marketing strategy. Its various systems are marketed under identical trademarks worldwide, and the product offering is adapted to regional and local requirements.

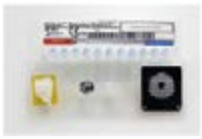
The Company's ten leading products accounted for 36% of revenues in 2019.

The main product lines marketed by the Group, and their applications, are presented below.

1.3.3.1 Main product lines

FILMARRAY®

Molecular biology	Technology RT-PCR*	Customers	Type of offer



Reagents

FilmArray Torch®

FilmArray 2.0®

FilmArray EZ®

Objective	Simultaneously identify, using a single test, or "panel", the pathogens (bacteria, viruses, parasites, fungi, yeast) that most frequently cause an infectious syndrome by the detection of genetic sequences of DNA or RNA that are specific to them.
Characteristics	**Easy to use**: the sample can be prepared for analysis in less than 2 minutes, and does not require any particular molecular biology skills. No intervention from the laboratory technician once the analysis is launched until the result is received (sample-to-answer). **Rapid**: test durations between 45 and 75 minutes, according to the panels. **Complete**: wide panels including between 14 and more than 40 pathogens
Portfolio	**Reagents**: • respiratory infections: Respiratory panel (20 pathogens), Respiratory panel 2 (21 pathogens) Respiratory panel 2plus (22 pathogens), Pneumonia panel (33 pathogens), Pneumonia plus panel (34 pathogens); • blood infection: Positive blood cultures identification panel (BCID with 27 pathogens and resistance genes, BCID2 with 43 pathogens and resistance genes); • gastrointestinal infections: Gastrointestinal panel (22 pathogens); • infections of the central nervous system: Meningitis/Encephalitis panel (14 pathogens). **Instruments**: • FILMARRAY® Torch®: modular and scalable. The basic configuration with two modules is capable of testing 44 samples/day and may be extended to 12 modules, which can process 264 samples/day; • FILMARRAY® 2.0 can function with up to eight individual units and can process 176 samples/day; • FILMARRAY® EZ offers a simplified user interface and uses a single FILMARRAY® 2.0 system. It is only available on the American market for the use of RP-EZ panel exclusively
Other Information	At the beginning of 2020, bioMérieux launched FILMARRAY® Trend. Trend is a software feature developed by BioFire to aggregate and share the results of FILMARRAY® tests coming from hospitals that use it, while preserving the anonymity of patients tested. It enables its users to see, in real time, the epidemiological trends related to the circulation of pathogens at the local, regional, national or global levels and to put the results obtained into context.

* *Real-Time polymerase chain reaction.*

Clinical Industry Reagents Instruments Software Services

VITEK® 2

Microbiology (Identification & antibiogram)

Technology
Colorimetry

Customers

Type of offer


Reagents


Vitek®2 XL


Vitek® 2


Vitek® 2 Compact

Objective	Automatically identify bacteria. Quantify and categorise their antimicrobial resistance so that the patient's treatment can be adjusted.
Characteristics	**Automated**: its design ensures an optimised laboratory workflow; fewer repetitive tasks, improved security, maximum standardisation and shorter turnaround time for the production and generation of reports. **Reagents ready to use**: once the consumable is loaded, the incubation and reading of each card are managed by the system without intervention by the laboratory technician. **Expert software for results interpretation**: bioMérieux has integrated, into its system, VITEK® 2 the Advanced Expert System (AES™), that automatically validates each antibiogram result: in an optimised time frame, it gives a precise phenotypic profile of the mechanisms of bacterial resistance for each isolate tested.
Portfolio	**Reagents**: VITEK® 2 enables identification of more than 450 bacteria or moulds and tests their resistance to more than 170 antibiotics. **Instruments**: • VITEK® 2 Compact has a capacity of 15, 30 or 60 cards; • VITEK® 2 has a capacity of 60 cards; • VITEK® 2 XL has a capacity of 120 cards. The VITEK® 2 system can be used only for antibiograms, and identification is then performed by VITEK® MS. This configuration is fully and seemlessly integrated through MYLA® (see below)
Other information	VITEK® 2 is the market leader in automated identification and antibiograms. The VITEK® range is also used by industrial customers in the food industry and in the pharmaceutical and cosmetic fields, which have to identify disease-causing organisms present in products or in the production environment. In the veterinary field VITEK® solutions enable identification and can produce the antibiogram for bacteria responsible for pathologies in animals.

VITEK® MS

Microbiology (Identification)

Technology
MALDI-TOF*

Customers

Type of offer


Vitek® MS Slide


Vitek® MS Mass Spectrometry Instrument

Objective	Identify bacteria in a few minutes by the use of mass spectrometry technology, which relies on the difference in mass between all the constituents of a bacterium to determine its unique "signature".
Characteristics	**Simple and secure workflow**: Rationalised sample preparation and convenient kits with reliable and effective inactivation and extraction protocols. **Rapid, robust and precise identification** at the level of the species, the genus or the group in a few minutes. **Integration with the antibiogram**: seemlessly integrates the identification results with the results from VITEK® 2 thanks to an optimised configuration and turnaround time.
Portfolio	More than 15,000 different strains in the database, taking into account the diversity within a species for increased precision. Also, specific kits necessary for sample preparation are available for *Mycobacterium/Nocardia* and for moulds.
Other Information	This bacteria identification technique is appropriate for laboratories that handle large volumes of samples as a quick and cost effective solution to obtain results. However, MALDI-TOF mass spectrometry cannot test sensitivity to antibiotics.

* *Matrix Assisted Laser Desorption Ionization-Time Of Flight.*

Clinical Industry Reagents Instruments Software Services

BACT/ALERT®

Microbiology (Blood culture)

Technology
Colorimetry

Customers

Type of offer

BACT® FAN PLUS® Reagents

BACT/ALERT® VIRTUO®
(Here with an additional module)

Objective	Multiply and detect microorganisms in the blood and other normally sterile bodily fluids. This stage is key for the case management of patients suspected of sepsis.
Characteristics	**Fully automatic loading and unloading**: reduction of manual tasks and economic optimisation. The entirely closed system provides better temperature control. **Detection of the level of blood**: measures the volume of blood added to each bottle when loading to immediately alert the laboratory if samples must be taken again; quality control of blood collection practices with traceability at the level of the patient sample. **Advanced detection algorithms**: detects positive samples quicker, enabling accelerated optimisation of the treatment of patients.
Portfolio	**Reagents**: • BACT/ALERT® FAN® PLUS bottles contain polymer beads for the most effective antibiotic neutralisation; • BACT/ALERT® FAN® bottles neutralise antibiotics using activated charcoal; • BACT/ALERT® Standard bottles without antibiotic neutralisation; • BACT/ALERT® MP bottles for the detection of pulmonary tuberculosis. **Instruments**: • BACT/ALERT® 3D (120 Combo and 240), first- generation instruments, flexible, easy-to-use and modular, enabling a usable capacity of 120 to 1,440 positions; • BACT/ALERT® VIRTUO®, next-generation instruments, with a capacity of 428 bottles and the ability to connect up to 3 additional modules to a single user interface, to reach a total capacity of about 1,700 bottles.
Other information	For industrial applications, the range of BACT/ALERT® systems is used for controlling the sterility of biopharmaceutical products, for microbiological control of drinks and for quality control of blood products, and more specifically platelets, for which BACT/ALERT® is the detection method that is most used throughout the world.

MYLA®

Microbiology

Customers

Type of offer

Myla®

Dashboard

Statistical and epidemiological module

Objective	Software suite offering consolidation of analytical data from bioMérieux's range of instruments. Connected to VITEK® 2, VITEK® MS and BACT/ALERT® VIRTUO®, it can both control and improve analytical activity using dashboards, as well as monitor infections and resistance using statistical and epidemiological tools.
Characteristics	Web application available on server, PC or virtual machine, connected in bidirectional mode to LIS* and accessible from any workstation in the laboratory.

* *Laboratory Information System = administrative software package running the main processes of a clinical laboratory.*

Clinical Industry Reagents Instruments Software Services

CULTURE MEDIA AND ASSOCIATED INSTRUMENTS

Microbiology (Culture)

Customers

Type of offer

Culture media (Petri dishes)

WASPLab®

WASP®

Objective	Multiply bacteria and isolate colonies. Identify bacteria and resistance mechanisms using the CHROMID® product line.
Portfolio	The Group offers an extensive range of culture media (more than 100 references available in the form of Petri dishes, tubes and bottles). It offers a wide range of conventional and chromogenic Pre-Poured Media (PPM). The range of chromogenic media CHROMID® combine isolation and simultaneous identification of target microorganisms (e.g.: Clostridium difficile, CPS, Salmonella) including resistant bacteria responsible for healthcare-associated infections (HAI) (MRSA, CARBA, OXA-48, Colistin R). This range was supplemented by the marketing of biplates: the intelligent association of two culture media in a single box, providing two items of information in one reading: CHROMID® CARBA SMART, CHROMID® SMART MRSA/S. aureus, as well as equipment for testing laboratory environments. In the field of industrial applications, the Company offers various specific media (testing for microorganisms in food, pharmaceutical and cosmetic products). It has also developed solutions for environmental monitoring appropriate to the pharmaceutical sector. Instruments (distribution contract with the Italian company Copan): • WASP®, automatic seeding system; • WASPLab™, an intelligent incubation system providing high-resolution images of the culture media and improving the speed, interpretation, reliability and accessibility to the results.
Other information	In 2018, artificial intelligence software (PhenoMATRIX™) was integrated into WASPLab™. It enables the analysis and automatic sorting of agars incubated in WASPLab™ thanks to the combination of patient data (extracted from the laboratory's information system) and the analysis of images via highly efficient algorithms.

TEMPO®

Microbiology

Technology Counting by fluorescence

Customers

Type of offer

Tempo® Reagent

Tempo FILLER®

Tempo READER®

Objective	Listing bacteria in production flows and finished products for food and cosmetics manufacturers.
Characteristics	It automates analyses of hygiene indicators, providing productivity gains of up to 50% and optimisation of up to two days in returning results. Making the analysis very simple and reliable, TEMPO® enables reliable microbiological checks, whatever the destination country. Composed of a TEMPO® FILLER for filling the cards and a TEMPO® READER automating their reading, it functions with dehydrated culture media for ease of storage.
Portfolio	TEMPO® now has 12 cards available to cover most of manufacturers requirements: Total Flora, Enterobacteria, *Escherichia coli*, *Staphylococcus* (coag+), Lactic bacteria, Yeasts and Moulds, *Campylobacter*, Coliformes (ISO), Coliformes (BAM), *Bacillus cereus*, Challenge Test bacteria, and Challenge Test moulds.

Clinical Industry Reagents Instruments Software Services

VIDAS®

Immunoassays

Technology
Enzyme Linked Fluorescent Assay

Customers

Type of offer


Reagents


Vidas 3®


Vidas®


MiniVidas®

Objective	Detect and quantify molecules of biological interest (hormones, tumour markers, antigens or antibodies) for the diagnosis or monitoring of diseases, for animal health, and for checking food and pharmaceutical products. Detection is done by reading a fluorescent signal emitted when an antibody-antigen complex is formed.
Characteristics	A product line with recognised reliability, the instrument is particularly robust (MTBF* > 700 days). It can perform up to 50 tests/hour.
Portfolio	Wide menu of parameters that fulfils the requirements of each type of customer: • **clinical applications**: more than 70 tests spread over the product lines Emergencies (cardiology, sepsis), Infectious Diseases (HIV, hepatitis, serological monitoring of pregnant women) and Immunochemistry (thyroid function, fertility, bone and mineral metabolism); • **industrial applications**: 16 tests for detecting pathogens commonly involved in food contamination, notably *Escherichia coli* O157 (including H7), *Salmonella*, *Listeria*, and *Campylobacter*.
Other information	VIDAS® is used firstly as an additional platform for innovative high medical value tests in consolidated central laboratories, and secondly, as a platform for routine tests in laboratories with little consolidation. bioMérieux is carrying out R&D work to enhance the menu of VIDAS® tests, notably with the NEPHROCHECK® test arising from the acquisition of Astute Medical Inc. and intended for acute kidney injury, a test for diagnosing traumatic brain injury arising from the partnership with Banyan Biomarkers, a test for diagnosing inactive tuberculosis and tests for infectious tropical diseases related to arbovirus, such as Dengue fever.

* *Mean Time Between Failures = arithmetic mean of the time of operation between failures in a system.*

Clinical Industry Reagents Instruments Software Services

1.3.3.2 Other product lines marketed

Microbiology

Manual measurement of the minimum inhibitory concentration (MIC) of an antibiotic: the ETEST® product line

ETEST® is a technique for dissemination in an agar medium enabling the minimum inhibitory concentration (MIC) of an antibiotic to be measured. ETEST® is useful to guide antibiotic therapy by measuring the sensitivity of germs to antibiotics and detecting resistance mechanisms. This technique is perfectly adapted to rare bacteria or those with difficult growth, and supplements the VITEK® offer, enabling testing the sensitivity of a newly commercialised antibiotic before it is included in the VITEK® cards, and adding a test for a particular antibiotic for which more fine-grained information is necessary.

The agar media necessary to measuring the minimum inhibitory concentration (MIC) of an antibiotic were developed and/or validated to facilitate the use of ETEST®.

In 2019, bioMérieux obtained accreditations from the FDA for four new ETEST®: ETEST® Meropenem/Vaborbactam, ETEST® Telavancine, ETEST® Imipenem/Relebactam, and ETEST® Eravacycline.

Identification of bacteria and manual antibiograms: API®, ATB™ and RAPIDEC® CARBA NP product lines

API® analytical profile indices are recognised as leaders at the worldwide level in the manual identification of bacteria. The API® product line is also used by industrial customers.

The Company has developed ATB™ New, a semi-automated instrument for emerging countries which includes analytical profile indices and antibiograms compliant with the CLSI® standard (Clinical and Laboratory Standards Institute).

bioMérieux also offers a simple solution for quickly and economically detecting or confirming the production of carbapenemases by gram negative bacilli using RAPIDEC® CARBA NP.

Solution for quantitative microbiological quality control: BIOBALL® product line

Companies and pharmaceutical laboratories must test and ensure the quality and safety of their products. BIOBALL®, which contains a precise number of microorganisms, can be added directly to samples of media or matrices, and thus control the fertility of culture media.

Rapid microbiology instruments using cytometry: CHEMUNEX® product line

The cytometry analysers CHEMUNEX® are based on a technology associating a fluorescent viability marker and detection by laser beam. They are an alternative to the traditional culture of microorganisms in a Petri dish and can provide results extremely quickly and reliably, for food, cosmetic, and pharmaceutical groups. It can be used for the accelerated release of batches before the market release of finished products, as well as for managing production plants.

The range includes the SCANRDI® and D-COUNT® instruments:

- SCANRDI® scanning cytometry equipment (also known as solid-phase cytometry) is used by the pharmaceutical industry for testing medicines that are sterile (*e.g.* injectable) or not (*e.g.* eye lotion), as well as pharmaceutical-quality water;
- D-COUNT® flow cytometry is particularly adapted to the microbiological testing of products that are difficult to filter: dairy products, fruit juice and cosmetics.

Detection of endotoxins: ENDONEXT™ product line

In 2018, bioMérieux launched ENDOZYME® II GO, a new test for detecting endotoxins from the bioMérieux ENDONEXT™ product line, based on recombinant horseshoe crab Factor C (rFC). The rFC technology, authorised by the European Pharmacopoeia since 2016, enables complete elimination of the use of horseshoe crabs, a species that is threatened in Asia and protected in the United States, whose blood is used in most tests for the detection of endotoxins currently available on the market.

This new test, arising from the joint expertise of bioMérieux in microbiology and Hyglos GmbH in the detection of endotoxins, enables testing for endotoxins in water of pharmaceutical quality, injectable medicines and other pharmaceutical products.

Molecular biology

Offer covering the automation of the molecular biology laboratory and extraction: NUCLISENS® product line

For the extraction of DNA and RNA, bioMérieux offers the systems NUCLISENS® MINIMAG® (semi-manual), NUCLISENS® EASYMAG® (automated, 24 extractions/40min), and EMAG® (automated, 48 extractions/90min). The extractions obtained are of great purity, and these systems offer extraction flexibility that can process very diverse types of samples.

The product range is supplemented by ESTREAM™, an automated preparation station for samples to process PCR tests. This new solution can optimise the analysis flows and improve standardisation and traceability in molecular biology laboratories, with the aim of improving the quality of results provided to clinicians.

Monitoring of immunocompromised patients: ARGENE® product line

The tests of the ARGENE® range are used for detecting and monitoring immunocompromised patients, while waiting for a graft or transplant. They detect cytomegalovirus, Epstein Barr virus, adenovirus, enterovirus, infectious respiratory pathogens including MERS CoV, responsible for Middle East Respiratory Syndrome, and the herpes virus. In 2019, bioMérieux supplemented its product range with the launch of the tests HSV1&2 VZV R-GENE®, HSV1 HSV2 R-GENE® and VZV R-GENE®. As the COVID-19 pandemic spreads, bioMérieux has developed a SARS-CoV-2 R-GENE® test, on an urgent basis, which meets the needs of clinicians and health authorities in the fight against this new infectious disease.

Detection of microorganisms for the food industry: GENE-UP® and VERIFLOW® product lines

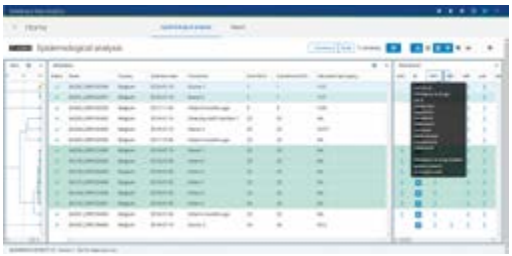
Intended for players in the food industry, GENE-UP® enables microbiological checks to be carried out on food, raw materials and the production environment. This innovative solution considerably simplifies laboratory flows. This new generation system combines the expertise of bioMérieux in industrial applications and BioFire in molecular biology.

GENE UP® enables the detection of the most frequently searched-for pathogens in the food chain, whether they are bacterial (*Salmonella*, *Escherichia coli* O157:H7, *Listeria* spp, *Listeria monocytogenes*, EHEC, *Cronobacter*) or viral (Norovirus GI, Norovirus GII, Hepatitis A and Hepatitis E).

bioMérieux has supplemented its molecular biology offer through the acquisition, in 2019, of Invisible Sentinel, which offers innovative solutions for detecting pathogenic agents and other contaminants in food and drink.

The VERIFLOW® product line is very easy to use and therefore does not require any sophisticated laboratory infrastructure. It is used by various customers in the food industry: beer, wine, poultry, fruit juice and nutraceuticals.

Service offer for epidemiology by new generation sequencing (NGS): EPISEQ™ CS



Under its partnership with Illumina, a worldwide leader in sequencing, bioMérieux has developed a next-generation sequencing solution dedicated to epidemiological monitoring of bacterial infections. At the beginning of 2019, a new version called EPISEQ™ CS, based both on the knowledge of bioMérieux in microbiology and the expertise of Applied Maths in software development, was launched. This version aims to cover the 13 disease-causing organisms most frequently encountered in the case of healthcare-associated infections (HAI) and may be applicable whatever the sequencer used.

Immunoassays

Hybiome markets 2 automated medium-rate immunoassay platforms (AE-180 and AE-240), which use a latest-generation CLIA technology and offer a menu with more than 80 parameters. Furthermore, in July 2018, Hybiome received accreditation from the Chinese authorities (CFDA) to commercialise the AE-120 platform, which will enable it to increase access to its menu of parameters.

1.3.3.3 Companion diagnostic tests

The Company has set up the Companion Diagnostic program with the aim of developing "companion tests"(1), or "supportive/complementary diagnostic"(2) tests, in partnership with pharmaceutical companies.

Also, bioMérieux is developing, in collaboration with pharmaceutical companies, tests for its ETEST® and VITEK® 2 product lines, which aim to evaluate sensitivity to new antibiotics.

1.3.3.4 Services and solutions

In line with its strategy, bioMérieux continues to develop services in addition to its products in a solutions-based approach to help clinical and industrial laboratories tackle their current and future challenges.

Services for laboratory organisation

bioMérieux offers a Lab Consultancy service based on Lean Six Sigma which adapts to the specific needs of microbiology laboratories, providing customers with an objective assessment of current performance and helping them focus on current and future workflow and procedural improvements to the laboratory.

(1) A companion test is a diagnostic test for selecting only the patients who are likely to receive the benefit of a targeted therapy by identification of a predictive marker.
(2) Supportive/complementary diagnostic tests are used to stratify homogeneous cohorts of patients to be treated in clinical trials.

Training and education

bioMérieux offers a comprehensive range of training modules for technicians and biologists with the aim of developing their skills in the routine and expert use of its products, various scientific issues and professional development.

Quality and compliance (accreditation assistance)

In order to support laboratories in the quality and accreditation process, bioMérieux offers method evaluation solutions to validate its products for routine use, in view of obtaining laboratory accreditation.

1.3.3.5 Rationalisation of the commercial offering

bioMérieux carries out a continuous process of evaluation of its portfolio aiming to rationalise its commercial offering, notably with, in 2018, the cessation of distribution of a product line for the microbiological analysis of urine, and in 2019, that of the rapid immunoassay test lines VIKIA® and BIONEXIA®, as well as the line of Petri dishes produced in China.

1.4 Strategy of bioMérieux

1.4.1 Competitive advantages

The Group's principal strengths are:

- a family majority shareholder, whose scientific, industrial and commercial vision has translated into financial stability, continuous sales growth and consistently satisfactory results, while successfully positioning the Company in the technologies of the future;
- a high level of expertise in the diagnosis of infectious diseases, based on over 50 years of experience in biology, which is also relevant for new areas such as industrial applications and cardiac diseases;
- a broad and balanced geographic footprint supported by a global distribution network that maximises marketing opportunities for its products, and a longstanding presence in emerging countries, enabling the Group to seize market growth opportunities;
- around 80% of its sales generated in three sectors where, based on its knowledge of the market, it holds the leading position: clinical microbiology, industrial applications, and molecular and syndromic diagnosis of infectious diseases:
  - a world-leading position in clinical microbiology, an extremely broad product range that can fulfil the needs of any size microbiology laboratory, one of the most complete collections of bacteria in existence, and unique expertise in bacteria and bacterial resistance mechanisms,
  - a highly respected pioneering and leading position in industrial applications, where the Company has the widest product range, and strong market positions,
  - an enhanced portfolio in molecular biology, which has created the market for syndromic diagnostics thanks to the BIOFIRE® FILMARRAY® system, covering infections of the upper respiratory tracts, pneumonia, sepsis, and gastro-intestinal infections, as well as meningitis and encephalitis;
- an installed base, primarily composed of closed systems, meaning designed to only use reagents developed specifically for these instruments and sold by bioMérieux; this installed base requires a service department made up of a team of maintenance and application engineers, who work on the ground or remotely;
- a drive for innovation to enhance the medical value of diagnostics and laboratory workflow, driven by significant capital expenditure on R&D: based on a percentage of sales, it exceeds expenditures made by its competitors. This drive leads to the regular release of new and innovative products and, combined with an efficient system to track new technologies, facilitates the identification and selection of the most promising advances, particularly in the area of diagnosis of infectious diseases;
- a genuine capacity to make targeted acquisitions and establish strategic partnerships and expertise in integrating acquired companies and forming commercial and operational synergies.

1.4.2 Strategy and priority policies

In the current uncertain economic climate, the Company feels that clinical and industrial *in vitro* diagnostics will benefit from dynamic growth drivers, as it becomes essential for medical decisions and for ensuring the safety of consumers. It also offers savings to healthcare systems and a major development opportunity in emerging countries.

In clinical microbiology especially, bioMérieux considers that there are both significant barriers to new entrants and attractive growth opportunities. According to its estimates, average annual growth on the market could pick up slightly, driven largely by the emergence of new technologies enabling faster results, and by the laboratories' need for automation to optimise workflow, standardise processes and shorten the time for returning results.

Backed by its competitive advantages, bioMérieux undertakes to be a pioneer at the service of public health, particularly in the fight against infectious diseases, and sets the following ambitions for itself:

- to consolidate its leadership in clinical and industrial microbiology. It is therefore continuing to innovate in these two areas. In order to fulfil the expectations of its customers, bioMérieux is launching new automated solutions, while continuing to improve its existing ranges;

- to consolidate its position as a pioneer and a reference in the field of the syndromic diagnosis of infectious diseases through the molecular biology range BIOFIRE® FILMARRAY®. Its strategy is based in particular on the geographical deployment of this range and the enhancement of the platform's menu of tests;
- strengthening its position as a specialist in immunoassays. It intends to capitalise on its VIDAS® franchise through marketing new parameters, through its expertise in high medical value parameters and the success of VIDAS® in emerging countries.

bioMérieux will also pursue its ambitious international development and will continue to promote innovation all over the world. Resolutely international, the Company intends to continue its expansion in the emerging countries and the adaptation of its commercial policy to the new economic context of the developed countries, notably in North America, the world's biggest market, and in Western Europe.

In 2015, and in the years to come, bioMérieux's main priorities will be to further develop its customer focus, enhance its operational excellence and ensure the sustainable and profitable growth of its business.

BELONG. DARE. IMPACT.

bioMérieux has defined an attitude that expresses its culture. The momentum expressed by the three words BELONG. DARE. IMPACT. describes a state of mind that guides the daily actions of employees and serves its long-term vision:

- BELONG: Expresses our humanist culture, the BELONGING to a unique community, and our commitment to public health and the regions in which we are established;
- DARE: Expresses the pioneering spirit. We want to DARE to create and innovate. We encourage initiative and risk-taking;
- IMPACT: Expresses our entrepreneurial ability and our capacity to develop advanced diagnostic solutions to serve health throughout the world. We have a positive IMPACT because we always seek to make a difference.

1.5 Quality systems and applicable regulations

1.5.1 Quality Management Systems

The Company is particularly attentive to compliance with quality standards and regulatory questions.

Quality System

The Global Quality Management System Manual describes the quality management procedures that govern the Company's activities, from the design of products to their delivery and installation, including after-sales service.

In addition to this manual, each subsidiary, production site and R&D site has additional local documentation describing provisions that are specific to its activities.

These manuals are used as permanent reference documents for the implementation, management and improvement of the Quality Management System, as well as for relations between bioMérieux and its customers.

Global Quality Department: Organisation and duties

This department ensures that a Quality Management System is implemented that is independent of operations. It has a Global Quality System and Regulatory Compliance Department, which contributes to defining the strategy aiming to proactively improve the processes put in place on the various sites and for all support functions. This department is also responsible for the post-market surveillance process. Its duties include the following:

- to improve the performance of the systems, tools and methods dedicated to quality;
- to set up indicators to improve the processes and procedures of the quality system, and to measure their appropriateness and efficiency;
- to ensure compliance with the requirements of customers and with regulatory requirements concerning the processes used in the design, production, distribution, installation and maintenance of products;
- to implement all actions concerning product correction or withdrawal, including the instructions to be followed by the teams on the ground;
- to manage incident reports in France and the United States and oversee the reports filed by other subsidiaries.

This department uses the resources necessary to apply or enforce, by all employees of the Company, the rules necessary to the achievement of quality objectives.

In addition, a Quality Assurance Department is involved in all phases of product development and at each stage of production, distribution and marketing.

Certification of sites

The distribution subsidiaries are mostly certified ISO 9001.

The main manufacturing sites of the Group, which produce *in vitro* diagnostic systems, are certified as compliant with the standards ISO 9001, ISO 13485 and MDSAP (Medical Device Single Audit Program grouping the standards of the following countries: United States, Canada, Japan, Brazil and Australia), considered as the quality references for this type of activity. This certification is issued within a regulatory framework either by a certifying body acting under the auspices of regulatory authorities, or where such recourse is not required, by an outside certifying body, as part of a voluntary procedure on the part of the Company.

1.5.2 Regulatory aspects

Specific regulations apply to each product category: products for clinical customers (medical laboratories, whether private or in hospitals) and products for industrial customers (pharmaceutical, cosmetics, food and veterinary industries).

Medical *in vitro* diagnostics systems used for humans are subject to specific national or international regulations. These regulations address the efficacy, performance and safety of systems.

Reagents used for microbiological testing intended for industrial customers must comply with standards that vary depending on the nature of controls and the specific requirements of users (pharmacopoeia, AFNOR-type standards, ISO, etc.). Regulations applicable to these products are part of the regulations governing industrial and consumer products and primarily concern product safety.

The production sites are regularly inspected/audited by the competent authorities.

1.5.2.1 Clinical *in vitro* diagnostics

As for any health product, those dedicated to *in vitro* diagnostics are governed by national or international legislation. They are subject to regulatory procedures that are less restrictive than those of other health sectors, such as the pharmaceutical industry. *In vitro* diagnostics provides medical information from biological samples taken from the patient (blood, urine, faecal matter, etc.), with the analysis itself being done outside the body of the patient within biology laboratories.

Also, some have their own regulations, or rely on the regulations of other countries, and others have no specific regulation. However, a growing number of countries have their own procedures for releasing *in vitro* diagnostics products on the market. Certain member states accept a gradual alignment for products that are already available on the market. Other countries require full and immediate compliance with their new market launch procedures.

The main legislation that governs the business of *in vitro* diagnostics is described below. These regulations classify devices on the basis of end-applications and risk assessment, and are becoming increasingly complex. The regulatory procedures to be followed prior to the marketing of these products differ based on the risk category of the product.

Within bioMérieux, as part of the procedures for marketing a product, the Regulatory Affairs Department creates a technical dossier prior to the launch of any new product. This documentation, which includes all the items verifying that the product meets all the requirements imposed by the regulation, is then submitted for approval to one of the Regulatory Affairs managers. The Marketing Committee verifies that the approved technical dossier is available.

Regulatory principles applicable

European Union	The regulatory environment results from directive 98/79/EC dated October 27, 1998 and the new European IVDR regulation dated April 5, 2017 (2017/746/EU), for a transition period of five years, at the end of which the regulation will be the only standard applicable to all *in vitro* medical diagnostic systems. **Directive 98/79/CE**, transposed into French law, harmonises the market for *in vitro* diagnostics, by standardising the procedures for the market release of *in vitro* diagnostics products. Based on the risk level and the alternative options offered under the regulation, a manufacturer chooses the appropriate procedure to follow. Currently, about 95% of the Group's products are marketed under the manufacturer's exclusive responsibility, following a self-evaluation to determine whether they are compliant (CE marking). As a result, there is no regulatory certification period following this declaration. For the remaining 5%, of a higher risk, it is necessary to obtain certifications of compliance before putting these products on the market. All certifications have been obtained and renewed for CE markings for all *in vitro* diagnostics products currently marketed in the European Union. For high-risk or medium-risk products, the level of regulatory intervention is proportional to the risk. This ranges from certifying the quality management system, when reviewing the product file (design file), to the inspection of each batch prior to sale. Generally, the time period required for obtaining the necessary certifications is less than six months. **The European IVDR regulation** (2017/746/EU) concerning the supervision of the market release of *in vitro* diagnostic tests, applicable without national transposition, aims to strengthen the supervision of the market release of *in vitro* diagnostic tests. The main new features provided by these regulations are the following: • the classification of products is now based on the risk related to the patient and/or public health; • the manufacturers must demonstrate the analytical and clinical performance of their products and their scientific validity; • the checks by the notified organisations are strengthened before and after marketing; • health companies must appoint a qualified person ("person responsible for overseeing compliance with the regulation") in charge of vigilance, the declaration of compliance with the regulations, the release of batches and the declaration on the performance evaluation of products at the most risk. Since 2014, bioMérieux has had a program to perform the work necessary to bring its products into compliance with this new regulation. As a result of Brexit, bioMérieux has made arrangements in order to adjust to the decisions that could be made that would enable its products to continue to be marketed in the British market.
United States	The level of FDA intervention is also proportionate to the risk. Some products in the microbiology product line are exempt from registration and are under the responsibility of the manufacturers. Medium-risk products must be 510(k) registered, which consists of demonstrating equivalence with a product already on the American market. In addition to 510(k) registration, a so-called *de novo* process was added by the FDA. This process is designed for new medical devices, for which the manufacturers cannot establish substantial equivalence. The FDA has implemented a unique medical device identification (UDI) system to which products sold in the United States are subject. Once fully implemented, the labeling of most of these devices will include a human and machine-readable identifier. It will be unique, from manufacturing to patient use. By facilitating traceability, this provision will improve patient safety, modernise post-market surveillance and facilitate innovation.
Japan	Products are subject to a registration procedure which is similar to that of the United States.
China	Products require a registration procedure with the NMPA (National Medical Products Administration), which includes the following phases: • the performance of quality control tests on 3 batches of reagents by the National Institute for the Control of Pharmaceutical and Biological Products or by another laboratory qualified by the NMPA. For instruments, additional tests must be carried out, such as to demonstrate their compliance with electromagnetic compatibility standards; • a performance study carried out in China; • an administrative review of the application; • a technical review of the application including areas such as production, product performance, quality control tests and the report on the performance study carried out in China.

Monitoring systems and audits

Applicable laws and regulations, which may differ from one country to another, impose an additional monitoring system (post-market surveillance - PMS), which requires manufacturers and users to notify the relevant regulatory body of any incidents or risks that could have harmful effects on human health. The PMS system also provides for a series of corrective measures. This allows the manufacturer to intervene voluntarily, correcting or recalling the products concerned.

The Company's sites are subject to audits and/or inspections:

- by regulatory authorities (FDA, ANSM, etc.), bodies acting on behalf of regulatory authorities, and certifying bodies. These audits are used to check compliance with the standards ISO 9001, ISO 13485 and MDSAP, or with the applicable national regulations to which the regulatory authorities refer;
- by certain customers, notably in the industrial field, aiming firstly to ensure that the Group's products and procedures are compliant with regulatory standards in force, as well as their own standards, and, secondly, to benefit from guaranteed quality of service;
- by the Company itself, to identify margins for improvement in its organisation; it may also audit its Quality Management System overall. These audits are conducted by the Company's internal auditors based on a program drawn up each year.

The ability to manage manufacturing processes, quality control and product release is guaranteed by validation and monitoring methods performed throughout the course of production.

The main inspections by the regulatory authorities on bioMérieux's sites in 2019 are shown in section 3.4.3.

1.5.2.2 Microbiological testing in Industry

In the field of industrial applications, regulations applicable to manufacturers of industrial microbiological control products are still limited to their safety aspects. However, in order to fulfil the requirements of its customers, the Company complies with the standards that are applicable to them (standards according to the use of products: pharmacopoeia, standards of the type AFNOR, ISO, etc.). The inspection rules that are binding upon the activity of customers of bioMérieux lead them to perform a large number of audits of their quality systems in order to check compliance with the requirements of GMP (Good Manufacturing Practice) applicable to the pharmaceutical industry. Recent crises in the food industry (*Listeria*, *Escherichia coli*, *Salmonella*, etc.) may lead to more stringent regulations being applied. Moreover, in the United States, for example, authorities may impose supplementary security measures as part of the fight against bioterrorism.

1.5.3 Management and monitoring of customer complaints

The Company has a procedure for the management and monitoring of customer complaints. The procedure serves to handle complaints while providing the Company with the information it requires to continuously improve its products.

1.5.3.1 Process of handling complaints

Complaints are processed on three levels:

- first level: most complaints are handled locally, by subsidiaries and distributors. Their closeness to customers allows them to deal with requests quickly;
- second level: complaints can be transferred to Global Customer Service (GCS) where they are handled by a specialised team that investigates to give a response to customers;
- third level: for complaints requiring a series of investigations involving the production sites and/or the R&D teams. An analysis is performed as to the causes of these complaints that could not be identified by levels 1 and 2. The Company can then resolve the customer complaint and implement corrective and preventive actions to avoid similar complaints in the future.

1.5.3.2 Quality management in the regions

Each bioMérieux entity has its own Quality Department which in turn reports to the Global Quality Department. The size and organisational structure of these units varies depending on quality standards and local regulations.

1.6 Research & development, patents and licenses

1.6.1 Research & development

1.6.1.1 Investment policy

The Group's R&D expenses, which amounted to €374 million or 14% of revenues in 2019 (compared with €327 million in 2018 and €304 million in 2017), focus on technologies that are developed internally or in partnership with other companies or academic research institutes, or under licenses acquired by the Company.

R&D activities have two key objectives: to enhance laboratory efficiency and to improve the medical value of diagnostic tests.

The main research & development projects cover:

- improvement of the functionalities of existing instruments;
- enhancement of the test menus available on its instruments.
- the development of new generations of instruments;
- the updating and development of embedded or independent software.

1.6.1.2 Corporate organisation

R&D is organised as follows:

- innovation activities are ranked according to strategic priorities and are intended to ensure continuity with the development stages, as well as to focus each R&D site on its area of expertise;
- research activities on biomarkers are carried out by the Open Innovation & Partnerships Department. This department's task, *via* partnerships, is to identify and validate biomarkers enabling the development of diagnostic tests with high medical value;
- development activities for reagents, instruments and associated software, and support to the lines that are marketed, are managed by each of the Clinical and Industry Application units; Furthermore, activities related to the collection, processing and interpretation of data (Data Analytics) are carried out within each Unit.

The Clinical and Industrial Application units are responsible for prioritising, validating and monitoring projects (approving schedules, human resources requirements, cost and risk). Major projects are periodically reviewed by the Executive Committee.

The Portfolio and Strategic Planning Department ensures that the project portfolio is aligned with the Company's overall strategy and assists the different departments in selecting R&D projects.

The R&D activities rely on nearly 1,800 employees and involve 18 R&D centres.

The Group's policy is to locate R&D activity in the area where the related product line is (or will be) manufactured whenever this is possible. The following table breaks down the Group's R&D activities at December 31, 2019, by geographical area:

	Site	Reagents	Systems	Software
EMEA	**Marcy l'Étoile** (France)	Immunoassays (VIDAS®)		
	Craponne, La Balme (France)	Microbiology (culture media, ETEST®, TEMPO®)	New technologies, laboratory automation	Microbiology Bio-informatics
	Grenoble, Verniolle (France)	Molecular biology (EASYMAG®/EMAG® BIOFIRE® FILMARRAY®, ARGENE®, CEERAMTOOLS®, GENE-UP®) Molecular virology for food applications	Molecular biology	Bio-informatics
	Combourg, Ker Lann (France)	Microbiology (culture media), cytometry reagents	Industrial applications: laboratory automation/sample preparation, counting, flow cytometry	
	Florence (Italy)		Immunoassays (VIDAS® product range) Industrial microbiology (TEMPO®) Molecular biology (EASYMAG®/EMAG®)	
	Bernried (Germany) site of Hyglos	Detection of endotoxins in pharmaceutical products		
	Sint-Martens-Latem (Belgium) site of Applied Maths			Bio-informatics
AMERICAS	**St. Louis** (Missouri, United States)	Automated microbiology (VITEK®)	Microbiology (VITEK®, BACT/ALERT®, VITEK® MS, BACT/ALERT® VIRTUO™)	Microbiology Bio-informatics
	Durham (North Carolina, United-States)	Microbiology (blood culture) BACT/ALERT®		
	Salt Lake City (Utah, United States) – site of BioFire Diagnostics	Molecular biology (BIOFIRE® FILMARRAY®)	Molecular biology (BIOFIRE® FILMARRAY®)	
	Salt Lake City (Utah, United States) – site of BioFire Defense	Molecular biology for the US Department of Defense	Molecular biology for the US Department of Defense and industrial and clinical applications	
	San Diego (California, United States) – site of Astute Medical	Identification and validation of biomarkers for immunoassays		
	Philadelphia (Pennsylvania, United States) – site of Invisible Sentinel*	Molecular diagnostics for food applications VERIFLOW®		
ASPAC	**Suzhou** (China) – site of Hybiome	Immunoassay tests	Platforms AE 120, AE 180, AE 240	
	Hyderabad (India) -	Molecular biology tests		

* *Invisible Sentinel was acquired by bioMérieux on February 7, 2019.*

Innovation is a major priority for the Company and every year, bioMérieux's Patent Awards recognise the Company's inventors who have filed high-potential patents.

1.6.1.3 Clinical R&D

Strategy

Innovation has always been a prime focus for bioMérieux. Its R&D programmes have a two-fold objective:

- enhance the medical value of diagnostics by constantly reducing the time required to obtain results, identifying new disease-causing organisms, finalising new biomarkers and providing information tailored to the needs of medical professionals;
- improve the efficiency and productivity of laboratories and healthcare facilities, thereby optimising overall healthcare costs.

The research & development teams working in clinical applications focus on the development of new platforms and test menus.

Agreements

Part of the Company's research activity, in particular for the development of new technologies, is based on partnership arrangements with leading public research institutes (CNRS, INSERM, Institut Pasteur, NIH (National Institute of Health), United States), universities, hospital research centres, laboratories, and biotechnology firms.

The agreements signed by the Company provide for the sharing of intellectual property rights as well as the payment of royalties when the products developed are actually brought to market.

The most significant existing agreements on clinical applications are:

- the agreement signed with Lumed, an innovative startup in the IT and health field, to help hospitals control their antibiotic use and fight against microbial resistance. This collaboration illustrates bioMérieux's selective approach to partnerships to develop its own business activity Data Analytics;
- the agreement signed with Qvella to investigate the potential of its technology to process samples directly;

  the global agreement signed with Banyan Biomarkers for the development and marketing of markers for traumatic brain lesions on the VIDAS® platform;
- the extension of the collaboration with the CNES on Aquapad, an innovative device for performing microbiological diagnostics on the potable water of a space crew;
- the contract awarded to BioFire Defense by the US Department of Defense (DoD) for the technological development of the Next Generation Diagnostics System (NGDS);
- partnership agreement signed with Baxter International Inc., a leading player in intensive care, for the development of future biomarkers for quickly identifying acute kidney injury (AKI) and giving information for treatment.

The Company has also established joint research laboratories with French and foreign academic partners:

- In France, with Hospices Civils de Lyon (HCL)

  As well as the ANTOINE research programme (biomArkers to differeNtiate bacTerial frOm vIral iNfEctions) launched in 2017 within the bioMérieux-HCL joint research laboratory, covering severe bacterial infections in children arriving in accident and emergency departments, bioMérieux and the HCL have begun a new project. It covers a study of the NEPHROCHECK® test for the early evaluation of the risk of acute kidney injury in multiple-trauma patients who have a profile close to that of patients with sepsis received within the intensive care unit of the Édouard-Herriot hospital.
- In France, with the French Institute for technological innovation in microbiology BIOASTER
  - The REALISM (REAnimation Low Immune Status Markers) research program was launched in October 2016 by bioMérieux, l'Ecole Supérieure de Physique et Chimie Industrielles de la Ville de Paris (ESCPI), GSK, the HCL, and Sanofi to improve the case management of patients with a high risk of sepsis. This program has identified and validated new biomarkers to improve the treatment of patients with a high risk of sepsis.
  - At the end of 2018, the DIREX research project on rapid microbiology was begun. It aims to characterise gram-positive and gram-negative bacteria, which constitutes an important stage in identifying pathogens, by automated reading.
  - bioMérieux is a partner in the ISIT-TB project alongside BIOASTER. The aim of this project, begun in 2015, is to identify biomarkers for the diagnosis of tuberculosis and to find out, in a patient exposed to tuberculosis pathogens, which of them is at risk of developing active tuberculosis, and what the patient's response is to the treatment. At the same time, molecular markers are prototyped on the BIOFIRE® FILMARRAY® platform.
- In China

  After the collaboration with Fudan University Shanghai Cancer Hospital, a new mixed-research unit was created with Shanghai Children's Medical Center under a three-year partnership contract signed at the beginning of 2019. Initially, it will lead to a clinical study concerning the use of the NEPHROCHECK® test for the early evaluation of the risk of acute kidney injury in young children after cardiac surgery.
- In Brazil

  On the model of the ANTOINE research program carried out with the Hospices Civils de Lyon (HCL), bioMérieux has set up a partnership with Infants Institute of São Paulo in Brazil to launch the ANTONIO Project concerning children aged under three admitted in accident and emergency with a febrile syndrome. It aims to validate the biomarkers that can rule out a bacterial infection and guide the prescription of antibiotics.

bioMérieux participates in the AMR (Antimicrobial Resistance) challenge, a new initiative by the American CDC (Centers for Disease Control and Prevention), which aims to bring together heads of government, health sectors and industry in a concentrated effort for one year, with the aim of accelerating the fight against the threat to public health posed by microbial resistance. About 75% of bioMérieux's R&D budget dedicated to clinical applications is devoted to perfecting new solutions participating in the fight against AMR.

Lastly, bioMérieux is also a partner in the VALUE-Dx project, proposed by six companies in the *in vitro* diagnostic sector, associated with 20 other partners including the University of Antwerp and the Wellcome Trust. VALUE-Dx is an approach on the European scale intended to collect data measuring and demonstrating the value of diagnostic solutions on a medical, economic and public health level, in the fight against antimicrobial resistance.

1.6.1.4 Industrial R&D

Strategy

The Industrial Applications unit has its own R&D teams.

This unit develops and manufactures the broadest range of industrial microbiological control solutions. It provides solutions for sample preparation, identification and microorganism typing.

The unit provides solutions for:

- the food industry;
- veterinary diagnostic laboratories;
- the biopharmaceutical industry;
- the cosmetics industry;
- blood banks.

1.6.2 Intellectual property, licenses, usage rights and other intangible assets

1.6.2.1 Intellectual property

The Company protects patents, copyrights and trademarks on its products and processes and actively defends its intellectual property rights throughout the world.

Proprietary patents

Diagnostic systems, which are underpinned by a combination of instrumentation, IT and biology, are heavily reliant on the protection of intellectual property; the players in the sector therefore seek to obtain strong positions in matters of patents.

Manufacturing know-how, installed base of closed systems and the number of menu parameters developed during the patent protection period generally mean that companies in this sector are less exposed when patents expire than pharmaceutical companies that have to deal with the launchl of generic drugs on the market.

Conversely, high medical value tests may be more sensitive to the expiration of their patent protection.

The Company continues to deploy its intellectual property policy. It actively protects its research findings *via* patents (around 30 new patent applications per year) and monitors its competitors for any infringements of its rights. At December 31, 2019, the Group owned 554 patent families, the majority of which are in force in Europe, the United States, and China. At the same date, the Group held 431 patents granted in the United States and 331 patents granted in Europe.

The Company's policy in this matter consists of filing a priority application (generally in France or in the United States) and applying for an extension within one year under the patent cooperation treaty (PCT), which has a single procedure for filing a patent in the 153 countries that are party to the treaty (at December 31, 2019). The final choice of countries for patent extension is made at the end of the PCT procedure, *i.e.* about 30 months after the initial filing. As a general rule, patents are extended in countries where the market is largest, notably the United States, Europe (especially France Germany, United Kingdom, Italy and Spain), China and Japan.

Licenses granted by third parties

In the context of its business, the Company benefits from licences granted by third parties to develop or market reagents or technologies (see section 1.6.2.2 and section 2.1.5).

Licenses granted by the Company

The Company has granted the following licenses to third parties:

- patents covering mutations to nucleic acids (Factor V) that are decisive for identifying the risk of thrombosis. The patents will expire in 2020 in the United States and have expired in 2015 outside the United States;
- patents covering sequences or techniques for detection of certain viruses such as EBV[1], for which the basic patents expired between 2013 and 2016. Three of the five patent families are currently in force, and the other two have expired in all countries except the United States;
- other patents, notably those covering the NEPHROCHECK® test system (namely what is necessary for tests, the control solutions, the necessary calibration, and the Astute140 measurement appliance) enabling diagnosis and prognosis of acute kidney injury.

For all technologies controlled by bioMérieux *via* exclusive third-party licenses with sublicensing rights, a portion of the revenue from sublicensing agreements is paid over to the patent owner.

Since 2018, the Company has had a policy aiming to commercially develop the biological raw material that it owns. Thus, the Company granted licences on the use of cell lines (hybridoma) for the production of antibodies that might be able to be used in *in vitro* diagnostic solutions or that might be offered for sale as biological raw materials.

(1) Epstein-Barr virus, responsible for infectious mononucleosis.

Trademarks

The Company owns the "bioMérieux" institutional trademark, which is registered in most countries both as a word trademark and as a word and device trademark. It should be noted that the use of the name "Mérieux" is managed by the Institut Mérieux, for all the companies under its control. Accordingly, the Company obtained the right to use the name bioMérieux within the scope of its activities from the Institut Mérieux.

The Company also has legal title to the trademarks of products (instruments, reagents and/or software) and services that it markets.

The new brand registrations are made as basic registrations in France or the United States, then the protection is extended:

- by registering brands with the European Union Intellectual Property Office, in all countries of the European Union;
- by international registration with the World Intellectual Property Organisation; and
- registration of national trademarks.

The portfolio includes 278 trademark families, and these have been registered in most countries.

Domain names

The Company owns more than 550 recorded domain names, including those consisting of the name "bioMérieux" and over 150 different extensions.

1.6.2.2 Degree of dependency

Dependence on patents and licenses

The Company holds a number of licenses which are listed below, the loss of which could have a significant impact on the Company's revenues:

- the PCT licence granted by Thermo Fisher along with the supply of raw materials, to develop and sell VIDAS® tests for the screening of procalcitonin as a marker of severe bacterial infections (renewed in October 2012 for the duration of all BRAHMS PCT patents);
- the NT-proBNP licence, granted by Roche Diagnostics, notably to develop and sell VIDAS® tests to detect NT-proBNP, a marker for congestive heart failure and acute coronary syndrome (patents on raw materials expiring in 2024);
- the licence to develop molecular beacons granted to PHRI Properties, Inc. notably to develop and sell products in the ADIAFOOD® line (patents expiring no later than 2024);
- licences concerning PCR technology granted by University Utah Research Foundation to develop and sell products in the BIOFIRE® FILMARRAY® line (patents expiring no later than 2025);
- licenses concerning technologies implemented as part of tests sold exclusively to the US government (BioFire Defense).

The Company also receives income from its patent portfolio (see section 1.6.2.1).

1.7 Property, plant and equipment

1.7.1 Land and buildings

Historically based in the Lyon region of France, the Company has expanded its geographical presence over the years by acquiring foreign companies, particularly in the United States, and by forming subsidiaries of its own.

The Company's production, logistics and R&D sites are generally fully owned by it.

1.7.2 Production

Manufacturing processes play a critical role in the *in vitro* diagnostics industry due to constraints related to the nature of the products. At end-2019, the Group operated 18 manufacturing sites organised by product line.

Manufacturing activities are organised by the Group based on the principle of "one site - one product line" (see section 2.2.3), partly due to the technical nature of the products, which requires highly specific expertise, specialised teams and on-hand R&D teams, and partly due to productivity gains that may be generated through economies of scale achieved by concentrating production. Petri dishes are the main exception to this principle due to their reduced shelf life and barriers to imports of animal-based products in certain countries. They must be manufactured close to customers at the facilities located in Rio de Janeiro (Brazil), Lombard (Illinois, United States), Madrid (Spain) and Combourg (France), in addition to the main manufacturing site in Craponne (France).

The Company endeavours to implement rigorous quality control at the production stage (see section 1.5.1).

The main production sites are described below.

	Site	Property/Rental	Surface area	Activity
EMEA	**Marcy l'Étoile** including Campus de l'Etoile (France)	Full ownership and real estate lease financing for the Campus de l'Etoile	187,000 m² including 53,000 m² of built usable floor space	• The Group's worldwide head office from the outset • Production of VIDAS® reagents • R&D • General Management, global functions, support functions and training centre
	Craponne (France)	Fully owned	80,000 m² including 33,200 m² of built usable floor space	• Production of culture media, including the product lines CHROMID® and 3P™ (Petri dishes, tubes and bottles, dehydrated media) • French sales department and sales administration • Support and global functions • R&D
	La Balme-les-Grottes (France)	Fully owned	119,000 m² including 19,000 m² of built usable floor space	• Production of the reagent lines API®, ATB™, TEMPO® and ETEST® • R&D microbiology, instrumentation and software
	Grenoble (France)	Fully owned	31,500 m² including 9,300 m² of built usable floor space	• R&D molecular biology
	Combourg (France)		43,000 m² including 12,000 m² of built usable floor space	• Production of reagents (culture media and cytometry) and instruments (product ranges for the automation of cytometry laboratories) intended for food industry applications • R&D industrial microbiology • Support functions (IS, customer services)
	Verniolle (France)		9,500 m² including 1,800 m² of facilities	• R&D molecular biology • Production of reagents (ARGENE® line)
	Florence (Italy) The Florence site is the Group's second-largest instrumentation centre	Fully owned	10,000 m² including 7,000 m² of built usable floor space	• R&D instruments • Production of VIDAS® instruments (immunoassays), NUCLISENS® EMAG® (molecular biology), TEMPO® and GENE-UP® (industrial applications) • Commercial activity for Italy
	Madrid (Spain)	Fully owned		• Microbiology production (Petri dishes and the CHROMID® line)

	Site	Property/Rental	Surface area	Activity
AMERICAS	**Durham** (North Carolina – United States)	Fully owned	579,000 m² including 21,000 m² of built usable floor space	• Registered office of bioMérieux Inc. • R&D • Production of microbiology reagents (BACT/ALERT®) • Customer services • Support functions
		Rental	10,000 m²	
	St. Louis (Massachusetts – United States)	Fully owned	141,000 m² including 66,000 m² of built usable floor space	• R&D • Production of microbiology instruments (VITEK® and BACT/ALERT®) and reagents (VITEK® cards)
	Lombard (Illinois – United States)	Rental	5,580 m²	• Production and sale of culture media (3P™ lines) for industrial applications in the United States
	Salt Lake City (Utah – United States) Site of BioFire Diagnostics	Full ownership on the campus of the University of Utah (Utah Research Park)	38,000 m²	• R&D • Production of the BIOFIRE® FILMARRAY® system (instruments and reagents) • Administrative and commercial functions of BioFire Diagnostics
	A new production site is being built in Salt Lake City.			
	Salt Lake City (Utah – United States) Site of BioFire Defense	To meet the expectations of BioFire's biodefense customers in the United States, BioFire Defense was created. All of the personnel, programmes and equipment for the Defence activity were physically transferred to a secure and separate site located in Salt Lake City		
	Philadelphia (Pennsylvania – United States)	Rental	1,000 m²	Production of molecular biology reagents (VERIFLOW®)
	Jacarepagua (Rio) Brazil	Fully owned	42,000 m² including 5,400 m² of built usable floor space	• Production, sale and distribution of reagents for ready-to-use media for microbiology (Petri dishes and the CHROMID® line) and industrial applications • R&D • Commercial and administrative functions
ASPAC	**Pudong (Shanghai)** Site of bioMérieux (Shanghai) Biotech Co. Ltd.		20,000 m² including 14,300 m² of buildings	• Production of rapid tests and culture media (Petri dishes of the CHROMID® line) • Commercial functions • Training centre
	bioMérieux Shanghai Co. Ltd. is also established on this site. The rapid test and culture media production activity was stopped in July 2019.			
	Suzhou (China) Site of Hybiome		9,000 m²	• R&D • Production of immunoassay instruments and reagents
	This site is the result of bioMérieux's equity investment in Suzhou Hybiome Biomedical Engineering Co. Ltd.			
	Sydney (Australia) Site of BTF	Rental	1,400 m²	• Production and sale of microbiological control reagents (BIOBALL®, EASYSTAIN®, ColorSeed, EASYSEED®)
	Hyderabad (India)		3,000 m²	• Production of molecular biology reagents
	This site is the result of bioMérieux's equity investment in RAS Lifesciences Pyt. Ltd.			

1.7.3 Supply chain

Given the dispersion and specialisation of manufacturing facilities, as well as the large number of products and their specific nature (reagents, instruments and spare parts), the logistics/supply chain team plays an essential role within the Group.

The logistics/supply chain function groups the following functions:

- handling of customer orders by the Sales Department;
- forecast management and demand planning;
- supply and storage of materials and components necessary for production;
- storage, transport and distribution of finished products.

To optimise the conditions of supply to customers and inventory management, product distribution is handled by:

- global platforms (in Europe and the United States) where finished products are stored and from which they are shipped to subsidiaries and distributors;
- local platforms – the management of which may be subcontracted to external operators – which process orders and shipments to customers of subsidiaries.

Among the global platforms, the IDC logistics centre at Saint-Vulbas in France is the largest. It handles the distribution of the instruments and reagents produced in Europe and in the United States to distributors and certain subsidiaries. It is fully owned and is located on land of 71,000 sq.m containing tall buildings with a total area of 9,500 sq.m.

In the US, management of the Durham (North Carolina) and Louisville (Missouri) platforms is subcontracted to a major industry player.

The logistics division manages the cold chain through the various stages of the distribution process and ensures product traceability (in particular through the use of barcodes on packaging).

Each subsidiary is responsible for managing its inventory levels of reagents and instruments, under policy guidelines set by the Group. It is supported by an expertise centre which optimises the coordination of flows and the balance between customer service and inventory levels.

After a phase involving the profound transformation of the organisation of its logistics, and a notable improvement in its performance, bioMérieux is now concentrating on the creation of more added value for its customers *via* personalised services.


BIOMERIEUX

2

RISK FACTORS

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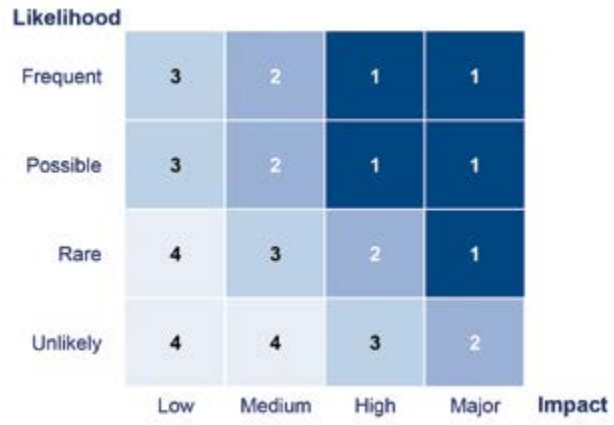
The Group is operating in an environment undergoing rapid development, causing risks for the Company that it might not be able to mitigate. A number of important factors could cause the Company's actual results to differ materially from those forecasted, with regards tp the achievement of its strategic objectives or its growth and profitability targets.

The risks and uncertainties presented below could have a material adverse impact on its business, outlook, financial position, results, ability to meet its objectives, or on its image and reputation. They are not the only ones to which the Company is exposed. Thus, at the time of writing this URD, from the outcomes of the risk assessment carried out during the year and taking into account the mitigation measures put in place, the Company considers the following risks as the most significant.

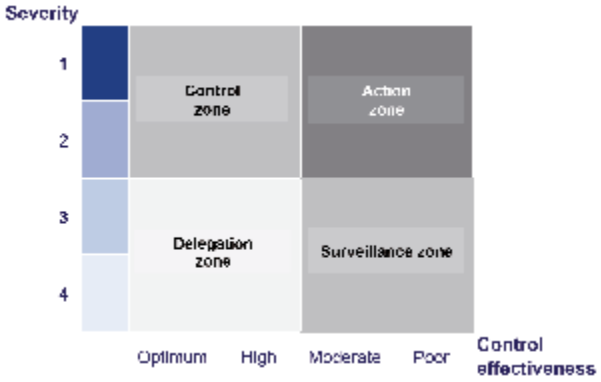
Methodology

To identify, assess and manage the risks it may face, the Company has implemented a risk map.

Firstly, this map enables to identify the main potential risks faced by the Company and to assess their likelihood of occurrence as well as their financial, legal, human and image impact.



Secondly, it allows the Company to identify and assess the efficiency of the actions implemented to mitigate these risks. This methodology is gradually rolled out within the operational entities and support functions, so as to manage the risks at a more detailed level.



The risk map is reviewed annually by the Executive Committee, then the Audit Committee. Work sessions and workshops are organised during the year to review gross risks, monitor the progress of action plans put in place, and assess the efficiency of risk management initiatives, while identifying and evaluating new risks. This enables the Company to assess its risk environment and when deedmed necessary, to define the action plans and internal audit program for the coming year.

This methodology is applied to describe and evaluate the main risks related to the Company's business, and where applicable, those created by its business relationships, its products or services. The presentation of the risk factors herafter is the result of this mapping exercise, at the date of this URD. The risks presented below are those that the Company considers as being specific to bioMérieux according to the meaning of Regulation (EU) 2017/1129 of June 14, 2017 and its subsidiary legislation, notably the ESMA Guidelines on risk factors under the Prospectus Regulation of March 29, 2019. Other risks, some of which are material, feature in the risk map and may affect bioMérieux, but have not been presented below because they do not fulfil this criterion of specificity.

TABLE SUMMARISING MAIN RISKS

The risk factors are presented in a limited number of categories according to their nature. In the description of each risk which follows, within each category, the risk(s) having the greatest impact and then the greatest probability of occurrence are presented first.

Category		Risk factors	Net impact	Probability
Risks relating to bioMérieux's industry		Competition and emergence of alternative technologies	♦♦♦	✱✱✱
		Changes in reimbursement policies	♦♦♦	✱✱✱
		Customer base concentration and tests decentralisation	♦♦♦	✱✱✱
	NFPS	Products' default and/or quality	♦♦♦	✱
		Intellectual property	♦	✱
Risks relating to bioMérieux's strategy and functioning		Failure of R&D projects and new products	♦♦♦	✱✱
	NFPS	Dependence on certain suppliers and partners	♦♦♦	✱✱
		Loss of a major industrial site	♦♦♦	✱
	NFPS	Failure and vulnerability of information systems	♦♦	✱✱
		Acquisition and integration strategy	♦♦	✱✱
	NFPS	Human Resources management	♦♦	✱✱
	NFPS	Climate change and environmental liability	♦	✱✱
Risks relating to bioMérieux's business environment	NFPS	Ethics and compliance	♦♦♦	✱✱
	NFPS	Regulatory environment applicable to products	♦♦	✱✱
		Foreign exchange	♦	✱✱✱

Net impact scale		**Probability scale**	
High	♦♦♦	*Probable*	✱✱✱
Medium	♦♦	*Possible*	✱✱
Low	♦	*Less probable*	✱

The above table reflects the exposure of the Company to the listed risks, after taking into account the mitigation measures implemented to reduce impact and probability, measures that are also described below.

Other risks and uncertainties that the Company currently considers as not material, or that, as mentioned above, more generally concern all economic players, could also in the future adversely affect its business, outlook, financial position, or ability to meet its objectives. These risks are monitored as part of the Company's risk management process.

2.1 Risks relating to bioMérieux's industry

2.1.1 Competition and emergence of alternative technologies

Risk description

In vitro diagnostics is a highly innovative industry in which the emergence of new technologies is a source of risks and opportunities (see section 1.3.1.2). The Company may be threatened by new technologies, such as:

- the sequencing of bacterial and viral DNA and RNA;
- the partial or total elimination of culture prior to sampling;
- the use of complex data to provide a medical response with higher added value.

The Company could also be threatened by existing technologies which compete with products in its portfolio, particularly BIOFIRE® FILMARRAY® technology (see section 1.3.3.1). As expected, competitors have recently obtained their authorisation to commercialize syndromic approach tests on the American market.

Generally, new technologies enabling quicker, more reliable or lower-cost diagnostic may appear. Especially, new competitors from emerging countries (China and India in particular) are developing and could offer products that are less expensive than those of the Company.

Lastly, the simplification of workflows proposed by some competitors, enabling the integration of all tests for a given technology in a single platform, could constitute a risk for the products marketed by the Company.

Potential impacts on the Company

Increased competition could cause the Company to:

- lower its prices in order to remain an attractive alternative for its existing customer base;
- lose volume, thus having an unfavourable effect on revenues and on its tests production costs.

In this context, the Company cannot be certain that its products will be able to compete over the long term with products marketed by other players, and allow it to gain or maintain significant market share and benefit from an equivalent product reputation than its better-positioned competitors.

Risk management

The Company has various channels dedicated to technological vigilance in order to detect the emergence of new technologies and to anticipate their potential and the speed of their adoption by laboratories. Also, it has set up a Business Development Department that is in contact with companies in the industry that are likely to provide access to innovative technologies, thus enabling the Company to enrich its product line, particularly through licence agreements.

At the same time, the Company is working on increasing the number of tests available on its platforms. As an example, bioMérieux is endeavouring to include new antibiotics on the antibiograms of its VITEK® platform, to enhance the menu of the BIOFIRE® FILMARRAY® system with the renewal and improvement of existing tests and the extension to new pathologies, and to broaden the menu of the VIDAS® platform with differentiating tests.

bioMérieux's Clinical unit, with the assistance of the Chief Medical Officer, develops clinical trials to extend the scope of some tests to other applications and develops medico-economic studies in order to demonstrate the medical value of its products.

Lastly, the Board of Directors has a Strategy Committee whose mission is to analyse the Company's main challenges, particularly those related to changes in the technological, medical and market environments in order to guide the Group's strategy by adapting its solutions or its business model.

2.1.2 Changes in reimbursement policies

Risk description

A decision by a public or a private insurer to limit or stop the reimbursement of certain diagnostic analyses could have a significant impact on demand for the Company's products and/or on the price charged by the Company to its customers (see section 1.3.1.4).

In particular, the Company is exposed to:

- the 2017 American PAMA (Protecting Access to Medicare Act) law, which plans a drop in the reimbursements from 10% to 15% per year until 2023 for outpatients on most diagnostic tests;
- decisions on reduction of reimbursement for specific tests. As an example, in 2018, Palmetto, a Medicare Administrative Contractor, decided to reduce reimbursements of BIOFIRE® FILMARRAY® respiratory and gastrointestinal panels for outpatients over 65 years old;
- in France, the BIOFIRE® FILMARRAY® solutions are included on the list of innovative procedures not classified for reimbursement purposes (French acronym: RIHN), a conditional acceptance mechanism for which the annual budget is set by health authorities. The increase in the number of test prescriptions addressed by this reimbursement budget could lead to a devaluation of the BIOFIRE® FILMARRAY® offer.

Potential impacts on the Company

As a result, the Company cannot be certain:

- that its customers will continue to buy the same volume of products;
- to maintain its prices, faced with reductions in reimbursement for its customers.

The impact of the PAMA reform on bioMérieux is mitigated by most of its products being used for hospitalised patients rather than outpatients. The Company nevertheless expects a potential indirect impact due to pressure on its customers' margins.

Risk management

The Company endeavours to promote the medico-economic value of its solutions through its Regulatory Affairs Department. This department files and defends requests for new product approval. The Medical Affairs Department is also key, assessing the medical value of the Company's products by conducting medico-economic studies and obtaining the related reimbursements.

Furthermore, in the United States, the Company has a team dedicated to Market access & reimbursement, whose task is to promote the medical value of its products to private or public insurers, and support its customers in their applications to obtain reimbursement.

2.1.3 Customer base concentration and tests decentralisation

Risk description

In the United States in particular, hospitals are increasingly going through central purchasing organizations that pursue an assertive purchase price reduction policy.

In addition, the consolidation of customers continues apace, particularly in Europe and the United States, for *in vitro* diagnostic products, which has led to the creation of technical platforms that process large test volumes daily. This consolidation trend allows customers to exert greater influence on product prices.

At the same time, this trend towards consolidation has also triggered a wave of decentralisation in the United States, where tests are being conducted ever closer to customers (point-of-care) in physician offices and pharmacies.

Potential impacts on the Company

The Company's product range might not correspond to the requirements of consolidated customers handling very large volumes of daily tests, and consequently might lead to losses of market share and volume in certain product ranges (see 1.3.1.4 and 1.3.1.5).

The concentration of the customer base and the accompanying reduction in sale prices could have repercussions for the revenues and profitability of the Company.

Lastly, the movement to decentralise tests could favour other diagnostics players having point-of-care offers and consequently reduce the volumes of tests sold by the Company.

Risk management

The Company has established, particularly in North America, in EMEA and within the Industrial unit, a specific organisational system that enables to efficiently manage key strategic customers.

A department dedicated to managing commercial performance has been put in place. Its mission is to improve the accuracy and management of the commercial policies of bioMérieux, and to optimise the customer approach strategy.

The Company pays particular attention to adjusting its prices based on its positioning in the markets in which it operates. It has a range of tools aiming for improved control of profitability per market and per product range, to best respond to the challenges of market concentration.

Furthermore, its research and development efforts aim at adapting the product portfolio to best respond to market developments.

2.1.4 Products' default and/or quality

Risk description

The production and marketing of diagnostic products exposes the Company to product quality liability risks.

The Company could be held liable if a diagnostic error resulting from the defective performance of one of its products leads to unsuitable treatment of a patient or the release of contaminated products. Even if diagnostic products are designed, manufactured and delivered in compliance with the quality standards (described in section 1.5) and it is common practice to perform a series of additional tests to reduce the risk of error for the most serious diseases, this risk cannot be totally eliminated.

Besides, the Group uses biological products that are manufactured or created from components developed from materials that are of human, animal or plant origin and which cannot yet be manufactured inexpensively using synthetic materials. This process causes risks in the use of these products or components because of the variability related to their origin.

Potential impacts on the Company

Defective product quality could generate a negative impact for the health of patients and consumers. Such defective quality could lead to litigation from customers of the Group, patient associations, or patients.

The competent health authorities (mainly the MDSAP, FDA, ANSM and the NMPA) could instruct inspections and, in the case of a major shortcoming, issue a letter of injunction or prohibit any sale until the identified shortcomings have been resolved.

Such a situation could lead to additional costs for the Company to implement corrective actions, protracted losses in market share, and an impact on revenue and operating income. Lastly, the Company's image would also be affected.

Risk management

bioMérieux has defined a policy aiming at complying with the quality standards in force and at addressing regulatory questions (see section 3.3.2). It has set up a Global Quality Department that makes sure that a management system is implemented. The main manufacturing sites are certified compliant to ISO 9001 and ISO 13485.

In addition, a Quality Assurance Department is involved in all phases of product development and at each stage of production and distribution.

The Company also has a process for managing and monitoring customer complaints that aims at constantly improving the quality of its products and addressing any risks towards patients and consumers.

Lastly, the Legal Affairs Department oversees compliance with the applicable legal and regulatory provisions. It has set up an insurance policy to protect against and prevent its risks, notably in matters of civil liability (see section 2.5).

2.1.5 Intellectual property

Risk description

Intellectual property law in the healthcare industry is constantly changing, giving rise to uncertainties (see section 1.6.2). Accordingly, the Company may not be able to:

- develop patentable inventions;
- be granted the patents for which it has applied;
- obtain or renew the licences it needs for its business;
- ensure that the validity of the patents or trademarks it holds, or for which it has been granted a licence, will not be challenged by third parties;
- be sufficiently broadly protected by its patents;
- ensure that the patents or other intellectual property rights held, or for which the Company has been granted a licence either now or in the future, will not be challenged or infringed by third parties;
- avoid paying compensation for infringement of third-party patents by products from the Company.

As the *in vitro* diagnostics industry develops, more and more patent applications are filed and patents granted, leading to an increased risk of unintentional infringement of third-party patents.

Potential impacts for the Company

Policing unauthorised use of intellectual property is difficult, and the Company may not be able to prevent misappropriation of its intellectual property rights, or obtain sufficient protection to prevent similar products entering the market. Consequently, its revenues may be affected by competition from these counterfeit or similar products.

The Company may have to obtain the appropriate licences to use third-party patents, or cease certain activities or seek alternative technologies if obtaining a licence is impossible or unprofitable.

Lastly, the Group might not be able to develop or sell products for which the intellectual property rights have been successfully challenged by a third party, and might have to pay damages for infringement.

Risk management

The Legal Affairs and Intellectual Property Department oversees compliance with the applicable legal and regulatory provisions.

To limit the risks related to intellectual property, the Company has an active policy of filing patents and monitoring third-party products to identify any infringements of its patents (see section 1.6.2.1). As applicable, it pursues, with respect to these infringers, either amicable resolutions or the judicial proceedings required to protect its rights.

Similarly, the Company checks the freedom to operate in relation to third-party patents for all products under development. The Company has set up a monitoring system to be able to prevent registration of third-party brands and trademarks that are likely to create confusion with its own key brands.

2.2 Risks relating to bioMérieux's strategy and functioning

2.2.1 Failure of R&D projects and new products

Risk description

The Company invests significant amounts in new product R&D (systems, instruments, reagents, software, services, etc.) (see section 1.6.1).

It is possible that bioMérieux might not be investing in the most promising technologies or in the biomarkers that will become dominant in the market.

As the process of developing new diagnostics systems is particularly complex, the Company might:

- encounter technical difficulties and thus be unable to develop a product that fulfils the performance requirements expected by customers;
- encounter organisational difficulties related to the availability of resources having the necessary skills, and/or the default of partners or subcontractors involved in the development;
- not be able to keep to the desired deadlines (such as deadlines for the recruitment of patients during clinical trials);
- encounter difficulties in industrialisation; the new instruments or reagents could prove to be too costly or difficult to manufacture on an industrial scale, and it might be difficult to find the supplies necessary to manufacture them and put them on the market;
- not be able to obtain the regulatory clearance it requires to market and sell its new products;
- not succeed in demonstrating the medical and economic value of new diagnosis solutions, which is a key factor in the commercial success of its solutions.

Potential impacts on the Company

The Company could shelve R&D projects in which significant human and financial resources have been invested, even at a development stage close to the commercial launch date, which could impact the Company's financial position.

The launch of new products may require more operational or capital expenditure than anticipated by the Company on R&D, production, marketing, sales force and commercial support, instrument placement and maintenance, medical education and customer training.

The Company may not collect the return on its investments in R&D in the event of technical or industrial failure, if the products developed do not receive the requisite regulatory clearance or if they do not meet with the expected commercial success.

Risk management

The Group pays particular attention to the selection, execution and monitoring of its R&D projects.

The Board of Directors has a Strategy Committee whose mission is to orient the Group's strategy and to conduct studies on the main issues facing the Company, particularly those related to changes in the technological, medical and market environment. The Group endeavours to incorporate market expectations and to apply its knowledge base and technological platforms into the definition of its new products in order to deliver systems that facilitate the creation of medical and technico-economic value for its customers. The Company organises specialised committees by pathology, bringing together the marketing, medical affairs, R&D, intellectual property, and innovation functions to identify and select future development opportunities, fully taking into account the parameters described above. Lastly, the Company establishes both private and public partnerships (universities, research centres) with the perspective of open innovation, in order to broaden the spectrum of its knowledge and skills.

The Portfolio and Strategic Planning Department ensures that the overall strategy is aligned with the project portfolio, and facilitates arbitrage of R&D projects together with the Units. The R&D activities are organised around dedicated teams, experts in different technologies (microbiology, immunoassays, and molecular biology). The R&D teams use a global project management software package. It includes a resource planning function, to ensure a balance between project demand and the availability of teams or subcontractors, in order to contribute to their proper implementation.

Financial teams dedicated to R&D monitor progress and compliance with project deadlines and costs, together with the project managers. They also take part in the upstream selection of projects through an evaluation of the value-creation potential associated with each project.

2.2.2 Dependence on certain suppliers and partners

Risk description

The Company is working with a vast network of suppliers and may, in certain cases, be in a position of dependency on some of them, due to their exclusivity or the specifics of the products/materials bought from them (see section 1.3.2.5).

The qualification of materials, components, and all types of supplies used often requires a long process and limits the number of suppliers that are authorised or able to fulfil the needs and requirements of the Company. Certain components of the Company's products may become obsolete if the suppliers decide to modify the composition of their products/materials. The Company is subject to strict rules in matters of manufacturing processes, and any change in raw materials must be requalified.

Lastly, the Company could lose the exclusive rights it holds with certain key partners, potentially to the benefit of competitors.

Potential impacts on the Company

A disagreement with certain suppliers or a failure of suppliers to meet their obligations could create difficulties for the Company's manufacturing operations, including for some of its main products, leading in certain cases to delivery interruptions, additional costs, and material delays resulting from the need to validate and put in place alternative procurement solutions.

In addition, certain suppliers' quality defects could negatively impact the Group's products, resulting in scraps during the production process.

Lastly, the Company could be forced to build up additional inventory of components if suppliers were to discontinue their production. It might even have to redevelop some of the production processes itself, which could lead to significant development costs and a temporary inability to manufacture its products.

Risk management

The Company has set up a Global Purchasing Department and is mapping the risks associated with its key suppliers and materials. From this map, the Company endeavours to secure its supplies by maintaining close relationships with its strategic suppliers, diversifying its sources of supply to the extent possible, endeavouring to conclude long-term supply contracts, building up buffer stocks, and partnering with its suppliers in a sustainable growth strategy (see section 3.6.1).

Also, the Purchasing Department is associated with the initiation phase of research and development projects, to identify and determine the extent of the risks related to this supplier dependency.

2.2.3 Loss of a major industrial site

Risk description

The Company operates 18 manufacturing sites, each primarily dedicated to a single product line and technology, based on the principle of "one site - one product line" (see section 1.7). The result of this is that, with the exception of the culture media, each of the Company's flagship product lines is manufactured on a dedicated site.

Also, the Company has an international logistics centre in France through which most flows intended to serve the various markets transit.

The Company is thus exposed to various risks that could cause the loss of one of its sites, notably:

- accidental or malicious industrial event: fire, explosion, contamination, loss or shutdown of a key production tool, or cyber attack;
- natural or climatic event: storm/cyclone (St. Louis – United States, Durham – United States), extreme temperatures (Lombard – United States), earthquake (Salt Lake City – United States), or floods.

Potential impacts on the Company

Any event affecting the production capacity or causing a temporary or definitive interruption of the activity of the "mono-product" manufacturing sites and/or its international distribution centre could cause a risk for public health and have a significant negative impact on the revenues and image of the Company.

Furthermore, such events could require significant capital expenditure for strengthening the organisational structure of the Company, and cause additional costs related to significant use of external help, such as consulting and assistance missions.

If it were impossible to quickly resume operations at the production facility concerned, the Company could be forced to relocate production of the product line concerned. Given the complexity of the products manufactured by the Company, setting up relocated production resources could be long and costly.

Risk management

All of the industrial sites have set up risk analyses related to their operations aiming to identify their exposure to risks and set up business continuity plans. The objective of these analyses is to put in place preventive actions (training employees, implementing emergency procedures) and/or corrective actions aimed at anticipating scenarios and reducing exposure to risks.

Also, together with its insurer, the Company performs annual audits of industrial sites to identify possible vulnerabilities in coping with accidental events. The results of these audits are taken into account by the Company's insurance policy (see section 2.5).

Lastly, the Company has implemented regular monitoring of the natural disasters risk, which enables it to evaluate the impacts of climate change on the regions in which its sites operate. Given that the Company consumes little water and is therefore hardly dependent on it, it does not anticipate any major risk associated with the increasing scarcity of this resource.

2.2.4 Failure and vulnerability of information systems

Risk description

The Company could face a failure in its information systems or their obsolescence, or a personal data leak, and/or run the risk of attacks by cybercriminals.

The acceleration of the digital transformation that has been in progress for several years in the Company could heighten its exposure to risks related to cyber attacks, as well as those related to failures of IT systems.

These have a major importance in the routine execution of the Group's operations in processing, transmitting and storing electronic data relative to operations, to the financial statements of the Group, and to communication with personnel, patients, customers, and suppliers of bioMérieux.

In particular, bioMérieux has access to patients' personal data, for which confidentiality is ensured by particularly strict regulations in the United States (Health Insurance Portability and Accountability Act – HIPAA) and Europe (General Data Protection Regulation – GDPR) (see section 3.3.3).

Lastly, bioMérieux's equipment is connected to the IT systems of its customers (LIS) and may therefore constitute a point of vulnerability for a cyber attack (see section 1.3.3.1 MYLA®).

Potential impacts on the Company

Any failure or malfunction of equipment, IT applications or communications network, notably of the Global ERP, or successful cybercriminal attack on the information systems or instruments of its customers connected to it could:

- lead to the use of strategic and confidential data by competitors;
- lead to the leakage, loss, theft and disclosure of personal data, including patient data, which could lead to administrative, civil, and criminal penalties;
- make it impossible to carry out routine operations and thus harm the business;
- affect the operations of customers;
- generate operating losses;
- and/or harm the image and reputation of the Company.

Risk management

The Company has an Information Systems Department which is tasked with ensuring the availability, continuity and performance of available IT services and setting up an IT security program based on risk management.

It performs audits on the internal processes and those of its external partners, in order to ensure the correct execution and compliance with procedures and evaluate its exposure to cyber attacks.

To prepare for the eventuality of a major incident, the Company has set up disaster recovery procedures in order to quickly return to a satisfactory level of business. In addition, critical applications and networks are duplicated according to clearly defined criteria.

The Company pays particular attention to the security of its information systems, notably through a dedicated "Global Information Systems Security Officer" function. This function works in close collaboration with internal experts and external partners to implement and maintain a strategy and to manage security based on the international security standards for information systems ISO 27001 and ISO 27002.

End users are trained and made aware of the risks of cyber criminality and personal data protection (see section 3.3.3).

Lastly, the Company has set up an insurance policy covering cyber risks (see section 2.5.2.4).

2.2.5 Acquisition and integration strategy

Risk description

The development of the Company is partly based on targeted acquisitions or equity investments (notably Invisible Sentinel, Hybiome, Astute Medical, BioFire) or external partnerships (notably Copan and Thermo Fisher) (see sections 1.1.2 and 5.1.2.4).

These transactions essentially aim to enhance its technology portfolio, its product range or its geographical positions. The specifics of each of these acquisitions lead to its own difficulties, related to the initial lack of proficiency in the acquired technology, which is particularly delicate in the industrial biology sector.

The value of certain targets or the conditions needed to obtain certain licences may represent obstacles to signing or renewing agreements required for the implementation of this strategy.

The integration of the acquired companies into the bioMérieux Group could encounter difficulties and lead to losses of key personnel or development that is less rapid than planned.

Lastly, the conditions for executing the acquisition business plan might not be fulfilled.

Potential impacts on the Company

The Company may be unable to:

- find or retain partners that could provide the technologies, products or market access it may need;
- pursue its strategy of acquisition or use under licence of technologies developed by third parties, or renew the rights required for some of its operations at the expiration date;
- preserve substantial know-how for the development, industrialisation, and production, as well as the understanding of clients' needs, and the key factors of success for marketing the solutions created by the acquired companies, and thus be unable to meet the targets set at acquisition;
- meet the objectives set at the time of acquisitions, chiefly owing to differences between the initial estimate and the actual results of the business plan. Failure to meet financial targets would cause the partial or total depreciation of the value of assets (property, plant and equipment, intangible assets and goodwill) related to the acquisition.

Risk management

The Company has set up a Technological Watch and Competitive Intelligence Department, as well as a Business Development Department staffed by international teams.

Before investing, the Company endeavours to perform the due diligence necessary to correctly value the target companies and their compliance with regulations. After having invested, it may, in certain cases, sit on the Board of Directors of these companies.

2.2.6 Climate change and environmental liability

Risk description

Corporate responsibility with respect to the environment is becoming a major concern, both for the authorities and for the population (see section 3.7).

This concern may result in more demanding regulations, notably in matters of Health, Safety and the Environment (HSE). Stricter laws and more rigorous implementation measures than those currently in force could be applicable to the Company's manufacturing sites and products (RoHS, REACH, Biocides, GHS, CLP), as well as to the reprocessing of instruments placed or sold to customer laboratories.

In particular, international agreements, such as COP21 or the European initiative aiming for neutrality by 2050, are tending to drive companies towards a low-carbon economy. The Company's production strategy is based on a "mono-site" approach (see section 1.7), which causes greenhouse gas emissions related to transporting products throughout the world.

Potential impacts on the Company

Bringing some of bioMérieux's activities or sites into compliance with the most restrictive environmental standards could require large costs and affect production.

Any closure of a site would involve significant delays before obtaining the regulatory clearance necessary to restart production.

Lastly, a change of "mono-site" industrial strategy could cause additional costs and technical difficulties in obtaining products of equivalent quality.

Risk management

bioMérieux has defined a policy and objectives relative to the environment as part of the "Vision 2020" program (see section 3.7.1).

HSE is managed on the production sites under management systems that meet internationally-recognised standards and are organised by a network of HSE professionals, both locally and globally. It aims to make sure that the regulations in force are known and applied, and that developments are monitored by the Regulation Watch Committee and their impacts anticipated.

Lastly, the Company is developing a strategy for eco-design and management of the end of product life, as described in section 3.7.2.

2.3 Risks relating to bioMérieux's business environment

2.3.1 Ethics and compliance

Risk description

The Company is exposed to risks of fraud and corruption due to its international presence, its network of partners representing it, and the nature of its activities in contact with healthcare professionals and representatives of public authorities (see section 3.4.4.1).

bioMérieux's products are ultimately sold to public and private healthcare organisations. The Company must therefore be very attentive to the laws and regulations relative to relationships between industrialists on the one hand, and healthcare organisations and professionals on the other ("Bertrand" law, Sunshine Act). Furthermore, many of these organisations are public and are therefore subject to specific rules in matters of calls for tenders and relationships with private operators. bioMérieux is also subject to international and extra-territorial anti-corruption laws (US FCPA rules, UK Bribery Act, Sapin II law, etc.) that penalise acts of corruption.

This risk is increased:

- due to the international presence of the Group, which has the effect of increasing the number of laws and regulations that must be complied with, and which, furthermore, does not mean that the Group cannot be subject to litigation pursuant to the laws of other countries having an extra-territorial reach;
- due to the use of distributors, the Group does not therefore have total control of the relationship between the customer and the end user (see section 3.6.2).

Also, bioMérieux is subject to the rules of international trade and, in this regard, is exposed to risks related to embargo and sanction policies (see section 3.4.4.1).

Potential impacts on the Company

In case of non-compliance with these laws and regulations and the principles of ethics and good business conduct, the Company would be exposed to legal action, resulting in financial loss and affecting its image and reputation.

Individuals committing offences could also suffer severe criminal penalties.

Risk management

bioMérieux's actions are governed by a set of principles, directives, standards and procedures that correspond to current ethical norms. Therefore, bioMérieux has developed an anti-corruption program, which includes a specific section on the correct rules for interaction with healthcare professionals. It is described in section 3.4.4.1. Furthermore, the Company has produced a map of corruption risks, to identify the risks inherent in the activities and implement global and local improvement plans to mitigate them.

bioMérieux has organised an Ethics and Compliance team covering the Group and its regions and based on local networks of correspondents trained in anti-corruption programs. An Ethics and Compliance Committee meets quarterly to define the guidelines for the function and to monitor the implementation of actions. Employees are trained annually in the principles of ethics and compliance, notably with online training courses on conflicts of interest, anti-corruption measures, and third-party management.

Since a significant portion of its sales are made through international or local distributors, bioMérieux contractually requires its partners to use the same high standards in the application of anti-corruption rules. It has also established a training program for their staff covering these high-risk subjects.

To minimise the risk of fraud, the Company has put in place an internal control system designed to prevent and identify fraud and ensure that procedures are duly applied. These include regular internal and external audits.

Lastly, an alert line has been made available to employees and third parties to report any malicious act that could harm the reputation and values of the Company (see section 3.4.4.2).

2.3.2 Regulatory environment applicable to products

Risk description

The Company's products and their manufacturing process are subject to strict, fast-changing regulations which vary widely from one country to another. These products are subject to controls carried out by the regulatory authorities throughout their process of development, production and marketing (see section 1.5).

The launch of *in vitro* diagnostic solutions is subject to the Company obtaining regulatory clearance. Securing the regulatory clearance or certification needed to market a new product may take several months or, in some countries, one to two years, and requires significant financial resources. Moreover, an increasing number of countries are creating regulatory bodies that are gradually implementing their own requirements for the registration of products, resulting in an increase in the number of registration cases to handle, whether for new references or existing references (notably Brexit).

Also, regulations aiming to limit the market release and use of certain dangerous substances (notably, in Europe, the REACH regulation and the RoHS directive – see section 3.7.1) are gradually being applied to the scope of *in vitro* diagnostics, and have led the Company to include these requirements in all of its activities.

Lastly, the changes to the following regulations could have an impact for bioMérieux and all players in *in vitro* diagnostics: the American UDI (Unique Device Identification) regulation and the European IVDR regulation (see section 1.5.2.1).

Potential impacts on the Company

New regulations or audits performed at the Company's manufacturing sites could:

- delay or preclude the marketing of new products by the Company;
- force the Company to interrupt or halt production or sales of existing products;
- oblige the Company to make changes to its manufacturing and quality control processes;
- impose costly constraints on the Company as well as on its suppliers.

Risk management

The Company strives to reduce this risk by rigorously inspecting production output and by monitoring regulatory compliance through the Quality Management System Department in all countries in which the Group operates (see sections 1.5 and 3.4.3). In addition, a number of standards or benchmarks (including ISO) are in force within the Group. The Company sets up specific project teams to reach the level of compliance expected at the various deadlines set by these new regulations. These teams set priorities, define compliance action plans, and ensure the viability of the solutions selected for current products and for future developments.

Furthermore, its Regulatory Affairs Department allows it to identify new regulations and ensure compliance with current obligations and applicable regulations, and a Regulation Watch Committee meets quarterly to ensure a cross-disciplinary approach to the obligations applicable to the Company.

In addition, the Group complies with the European directive on Waste Electrical and Electronic Equipment (WEEE directive), and hires external service providers to remove equipment from customer sites located within the European Union and for the safe removal of heavy metals included in certain equipment. Accordingly, it no longer establishes provisions in this regard.

2.3.3 Foreign exchange

Risk description

The Company, due to its manufacturign footprint mainly in the Euro zone and in the United States, is highly exposed to fluctuations in the foreign currencies in which its sales are made. Fluctuation of a currency other than the euro and the dollar may cause a drop in revenues (in local currency) without a proportional drop in costs (partially in local currency but only for the local costs of sales, marketing and service).

The commercial policies of the Company might not compensate for the negative impact of the currencies in the markets.

Also, due to its international commercial establishment, the Company is exposed to the conversion risk for the accounts of consolidated subsidiaries having a functional currency different from the euro, the currency of publication of its financial statements.

The foreign exchange risk is covered in note 28.1 of section 6.1.2.

Potential impacts for the Company

These foreign exchange fluctuations may affect the financial performance of the Company.

Also, a significant drop in certain currencies could have a more overall negative effect on the economies of these countries, and affect:

- order volumes from local customers;
- the ability of the Company to collect amounts due.

Risk management

In view of the size of the Group's operations in the US, certain operating expenses are settled in US dollars, thereby mitigating the impact of fluctuations in the US dollar on operating income.

The Company's policy, reviewed annually by the Audit Committee, aims to use annual currency hedges to protect against the impact of exchange-rate fluctuations on its operating income in relation to its budget. To do this, the Group makes use of these instruments as soon as they are available at a reasonable cost. Its current practice is to put in place global hedges covering similar risks. However, they are put in place over a time frame of approximately 12 months, and beyond this time frame, exposure to exchange-rate fluctuations returns to full.

Hedging contracts are purchased to cover transactions included in the budget and not for speculative purposes.

2.4 Administrative, legal and arbitration procedures

The Company is involved in a certain number of claims and litigation arising from the normal course of its business. It does not believe that these claims and litigation will have an unfavourable influence on the continuity of its operation. The Company is not involved in any litigation considered to be material, with the exception of the proceedings described in Notes 15.4 and 15.5 to section 6.1.2 of the consolidated financial statements.

On October 14, 2016, bioMérieux, like other manufacturers, was summoned before the Tribunal de Grande Instance de Paris (Paris District Court) in view of obtaining compensation for anxiety allegedly "caused by the lack of reliability of serodiagnostic tests" for Lyme disease. As at the date of this URD, the civil proceedings, initiated by 45 plaintiffs, now include 93, following the combination of two new identical summons, and are still ongoing. The date for the hearing has not yet been set. bioMérieux objects to the applications for the summons, which it considers unfounded, since the serodiagnostic test manufactured by bioMérieux complies with applicable regulations, the current state of scientific knowledge, and recommendations from learned societies and expert consensus, at the national, European and international levels. Thus, the Company does not mention this litigation as a risk factor in paragraphs 2.1, 2.2 and 2.3 of this URD.

To the best of the Company's knowledge, there are no other governmental, legal or arbitration proceedings, whether pending or threatened, that are liable to have or that have had a material impact on the Company's financial position or profitability during the past 12 months.

2.5 Insurance and risk management

2.5.1 Insurance policy

The Company's policy regarding insurance coverage is designed to ensure that all subsidiaries have access to similar coverage, regardless of their size or location. Generally, all new companies acquired by the bioMérieux Group are included in the insurance programmes.

Coverage purchased takes into consideration the specific nature of local regulations, while at the same time reflecting the Group's centralisation and overall coverage policies. Insurance policies are purchased from insurance companies selected on the basis of their creditworthiness as well as their ability to provide the Company with risk prevention services.

Coverage is calculated on the basis of loss assumptions, taking into account the Company's risk profile. The Group also takes care to keep confidential any information relative to deductible amounts and premiums, and the terms of coverage, to avoid them being used against its interests. This is particularly true in the case of liability insurance.

2.5.2 Principal insurance policies

2.5.2.1 Civil liability

The nature of the Company's business has also been taken into consideration for the purpose of liability coverage (professional nature of most of its customers and batch manufacturing processes that reduce the likelihood of multiple risks). Separate policies are sometimes required to cover specific risks, either due to insurance regulations or applicable laws.

The Company and all of its subsidiaries are insured under an umbrella policy covering operating liability, liability after delivery and/or product liability and/or liability for experimentation, professional liability and liability for environmental damage caused by its products. This umbrella coverage is separately supplemented by the following specific policies: civil liability for environmental harm caused by the Group's companies, and civil liability incumbent upon the Group pursuant to the regulations on biomedical research (Jardé Act).

The Company also has an insurance program covering the liability of its corporate officers, senior executives and representatives.

2.5.2.2 Property and casualty

The guarantees purchased include accidental events coverage (fire, machine breakage and computer damage in particular), as well as consequential operational losses.

The Company and its subsidiaries have umbrella coverage for property and casualty which includes coverage for accidental events such as fires, machine breakage, theft and natural events likely to affect the Company's sites, and consequential loss of operation. This so-called Master policy covers all subsidiaries located in the European Union, making it unnecessary for them to take out insurance locally. It can also be extended to cover subsidiaries located in major countries outside the European Union, including the United States, through local agreements with the same benefits or as supplementary coverage or where no coverage has been taken out locally to comply with regulations.

2.5.2.3 Transport

"Ordinary" risks related to the transport of goods by land, sea and air are covered by an umbrella insurance policy. Freight transportation insurance contains the usual exclusions, namely for nuclear, chemical, biochemical, electromagnetic and cyber risks.

2.5.2.4 Cyber

bioMérieux has an insurance policy that covers damages and civil liability for risks arising from a cyberattack or a breach of personal data confidentiality.

3

A CORPORATE CITIZEN SERVING PUBLIC HEALTH

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bioMérieux is a Corporate citizen, through its historic and pioneering commitment to the fight against infectious diseases. bioMérieux considers serving global public health to be an important responsibility, one that the Company takes very seriously throughout its various fields of expertise, in particular infectious diseases. The Company's history reflects a long-standing commitment to Corporate Social and Environmental Responsibility, as illustrated by its signing up to the Global Compact. Indeed, the humanist values held by the bioMérieux family form the bedrock of a responsible Corporate culture translated into bioMérieux's international strategy.

The Company and its shareholder, Institut Mérieux, have also made philanthropy and giving back to society its duty.

"Our commitment to philanthropy goes to the heart of the public health mission of our Institute. Infectious diseases can only be combated on a global scale as bacteria and viruses know no borders."

Alain Mérieux, Chairman of Institut Mérieux

"bioMérieux's entrepreneurial adventure has its roots in a strong family commitment to serving public health. Faithful to our pioneering spirit, our ambition is to remain a major player in the diagnosis of infectious diseases. Through our scientific multidisciplinary approach, with no geographical borders, and driven by the commitment of our staff worldwide, we will maintain this course with a long-term vision."

Alexandre Mérieux, Chairman and Chief Executive Officer of bioMérieux

bioMérieux works with many international organisations (Fleming Fund, Bill Clinton Foundation, United Nations, Medecins Sans Frontières, etc.) as part of public health programs for the financing of global health and the development of *in vitro* diagnostic tests. For example, late 2019, bioMérieux has been selected as a supplier in a tender process by the Fleming Fund, a £265 million UK aid investment to tackle antimicrobial resistance in low- and middle-income countries around the world. bioMérieux will be locally active in 18 out of the 24 countries taking part in the programme. In each of these countries, in Africa and Asia Pacific, over the next three years, the Company will equip one reference clinical laboratory and one veterinary laboratory with the VITEK® MS and VITEK® 2 systems for pathogen identification and susceptibility testing, and with MYLA® software for data processing.

3.1 A business model based on economic development and a social commitment in support of public health and future generations

The various parts of the business model are set out in the chapters of this Universal Registration Document according to the concordance table below and bioMérieux's value creation chart, presented briefly on pages 8 and 9.

Organisation and structure	Organisational structures	Section 1.2
	Governance	Section 4.2
Markets in which it operates	The *in vitro* diagnostic industry	Section 1.3.1
	Areas of expertise	Section 1.3.2.1
Main activities	Research & development	Section 1.6.1
	Production	Section 1.7.2
	Distribution network	Section 1.3.2.4
Market position	Competition	Section 1.3.2.2
	Trade receivables	Section 1.3.2.3
	Trade payables	Section 1.3.2.5
	Regulations	Section 1.5
Products and services		Section 1.3.3
Key figures and performance indicators		Section 5.1
Objectives and strategies	Market trends and growth prospects	Section 1.3.1.4
	bioMérieux's strategy	Section 1.4
	bioMérieux trends and objectives	Section 5.5

3.2 A recognised approach

3.2.1 A policy of commitment, based on internationally-recognised principles

bioMérieux has committed to upholding a number of laws and international conventions, including the Universal Declaration on Human Rights of 1948 and the United Nations' Guiding Principles on Business and Human Rights of 1911. Since 2003, bioMérieux has been a signatory to the United Nations Global Pact. The Global Compact is a voluntary framework for commitment by which companies, associations and non-governmental organisations are invited to comply with ten universally accepted principles affecting human rights, labour standards, the environment, and the fight against corruption.

Through its activities, bioMérieux supports a number of the United Nations's Sustainable Development Goals (SDGs), the aim of which is to provide a process for achieving a better and more sustainable future for all, and particularly Goal 3.3, to end certain infectious diseases by 2030. As such, the Company's progress toward these objectives is difficult to quantify, since its contribution is only indirect, through the design, manufacturing, and marketing of tests to diagnose transmissible infectious diseases.

Moreover, bioMérieux strives to adhere to the fundamental conventions of the International Labour Organisation (ban on child and forced labour, freedom of association), the promotion of diversity, women's rights, the right of peoples to freely dispose of their natural resources, and the right to health.

3.2.2 Performance recognised by non-financial rating agencies

For a number of years, non-financial rating agencies have been evaluating the CSR performance of bioMérieux and have included it in their SRI (socially-responsible investing) indicators.

In particular, bioMérieux has been evaluated by the following agencies: ISS ESG, FTSE Russell (FTSE4Good Index), Vigeo Eiris, CDP (Carbon Disclosure Project), Forum Ethibel (Ethibel Sustainability Index (ESI) Excellence Europe), EcoVadis and Corporate Knights Global 100 Index.

The most recent scores and certifications obtained are:

Certification	Date	bioMérieux performance
Global Challenges Index	Feb 2020	Inclusion in the Global Challenges index, covering companies that make pioneering contributions to overcoming global challenges. The index was initiated by Boersen AG, operating the stock exchange in Hanover, Germany, in collaboration with ISS ESG. It is made up of 50 international companies that meet the criteria, from a panel of approximately 4,200 enterprises.
CDP	Jan 2020	Score D
FTSE4Good	Jan 2020	Included in the FTSE4Good Index, reserved for companies with robust environmental, social and governance risk management practices
Gaïa RATING	Jan 2020	Score 72 (Healthcare sector average 46)
GOLD 2019 ecovadis CSR Rating	Nov 2019	Score 72/100, an improvement on previous years Ranked in the top 1% of highest-performing companies
Corporate Knights Global 100	Nov 2019	Ranked 26th in Corporate Knight's Global 100 (companies with more than $1 million in revenue)
Corporate Responsibility Prime rated by oekom research	Oct 2019	Score C+ Ranked in the top decile for the Health Care Equipment & Supplies sector
EURONEXT vigeo eiris EUROZONE 120 ETHIBEL	Sep 2019	Ranked No. 1 in the Health Care Equipment & Services sector. Included in the Ethibel Index, dedicated to European companies with the best CSR performance

3.2.3 Governance that supports CSR

Beyond its mission to help improve public health worldwide, bioMérieux is a committed company that is concerned about its environment and societal impact. CSR is a major and growing concern for all of the Company's stakeholders.

In 2018, bioMérieux set up a quarterly CSR Committee made up of a number of members of the Executive Committee. Its remit is to oversee issues around Corporate Social Responsibility in order to better anticipate the opportunities, challenges and associated risks. It holds discussions in coordination with the Executive Committee, makes recommendations on bioMérieux's achievements in this area, and evaluates the Company's progress.

Wishing to raise the profile of its CSR commitment as well as strengthen its initiatives, bioMérieux appointed a CSR director in 2019 to coordinate and manage CSR performance.

bioMérieux has been committed to CSR initiatives for a number of years and has set itself the ambition of producing a new road map in 2020, in light of the materiality analysis begun in 2019.

Finally, the Audit Committee and Board of Directors are kept informed of the CSR policy and associated risks, at least once yearly.

3.2.4 Summary table of risks and opportunities

In order to identify its non-financial risks and opportunities and respond to non-financial performance reporting requirements, bioMérieux has drawn on the Group's risk-mapping methodology.

A specific exercise was carried out with internal stakeholders, selected for their range of expertise, geographical coverage, and exposure to external stakeholders. The process was presented to the Central Works Council, certain members of which helped to identify the risks and opportunities.

The Risk Department oversaw the identification of risks and opportunities, supported by a Steering Committee made up of the CSR, Legal, and Investor Relations Departments.

Risks and opportunities, policies implemented, and indicators were reviewed and approved at workshops with the relevant departments, particularly Purchasing, Human Resources, Health, Safety and Environment, Ethics and Compliance, Quality, and Commercial Performance.

Risks and opportunities were assessed for their potential impact and likelihood of occurrence using dedicated risk scales.

The non-financial risk and opportunity map was presented to the CSR Committee and the Audit Committee.

The Company decided to draw on the SASB guidelines to structure its reporting on and presentation of non-financial risks and opportunities.

Although the Company does not consider tax evasion to be a major non-financial risk, this is detailed under section 3.4.4.5, in accordance with the French law on combating fraud – law n° 2018-898 – published on October 24, 2018.

Finally, Chapter 3 reproduces the information required for the non-financial performance statement (NFPS).

	Issues	Description	Policies implemented	Indicators	Paragraphs and page
Environment	Life-cycle of products	Ability to manage the life-cycle of products by limiting their environmental impact, in compliance with international standards	Deploy systematic analyses of the life-cycles of our products Establish the relevant eco-design strategies	• Number of life-cycle analyses performed on our new products	§ 3.7.2 p. 99
	Impact of climate change on performance and environmental compliance*	Limit the impact of our operations on the environment and climate change Consider the effects of climate change in our activities	Currently defining a new plan setting targets for reducing the consumption of water and energy as well as carbon emissions and waste Prioritise renewable energy sources Develop sea freight Certify production sites Roll out a site energy audit program Structure regulatory monitoring Provide digital tools aimed at reducing the amount of travel by employees	• Number of ISO 14001 certified sites • Greenhouse gas emissions • Total volume of waste generated, of which hazardous waste • Consumption of public water and groundwater • Wastewater discharged • Total energy consumption and percentage of energy consumption from renewable sources	§ 3.73 p. 99
Share capital	Data protection*	Process and protect the personal data of employees, third parties and patients	Implement the GDPR compliance plan Secure buy-in for our policies from suppliers Conduct impact assessments on the Company's processes Introduce a procedure for managing data breaches	• Number of impact assessments conducted • Number of applications recorded in the GDPR risk register	§ 3.3.3 p. 78
	Product quality and safety*	Produce and deliver high-quality products that comply with local/international standards and meet customer expectations	Maintain a quality management system and customer service Train and manage an internal network of quality auditors Certify production sites	• Number of ISO 9001 and ISO 13485 certified sites	§ 3.3.2 p. 77

	Issues	Description	Policies implemented	Indicators	Paragraphs and page
Human capital	Managing skills and workforce*	Anticipate workforce and skills required to respond to the Company's strategy and market trends	Strengthen the skills and workforce planning process Implement personal training and development plans Roll out the training program in partnership with Mérieux Université	• Number of training hours per employee	§ 3.5.2 p. 87
	Attract and retain talent*	Attract and retain talent	Roll out the global and regional HR roadmap Strengthen the employer brand Develop internal mobility plans Develop succession plans Step up employee share ownership Develop employee engagement	• Overall voluntary turnover rate for employees with less than three years of service • Number of employees who were promoted during the year • Absenteeism	§ 3.5.3 p. 88
	Diversity and inclusion*	Develop an inclusive culture and promoting diversity within the Company	Implement the HR vision Develop and implement collective agreements Roll out non-discrimination policies Promote diversity and raise employee awareness	• Gender breakdown of managers (Women/Men) • Rate of internal promotion (Women/Men) • Breakdown of employees with disabilities	§ 3.5.4 p. 92
	Employee health and safety*	Ensure safe working conditions for employees and external providers	Continue to implement the Occupational Health and Safety policy management system	• Frequency of lost-time occupational accidents • Occupational accident severity rate • Number of occupational diseases	§ 3.5.5 p. 94
Business model & innovation	Distributors management*	Manage the network of distributors in accordance with the Company's requirements and expectations	Strengthen the process for selecting and approving distributors Streamline and standardise distribution contracts Standardise sales policy Continue to train distributors in bioMérieux practices Regularly review the performance of distributors		§ 3.6.2 p. 96
	Sustainable and responsible purchasing*	Develop and maintain sustainable and socially-responsible purchasing practicess	Promote and roll out the Responsible Purchasing Charter to suppliers Incorporate CSR criteria at each stage of the supplier relationship (qualification, selection, Business Reviews, etc.) and support their development Secure critical supply chains	• Number of suppliers evaluated by an external ratings agency against CSR criteria and % of expenditure covered	§ 3.6.1 p. 96
Governance	Regulatory compliance*	Safeguard the legal and regulatory compliance of activities	Organise structured monitoring and appropriate governance Capitalise on the quality system in place and the networks of internal experts	• Audit and inspection findings	§ 3.4.3 p. 81
	Public health mission	Carry out the Company's public health mission	Help protect the health of patients and consumers facing infectious diseases		§ 3.3.1 p. 75
	Business ethics*	Prevent breaches of business ethics	Strengthen the governance in place Promote the whistle-blowing procedure and raise awareness among employees and third parties Roll out the Company's anti-corruption policies and procedures Continue the employee and distributor training program	• Percentage of online training courses taken: . Preventing corruption . Third-party management . Managing conflicts of interest	§ 3.4.4 p. 81

* *These topics cover the main risks as assessed in the Company's risk-mapping.*

3.3 Help protect patient and consumer health against infectious diseases

3.3.1 Diagnostics create value for healthcare systems

bioMérieux's mission is to help to protect patient and consumer health against infectious diseases and, as such, responding to a number of major public health challenges (microbial resistance, sepsis, and emerging pathogens).

3.3.1.1 Combat antimicrobial resistance

Antimicrobial resistance is a natural phenomenon. Under their action, most sensitive bacteria are destroyed. But some can survive and adapt, acquiring "resistance genes" either by mutation of existing genes or by the acquisition of new genes.

In all viral infections (colds, influenza, migraines or other respiratory infections, etc.), taking antibiotics is not only useless, but also harmful, because it increases the resistance of bacteria. The misuse and overuse of antibiotics, in both humans and animals, has led to the development of resistant bacterial strains, making these therapies ineffective.

Consequently, the treatment of a growing number of infections such as pneumonia, tuberculosis, sepsis and gonorrhoea has become difficult, even impossible. Other diseases such as tuberculosis are reappearing.

New antimicrobials are being developed, but none of them is now effective against the most resistant bacteria.

The risk of having to face super-resistant bacteria without any recourse is a reality today. Antimicrobial resistance is considered by the World Health Organization as one of the biggest threats to world health. The projections are alarming, with an impact of more than 10 million annual deaths in 2050(1). That is approximately one death every three seconds. The social and economic costs are also significant. It is estimated that this phenomenon will generate a 2-3% decline in world GDP by 2050.

In vitro diagnosis has a crucial role in the fight against this threat. This mission can take four forms:

Prevention of resistance: Diagnostic tests, used to determine whether an infection is bacterial or viral, have a major function by limiting the over-prescription of antibiotics. These tests will make it possible to prescribe antibiotics only to patients who truly need them.

Identification of resistance: Initiating an appropriate antibiotic therapy as early as possible can have a decisive impact on the patient's survival.

Resistance monitoring: Effective monitoring of resistance profiles at all levels (national, local, hospital environments) is essential for setting up programs to fight infections. This knowledge of the bacterial environment is useful for better management of the emergence of resistant bacteria.

Resistance screening: Screening for multi-resistant bacteria in asymptomatic patients who are most at risk of "carrying" will lay the groundwork for the necessary preventive measures, including the enhancement of hygienic measures, isolation of carrier patients, and the limitation of propagation by these pathogens.

> Since 2016, bioMérieux has hosted a website dedicated to microbial resistance, whose main objective is to educate and raise awareness among the general public about this major public health challenge and to highlight the key role of diagnosis in combating this threat.
>
> www.amr.biomerieux.com

A world leader in microbiology and a pioneer in tests for detecting resistance, bioMérieux is a leading player in this fight. The Company's products cover the full range of needs in public health. An example is the use of the VIDAS® test for procalcitonine dosing obtained FDA approval in 2017.

bioMérieux's contribution is also tangible through:

Its participation in international summit meetings and forums

In September 2016, the Group, represented by Mark Miller, Chief Medical Officer at bioMérieux, stressed the importance of diagnostic tests in the fight against antibiotic resistance at a satellite session of the United Nations General Assembly.

In 2017, bioMérieux was signatory to the statement on antimicrobial resistance at the Economic Forum in Davos (Switzerland).

The World HAI/Resistance Forum, organised by bioMérieux in 2013, led to the first global prevalence survey on antibiotic use levels and microbial resistance in hospitals (Global Point Prevalence Survey - GLOBAL-PPS). This broad, ground-breaking study was coordinated by Professor Hermann Goossens and Dr Ann Versporten of the University of Antwerp in Belgium, and supported by bioMérieux. The results obtained highlight the need to optimise prescription habits. This investigation quickly established itself as a major element in the measurement and monitoring of corrective actions and has resulted, in some countries, in national improvement programs.

(1) 2016 O'Neill Report.

It also highlights the importance of *in vitro* diagnosis, as well as the need to use more diagnostic tests and improve the practices of prescribing antibiotics in all countries. More recently, the GLOBAL-PPS was disseminated by the WHO in its new toolkit, emphasising the programs for the proper use of antibiotics in countries with limited resources. It was also adopted by the CDDE(1), the IDSA(2) and Médecins Sans Frontières. bioMérieux has since renewed its support for new surveys. The GLOBAL-PPS is now used in more than 90 countries, with the entry of five new ones in 2019 and data from more than 250,000 patients hospitalised throughout the world.

The GLOBAL-PPS more particularly focuses on education and countries with limited resources, especially through on-line training developed by the BSAC(3). This training module, combined with other tools, will enable hospitals to define customised action plans, based on the results of the survey in their establishment and on local priorities.

The results of the fourth version of the study will be presented at the ECCMID conference in 2020. To complete the study, a new optional module devoted to healthcare-associated infections was created, as well as a questionnaire about the programs for the proper use of antibiotics put in place in participating hospitals.

Contribution to advisory committees

Christine Ginocchio, bioMérieux's Director of Medical Affairs, has been appointed to a four-year term on the US President's Advisory Council on Combating Antibiotic-Resistant Bacteria.

Its action within industrial consortia

The Company has also been involved in launching the AMR Industry Alliance, a consortium aimed at making and measuring progress in combating antimicrobial resistance in industry. Mark Miller, Chief Medical Officer at bioMérieux, sits on the Board of AMR Industry Alliance as the representative of the diagnostics industry.

In November 2017, General Management signed the BIVDA(4) Antimicrobial Resistance Declaration.

In 2018, bioMérieux organised a day of discussion hosted by Lord Jim O'Neill, the renowned economist, politician and philanthropist who chaired The Review on Antimicrobial Resistance.

In April 2019, the University of Antwerp, bioMérieux, and the Wellcome Trust announced the launch of VALUE-Dx, the first project sponsored by IMI (Innovative Medicines Initiative) proposed by 6 companies in the *in vitro* diagnostics sector. These companies joined forces with 20 other partners to support the fight against antimicrobial resistance and improve patient care. The purpose of VALUE-Dx, a European public-private partnership, is to move medical practice towards the more appropriate, personalised prescription of antibiotics based on medical tests, through the use of diagnostic tests.

In addition, continuing a collaboration with the pharmaceutical laboratory Pfizer, bioMérieux supports the multicentre surveillance study iCREST (infection-Carbapenem Resistance Evaluation Surveillance Trial). The objective of this project is to determine the prevalence of infections caused by bacteria resistant to the carbapenem class of antibiotics, and also to evaluate the efficacy of a new combination of antibiotics, bringing together ceftazidime and avibactam, in order to treat these serious and antimicrobial resistant infections. This study uses products developed by bioMérieux: the Chromogenic culture medium CHROMID® CARBA SMART and two ETEST® antibiotic susceptibility tests, ETEST® ceftazidime/avibactam (RUO) and ETEST® meropenem.

Support for international initiatives

The Company also supports a number of initiatives to help fight against microbial resistance in its host countries. bioMérieux participates every year in "European Antibiotic Awareness Day", organised by the European Centre for Disease Prevention and Control (ECDC), and "World Antibiotic Awareness Week", organised by the WHO. In this context, bioMérieux is launching education and awareness-raising campaigns in regards to laboratories, clinicians, veterinarians, the general public, and employees, to promote a more rational use of antibiotics.

Finally, in Burkina Faso, bioMérieux has supported a cross-university degree in antibiology, jointly organised by African and French experts, through the funding of scholarships for six students from the University of Bobo-Dioulasso. The aim of this program is to train practitioners in public hospitals in prescribing antibiotics appropriately.

bioMérieux also organises high-level scientific meetings throughout the world to enable experts to discuss ways of responding to the worrisome emergence of resistant bacterial strains.

3.3.1.2 The fight against sepsis: early first-line diagnosis

Sepsis is a serious infection characterised by the reaction of an organism's immune system leading to potentially fatal organ failure. It is one of the primary causes of death throughout the world. About 27 million people around the world are affected each year by sepsis.

Making a diagnosis as quickly as possible is crucial for patients. The survival rate is 60% when patients receive appropriate treatment within 2 hours after the onset of care, and it falls to 30% if treatment is given within 4 hours.

bioMérieux has been committed to fighting this syndrome for a long time already.

To address this public health challenge, bioMérieux has adopted a solution-based approach, positioning itself as a valuable partner for healthcare professionals. Our "Sepsis Solution" offers a complete range of solutions dedicated to caring for patients at every stage of the infection. It promotes workflow optimization and allows sepsis patients' samples to rapidly reach the laboratory and undergo analysis.

(1) Center for Disease Dynamics, Economics & Policy
(2) Infectious Diseases Society of America
(3) British Society for Antimicrobial Chemotherapy
(4) British In Vitro Diagnostics Association

The Company offers different and complementary solutions, including immunoassay, bacteriology and molecular biology testing based both on the host response with VIDAS® procalcitonin testing (PCT), and the detection, identification and characterization of the disease-causing organisms, in particular with the BACT/ALERT®, VITEK®, and FILMARRAY® product lines.

3.3.1.3 Managing the risk of epidemics due to emerging pathogens: providing an appropriate response in the countries concerned

bioMérieux has long been present in emerging countries and pays close attention to the emergence of new disease-causing organisms.

Solutions tested in the context of epidemics

Since 2014, bioMérieux has established a group of internal experts dedicated to threats from infections due to emerging pathogens (Zika, Ebola, MERS-CoV, Lassa fever, Marburg virus, Chikungunya, etc.) and working to develop appropriate diagnostic tests. The aim is firstly to monitor the emergence of new epidemics, and secondly to develop and validate diagnostic tests for these emerging pathogens.

As such, in the face of the health crisis caused by the Ebola epidemic in West Africa in 2014, BioFire Defense, a bioMérieux subsidiary, obtained from the FDA an Emergency Use Authorization for BIOFIRE® FILMARRAY® BioThreat-E test, detecting the Ebola virus.

In 2015, the Company launched the ARGENE® MERS-HCoV r-gene® test, a new research-only RUO kit aimed at laboratories working on developing a tool for the diagnosis of the Middle East Respiratory Syndrome coronavirus (MERS-CoV). This molecular solution makes it possible to detect and screen for this pathogen, which has a mortality rate of around 35% in humans.

In April 2017, the Company obtained CE marking for the BIOFIRE® FILMARRAY® respiratory panel 2 Plus (RP2*plus*). It can test 22 pathogens (18 viruses and 4 bacteria) responsible for respiratory tract infections (including MERCS-CoV) simultaneously. This improved version, extended to the BIOFIRE® FILMARRAY® respiratory panel, offers faster result times (45 minutes compared to around 1 hour previously) and greater sensitivity.

An epidemic of acute respiratory infections and pneumonia emerged in the city of Wuhan, (in Hubei province, China) in December 2019. The coronavirus, referred to as Covid-19, different from other known coronaviruses, was identified as the agent responsible for the epidemic and has been spreading ever since, mostly in China, but also to other parts of the world. The bioMérieux research teams started urgently developing reliable diagnostic tests to detect the Covid-19 coronavirus. At the date of this document's publication, the availability of ARGENE® format tests is planned for the first quarter of 2020, and the launch of a panel of FILMARRAY® format tests is planned for the first half of 2020.

A centre of excellence on tropical infectious diseases and research programs

In 2016 the Company created a Centre of Excellence in Brazil, where local teams are conducting research projects on the diagnosis of tropical infectious diseases.

In April 2017, bioMérieux and its partner, the Institute of Tropical Medicine at the University of Sao Paulo, received the financial backing of the Sao Paolo State Research Foundation (FAPESP) for a program to research severity markers for viruses such as Dengue and Chikungunya.

In October 2019, bioMérieux and the University of São Paulo announced the creation of a joint research unit. On the model of the ANTOINE research program carried out with the *Hospices Civils de Lyon* (see section 1.6.1.3), the ANTONIO Project with the Infants Institute of Sao Paulo involves validating biomarkers in immunocompetent and immunosuppressed children presenting with febrile syndrome. It aims to validate the biomarkers that can rule out a bacterial infection and guide the prescription of antibiotics.

3.3.2 Product quality and safety

Every day, bioMérieux strives to guarantee the quality and safety of its products, thus protecting patients and consumers (see section 1.5). It must meet the highest industry standards and ensure that its partners in the production chain, both upstream and downstream, meet the same standards. This is all the more important in a regulatory environment that is changing rapidly at both local and international levels, resulting in an increase in the number of regulations to follow and greater complexity in meeting all of these requirements.

Driven by the constant increase in the geographical expansion of its installed base means that the Company is becoming more vigilant with respect to the robustness of its quality management system, as well as its ability to detect and correct any problems associated with the quality of its products, or carry out preventative maintenance on its instruments.

The Company may be liable in the event of a diagnostic error resulting from a quality defect in one of its tests or a performance defect in one of its machines. As stated in section 2.1.4, the Company has introduced a Global Quality Department, whose mission is to implement a management system aimed at guaranteeing compliance with current quality standards and addressing regulatory issues. A Quality Assurance Department in each region is involved in all phases of product development, as well as in each stage of production and distribution, including monitoring products after they are brought to market and tracking customer complaints and product recalls.

Regular internal audits are conducted at production sites and subsidiaries, aimed at improving implementation of internal processes and compliance with standards such as MDSAP (see section 1.5.1).

The Group's production sites are also regularly inspected by health authorities to provide independent oversight and support a process of continuous improvement. A summary of the inspections conducted in 2019 is presented in section 3.4.3.

Finally, the Company has begun a process of certifying its main production sites, with the aim of meeting the most stringent industry standards:

- **ISO 9001 certifications: 49 sites and subsidiaries in 2019**
- **ISO 13485 certifications: 12 sites and subsidiaries in 2019**

3.3.3 Data protection

In the course of its business, the Company has acces to three categories of personal data: employees, patients, and administrative data from partners (clients, suppliers, and distributors).

As to the data patients' personal data, the confidentiality of which is ensured by particularly strict regulations in the United States (Health Insurance Portability and Accountability Act – HIPAA) and Europe (General Data Protection Regulation – GDPR). In addition, systems marketed by the Company process patient data on a daily basis. In designing and supporting these systems, the Company must ensure data confidentiality, integrity and availability and uphold the basic rights of the affected patients (see section 2.2.4).

As a response to these issues, bioMérieux has developed a personal data protection program based on:

- the general data protection policy approved by General Management;
- the appointment of a Data Protection Officer (DPO) reporting to the Executive Director, Legal, Intellectual Property, and Compliance; and registered with the French Data Protection Authority (*Commission Nationale Informatique et Liberté* – CNIL);
- a network of 50 DPO-business line liaisons at subsidiaries, sites, and global functions, who, trained in the regulations, are responsible for overseeing compliance;
- an on-line training about GDPR aiming at heightening awareness of employees about their rights.

The methodology applied to ensure GDPR compliance has now been expanded to other companies of the Group and outside of Europe in order to apply a level of protection at least identical to that imposed by European regulations.

bioMérieux's policy and legal information on processing is accessible to third parties on the Company's Corporate website and to employees on its intranet.

Finally, the privacy implications of the processing of patients' personal data has been analysed, with potential risks highlighted and ranked, and remedial plans regularly monitored.

As such, under GDPR, over 400 personal data processes have been recorded at the Company. Assessing these processes led to 69 privacy impact assessments and to maintaining a register including more than 430 applications within the scope of the GDPR.

3.3.4 Sponsorship and charitable activities

3.3.4.1 Sponsorship

Pursuant to Act No. 2003-09 of August 1, 2003, the Company's Board of Directors decided to contribute a portion of revenues to sponsorship activities. The table below shows the funds contributed to Corporate sponsorships and other donations:

Contributions, donations and sponsorships *(in thousands of euros)*	2019	2018	2017
Contributions	4,034	3,654	3,047
of which to the Mérieux Foundation	*409*	*350*	*33*
of which to the Christophe and Rodolphe Mérieux Foundation	*2,000*	*2,000*	*2,000*
Sponsorships and other donations	326	854	372
TOTAL	**4,360**	**4,507**	**3,419**
As ‰ of sales	*3.5*	*3.8*	*3.0*

bioMérieux supports the Museum of Grenoble and the Musée des Beaux-Arts in Lyon, thus securing the acquisition of paintings of considerable historical importance. As such, in 2019, bioMérieux helped to fund the acquisition of a Henri Matisse painting, "Katia en robe jaune", for the *Musée des Beaux-Arts* in Lyon.

For many years, bioMérieux has also supported diverse cultural events, including the Chaise Dieu music festival (Haute-Loire – France), a partnership of over 30 years, the Baroque Music Festival of Lyon (Rhône – France), and the Lumière Cinema Festival organised in Lyon (France) every year by the Institut Lumière.

3.3.4.2 Working with local communities

The Group is involved in the life of the local communities around its sites and subsidiaries, taking part in social and cultural initiatives.

For example, the Company implements a policy promoting the employment of troubled youth and equal opportunities through partnerships with the *Sport dans la Ville* and *Institut Télémaque* associations.

Since 2007, bioMérieux has been one of the main partners of the Sport dans la Ville Association in France, whose purpose is to promote the social and professional integration of young people from underprivileged neighbourhoods through sport. In 2018, bioMérieux became involved with a project to build a digital space on the Association's Lyon campus. This dedicated space, covering more than 130 m^2, is an innovative workspace for young people in the *Job dans la Ville* program, and familiarises them with digital technologies. It opened in January 30, 2019 in the presence of Alexandre Mérieux.

In 2019, bioMérieux was keen to continue its support for the development of the *Apprenti'Bus* program. The Company helped to fund the acquisition of a third adapted bus offering mobile educational assistance to young people to support them in learning written and spoken communication.

In 2014, bioMérieux launched a partnership with the Institut Télémaque whose mission is to support social mobility by sponsoring deserving secondary pupils from modest backgrounds who are eager to succeed in school. The Company has funded the mentoring by some of its employees of 20 young people, selected by Institut Télémaque, for the 2018-2019 academic year.

THE *ENTREPRISE DES POSSIBLES*:

In early 2019, Alain Mérieux officially launched the *ENTREPRISE DES POSSIBLES*, a societal initiative aimed at mobilising companies in the Lyon metropolitan area and their employees to offer assistance to the homeless and vulnerable. bioMérieux, alongside other companies, is already involved as the founding member of the collective.

bioMérieux employees were given incentives to take part in either of two ways: donating paid leave days or doing volunteer work. In terms of the first strand, the response of bioMérieux employees was exceptional, with the donation of some 214 paid leave days which were then monetised (and matched by bioMérieux), resulting in a total contribution of €100,000 to the *Entreprise des Possibles* endowment fund to help the most vulnerable. The first volunteer opportunities were published in September 2019, and a review will be published in 2020.

BIKE&RUN RACE:

For three years, bioMérieux has been supporting and taking part in the Bike&Run France race held each year on the campus of an educational institution in Lyon. Students from universities and educational institutions take part in this mixed race alongside companies from the Auvergne-Rhône-Alpes region. With student-company pairs competing, its aim was to enable manufacturers to share their values with undergraduates through a sporting event and to meet young talent in a different way.

3.4 Acting with independence and integrity

3.4.1 An independent shareholding structure that serves public health

bioMérieux's commitment to public health, and its expertise in biology, is rooted in the unique history of the Mérieux family. Institut Mérieux has a 59% stake in bioMérieux. Institut Mérieux commits its experience in biology to serving medicine and public health across the globe.

Established by Chantal and Alain Mérieux in 2001, the Fondation Christophe et Rodolphe Mérieux is an independent family-run foundation under the aegis of the Institut de France. Since 2005 it has been the reference shareholder of Institut Mérieux, holding one third of its shares. Its on-the-ground initiatives are financed through the portion of dividends paid by bioMérieux that it receives indirectly from Institut Mérieux.

As the reference shareholder of Institut Mérieux, Fondation Mérieux contributes to maintaining a humanist and responsible spirit in the Group. The presence of this reference shareholder ensures the viability of the Company, contributes to improving public health, particularly among the most disadvantaged groups, and makes the sharing of value, in line with the mission led by the Mérieux family and expressed within all of the Group's companies, a reality.

3.4.2 Sharing value with the foundations

bioMérieux contributes to the Group's Corporate Social Responsibility by sharing the value created with two foundations in particular: Fondation Christophe & Rodolphe Mérieux and Fondation Mérieux ("the Foundations"). These independent family foundations fight against infectious diseases that affect developing countries by increasing their diagnostic capacities. In addition to strengthening

local capabilities in biology, they also act to protect the most vulnerable individuals, especially mothers and their children.

bioMérieux distributes dividends to Institut Mérieux. Part of these dividends are paid indirectly to the Fondation Christophe & Rodolphe Mérieux, which is the only ultimate shareholder benefiting from them. This funds the Foundation's activities.

Furthermore, bioMérieux supports the activities of the Foundations through its contributions. As such, the Mérieux Foundations received €2,409 million in 2019.

Fondation Christophe et Rodolphe Mérieux

The purpose of the Christophe et Rodolphe Mérieux Foundation is to support public health-applied biological research in developing countries, and more specifically aid in the fight against infectious diseases, and contribute to scientific and educational projects.

In an effort to support high-level research in emerging countries, it launched the Dr Christophe Mérieux Prize of €500,000. Awarded each year, the aim of this prize is to sponsor researchers studying specific diseases in developing countries.

In order to dedicate most of its resources to financing its projects, the Fondation Christophe and Rodolphe Mérieux relies on the staff of the Fondation Mérieux, entrusting to them its operational activities on the ground, in particular the construction and operation of the Rodolphe Mérieux Laboratories.

Fondation Mérieux

Since its founding in 1967 by Dr Charles Mérieux, the Fondation Mérieux, an independent family foundation recognised as being of public interest since 1976, has been fighting against infectious diseases in developing countries.

Its objective is to strengthen laboratory diagnostic capabilities, which are often lacking in many countries suffering from repeated epidemics. Its actions favour diagnosis as an essential part of patient care, and also as an essential tool for monitoring and controlling diseases.

Fondation Mérieux's activities are based on four priorities:

- applied research capacity-building on the ground by training researchers, creating diagnostic tools and developing collaborative research programs for diseases that affect these countries;
- improving access to diagnosis for vulnerable groups by building microbiology capacity in national health systems through the creation of laboratories of excellence (Rodolphe Mérieux laboratories), setting up or renovating medical laboratories in hospitals and training their staff;
- promoting dialogue and the sharing of knowledge between health sector stakeholders. Le *Centre des Pensières* (Annecy, France), a forum for discussion between the North and South, plays a key role in circulating knowledge and scientific innovation worldwide. For over 30 years, it has been playing host to parties working in the health sector, from all disciplines and all countries: researchers, clinicians, biologists, pharmacists, veterinarians, representatives of health and regulatory authorities;
- taking action for the mother and child through a holistic approach to health.

In 2019, for example, the accomplishments of the Foundations are the following:

- The Laboratoire Rodolphe Mérieux de Beyrouth, an observatory for disease-causing organisms and infectious diseases in Beirut, Lebanon, was designated the national reference laboratory for tuberculosis.
- In Laos, a Level P3 containment laboratory was installed at the Centre d'Infectiologie Lao Christophe Mérieux to enable the diagnosis and tracking of tuberculosis. This laboratory received ISO 15189 and ISO 15190 accreditation (quality, competency and safety of medical biology laboratories).

Committed to the fight against Ebola in the Democratic Republic of the Congo

bioMérieux supported the activities of the Fondation Mérieux as part of the fight against the Ebola virus epidemic in the Democratic Republic of the Congo. As such, bioMérieux donated BIOFIRE® FILMARRAY® systems and Global Fever Panel-RUO panels (for research is only) and BioThreat-E (Ebola).

- For the first time, the Fondation Mérieux provided training in antimicrobial resistance in partnership with Paris-Diderot University. The aim of this training was to support the objectives of the WHO Global Action Plan to combat antimicrobial resistance and enhance the capacities for strategic decision-making, particularly in countries with low to moderate income.
- The Foundations launched the construction of a medical-social centre for Yazidis women and children in Shekan (Irak). Inaugurated in 2019, this centre is composed of units that provide psychological care, production workshops, and space for children's games and sports.
- In Lebanon, the construction of a medical-social centre for refugees was completed by the Foundations, with the support of its partners. Located in the Bakaa plain, this centre provides medical support as well as gynaecological, obstetric and paediatric consultation, and information on proper hygiene and social issues.

bioMérieux supports the Betania centre in Madagascar

bioMérieux provided its financial support to the Betania centre located in Ankasina, Madagascar. This centre, of which Fondation Mérieux is a partner, is composed of a medical dispensary for pregnant women and young mothers, a school, and a cafeteria for children. The funds allocated by bioMérieux were used to upgrade the medical building and build a sanitary building, in order to enhance the prevention of infectious diseases.

3.4.3 Regulatory compliance applicable to products

As described in sections 1.5 and 2.3.2, the regulations that apply to bioMérieux are numerous, wide-ranging, and rapidly changing as they are implemented and transposed locally. There is also a risk that these regulatory changes are not identified, interpreted, and implemented within the required time-scale.

In particular, the Company must meet the following regulatory requirements:

- industry-specific requirements such as ISO standards (in particular 9001 and 13485), MDSAP (Medical Device Single Audit Program), UDI (Unique Device Identifier), IVDR (*In Vitro* Diagnostic Regulation), and Post-Market Vigilance;
- local and international regulations, particularly those associated with import and export management.

Compliance is then audited by internal quality auditors who ensure that processes, data and documentation relating to various applicable regulatory requirements are robust.

As a response to these matters, the Company has established a Global Watch Committee with the aim of identifying, ranking and monitoring enforcement of the main regulatory changes across the Group.

The Company is also regularly inspected by local and international regulatory authorities. The results of the inspections conducted in 2019 are detailed below:

Main inspections of bioMérieux sites by regulatory authorities in 2019

	Site	Organisation	Date	Comments
EMEA	Marcy, Craponne, La Balme, Grenoble, Verniolle (France), and Florence (Italy)	LNE-Gmed, a notified body designated by certain regulatory authorities, in particular the FDA, based on the MDSAP (Medical Device Single Audit Program), ISO 9001:2015 and ISO 13485:2016 standards	June 2019	Renewal of MDSAP, ISO 9001:2015, and ISO 13485:2016 certifications
	Combourg (France)	LNE-Gmed, a notified body designated by certain regulatory authorities, based on ISO 9001:2015	June 2019	Renewal of ISO 9001:2015 certification
	Combourg (France)	COFRAC (French Accreditation Committee) based on ISO 17025	April 2019	Renewal of ISO 17025 accreditation for temperature calibration laboratories and the testing laboratory
	Tres Cantos (Spain)	COFRAC (French Accreditation Committee) based on ISO 17025	April 2019	First ISO 17025 accreditation for the site laboratory.
	Tres Cantos (Spain)	LNE-Gmed, a notified body designated by certain regulatory authorities, specifically the FDA, based on ISO 9001:2015 and ISO 13485:2016	May 2019	Renewal of ISO 9001:2015 and ISO 13485:2016 certifications.
AMERICAS	St. Louis, Missouri, and Durham, North Carolina (United States)	LNE-Gmed, a notified body designated by certain regulatory authorities, in particular the FDA, based on the MDSAP (Medical Device Single Audit Program), ISO 9001:2015 and ISO 13485:2016 standards	June 2019	Renewal of MDSAP, ISO 9001:2015, and ISO 13485:2016 certifications
	Lombard (United States)	LNE-Gmed, a notified body designated by certain regulatory authorities, based on ISO 9001:2015	June 2019	Renewal of ISO 9001:2015 certification
	Rio (Brazil)	LNE-Gmed, a notified body designated by certain regulatory authorities, based on ISO 9001:2015 and ISO 13485:2016	July 2019	Renewal of ISO 9001:2015 and ISO 13485:2016 certifications
	BioFire Diagnostics – Salt Lake City, Utah (United States)	LNE-Gmed, a notified body designated by certain regulatory authorities, specifically the FDA: certification monitoring audit, based on MDSAP standards, ISO 9001:2015 and ISO 13485:2016	September 2019	Renewal of MDSAP, ISO 9001:2015, and ISO 13485:2016 certifications
ASPAC	Shanghai (China)	LNE-Gmed, a notified body, of the Pudong site, based on ISO 9001:2015 and ISO 13485:2016		Production halted at Pudong production site in June 2019

3.4.4 Business ethics

3.4.4.1 Anti-corruption measures

bioMérieux is exposed to risks of corruption linked to its business (see § 2.3.1).

bioMérieux's commitment to public health is part of a policy of protecting patient interests whilst preserving its reputation and the interests of shareholders. bioMérieux's actions are governed by a set of principles, directives, standards and procedures that correspond to current ethical norms. Thus, bioMérieux is developing an anti-corruption program which reflects the principles of the Global Compact and current regulations. In particular, bioMérieux and its employees are committed to combating corruption in all its forms, including extortion and bribery.

This program is under the responsibility of the Corporate Vice-President, Legal, Intellectual Property, and Compliance, through the Ethics and Compliance Department. The Global Compliance Officer draws on regional and local managers for the three main subsidiaries, as well a team responsible for export control.

bioMérieux's ethical principles extend to everywhere it operates. For this reason, teams of correspondents have been set up in each site and tasked with disseminating and applying the program's ethical and compliance-related principles at the local level. These teams also ensure that the Group's internal directives and all local laws and procedures are applied. Each site or subsidiary has a dedicated Local Compliance Team (LCT), which comprises, at a minimum, the subsidiary manager or site director, human resources director, finance director and a training coordinator. This team acts as the central team's correspondent at the local level and is responsible for disseminating and applying the Ethics and Compliance program.

General Management, the Executive Committee and the Audit Committee of the Company are regularly apprised of the status of the program. Moreover, a Central Ethics and Compliance Committee, consisting of, at a minimum, the Corporate Vice-President, Legal, Intellectual Property, and Compliance, Institut Mérieux's Secretary General, the Chief Financial Officer, the Vice President of Human Resources, and the Head of Internal Audit and Risk, meets every quarter to oversee the Group's implementation of the Ethics and Compliance program.

The Ethics and Compliance Department is in charge of drawing up, promoting and monitoring implementation of all compliance and ethical standards in accordance with applicable laws and the Company's Global Code of Conduct.

bioMérieux has also introduced a tool for analysing its suppliers in order to identify potential controversies surrounding them, particularly in terms of corruption.

Finally, the Company has brought its anti-corruption program into compliance with the Sapin II law, by introducing appropriate procedures.

Ethics and Compliance program

Through the Ethics and Compliance program (the "Program"), bioMérieux places an emphasis on conducting business in compliance with all laws and regulations, as well as the Company's own values and culture. bioMérieux expects its employees to embrace and share these values.

The program is intended to allow all bioMérieux employees to contribute to the Company's growth, in compliance with business ethics, Group culture and all applicable regulations. It is designed to prevent unethical conduct. The program also takes account of the rules that apply in the field of lobbying.

For this reason, staff training in the rules of business ethics is a central part of the Program, which contributes to the prevention of risks. It draws on the Global Code of Conduct. The principles of which will be gradually developed in line with annually set priorities.

In 2019, the Program's main priorities were to:

- enhance measures to prevent corruption, in accordance with the new requirements of the Sapin II law;
- secure the distribution network and other intermediaries;
- relations with healthcare professionals;
- understand and effectively apply export regulations;
- the new EU General Data Protection Regulation (GDPR).

Code of Conduct

A new, more comprehensive version of the Global Code of Conduct[1], and adapted to new risks arising mainly from new regulations (in particular anti-corruption, anti-money laundering, relationships with healthcare professionals, and personal data protection), has been issued to all employees. It is available in nine languages (French, English, Chinese, Spanish, German, Portuguese, Italian, Russian and Turkish) and is the subject of an annual comprehensive staff training and awareness-raising campaign. The Global Code of Conduct specifies that any employee who breaks one of the rules, or who encourages or authorises an infraction against the Code, will be subject to disciplinary sanctions that could involve termination of their employment contract.

Its distribution is supported in the following ways:

- a training course on the content of the Global Code of Conduct is offered to all employees;
- the code is uploaded to the Company's Corporate website and Intranet;
- a copy of the Code of Conduct is given to each new bioMérieux employee.

Moreover, the Code of Conduct as well as a document containing "Business Practices Applicable to Third Parties" are brought to the attention of external partners, whom the Group asks to uphold the principles of business ethics. For this purpose, the Group appends these documents, or a web reference to them, to its main contracts with suppliers and distributors, in order to ensure that its commercial partners are contractually bound by them.

Corruption prevention measures

bioMérieux's Corruption Prevention program is based on two components. The first is the Global Code of Conduct, which forms the basis of the Ethics and Compliance program. The second is the Corruption Prevention Manual[2] which can be accessed on the Company's Corporate website and intranet. The Manual sets out the Company's expectations in its relations with partners.

In 2019, the Company also created and circulated a new procedure and new interactive tool for approving third parties in order to identify and, where necessary, reject before hiring, any partners at risk of corruption.

In addition, the Company has produced a document on "Business Principles for Third Parties" and a "Third Party Approval Form" to raise its partners' awareness of the importance of complying with the Company's ethical conduct rules when doing business.

(1) http://www.biomerieux.com/sites/corporate/files/Ethics/FR/mobile/index.html
(2) https://www.biomerieux.com/sites/corporate/files/040268_-_att_2_-_manuel_de_prevention_de_la_corruption_-_fr_1.pdf

The Corruption Prevention program is designed to:

- promote ethical conduct in business dealings;
- familiarise employees with the Company's rules and anti-corruption laws;
- give employees a forum in which to ask questions.

The Ethics and Compliance program provides for online training, with the schedule, content and target audience determined on a yearly basis. The training aims to raise employee awareness of applicable internal regulations and procedures so that team members can conduct themselves in an upright, ethical manner in their business and work relationships.

In 2019, about 19,000 online courses were offered to employees across all subsidiaries, including courses on the Code of Conduct, anti-corruption measures, and third-party management.. Furthermore, courses on the AdvaMed (American "Advanced Medical Technology Association") and MedTech Europe (European association of medical equipment suppliers) and Mecomed (for the Middle East and Africa) Codes of Conduct were also distributed to the employees concerned. Finally, since 2016, all new hires have systematically taken three compulsory courses (on the Global Code of Conduct, anti-corruption measures, and conflicts of interest).

In 2016, bioMérieux put in place a global training and awareness campaign on its Code of Conduct for all of its employees. In 2017, 2018 and 2019, the Company provided this training to all new recruits. In 2019 a new global training campaign was launched for all employees.

In 2019, the Company offered its employees online courses on business ethics. The anti-corruption course participation rate was 79%, the third-party management course 78%, and the conflict of interest management course 62%.

3.4.4.2 Whistle-blowing

Special structures comprising a dedicated hotline and e-mail address have been set up as a listening service and to advise employees so that they can express themselves freely and report cases of non-compliance (see section 2.3.1).

Any employee who witnesses a breach of the Global Code of Conduct or of laws or regulations in general, should first report the issue to his or her manager or supervisor. Employees may also contact the Human Resources Department, the Legal Department or the Ethics and Compliance Department.

An ethics hotline has been rolled out in all of bioMérieux's host countries and is independently managed by an external provider. It provides employees with a local telephone hotline in the local language, as well as a website through which a report can be made online. To this end, in 2018 all Group employees received a card with the local contact details or website to submit their report.

The Company has a zero-tolerance policy concerning threats to employees who have reported something in good faith, refused to break the law, or taken part in an investigation.

Finally, the Company has made the necessary changes to its procedures and tools in order to incorporate the status of whistleblower as defined by the Sapin II law and the Vigilance law.

3.4.4.3 Public and governmental affairs

Around 70% of medical decisions are based on *in vitro* diagnostic testing, while the sector only accounts for 1-2% of healthcare spending(1). The importance of *in vitro* diagnostics in improving patient care and its effectiveness in terms of the sustainability of healthcare systems are increasingly recognised, making diagnostic tests a key part of 4P medicine (personalised, preventative, predictive and participative).

On the basis of this observation, in 2018 bioMérieux established the Public and Governmental Affairs Department which is aiming at raising awareness and achieve recognition of the medical and economic value brought by *in vitro* diagnostics, particularly in terms of antimicrobial resistance, to ensure antibiotics are prescribed appropriately and for food safety purposes.

The Public and Governmental Affairs team strives to share relevant information liable to inform public decision-making, with full transparency, integrity and in accordance with its mission as a public healthcare provider. In particular, it aims to ensure that the specificities of the *in vitro* diagnostic sector are taken into account by the authorities. The objective is to improve market access and fund diagnostic solutions in the long term, in particular in the case of innovative tests, in a restricted economic environment, amid major changes in medical practice and current government reforms in healthcare.

The Company undertakes to take collective and individual action, drawing on comprehensive, accurate, objective and balanced information:

- in accordance with national and international regulations;
- in a reasonable manner;
- in the spirit of consultation and transparency.

(1) Rohr et al., The Value of In Vitro Diagnostic Testing in Medical Practice: a status report, PLoS one, 2016 Mar 4.

The following are examples of concrete action by bioMérieux:

In France – *CSF-Antibiorésistance*

bioMérieux is leading the industry-level strategy on fighting antimicrobial resistance, *Contrat Stratégique de Filière Industries et Technologies de Santé – Antibiorésistance*. Amid a global public health emergency, the purpose of this working group is to make practical, evidence-based proposals to French health authorities in order to (i) unite the industry around fighting "antimicrobial resistance", (ii) allow existing health products to remain on the market, (iii) support the launch of new products under regulatory and pricing conditions that are satisfactory and sustainable for all players, and (iv) entrench France's role in combating antimicrobial resistance on the international stage.

In the United States – PACCARB

The purpose of the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria is to provide the US government with advice, information and recommendations on programmes and policies related to combating antibiotic-resistant bacteria. bioMérieux's Vice President Global Medical Affairs, Christine Ginocchio, is actively involved with this group.

In taking action, the Company is supported by these trade associations:

- the Advanced Medical Technology Association (AdvaMed): This American association promotes policies that foster the highest ethical standards, rapid product approvals, appropriate reimbursement, and access to international markets;
- the *Syndicat de l'Industrie du Diagnostic In Vitro* (SIDIV): this trade association represents manufacturers in the sector in France. It helps them to defend their interests by acting as a key point of contact for public authorities. bioMérieux's director of Public and Governmental Affairs, Isabelle Tongio, was elected Chair of SIDIV in 2019 for a one-year term;
- Medtech Europe is a European trade association for the medical industry. Yasha Mitrotti, bioMérieux's Corporate Vice-President, Europe, Middle East, Africa Region, sits on its Board, and Isabelle Tongio, bioMérieux's director of Public and Governmental Affairs, is a member of its Public Affairs Committee;
- AMR Industry Alliance is a global initiative that brings together industry players from the life sciences sector to respond to the United Nations' call in 2016 to tackle microbial resistance. bioMérieux is actively involved in this organisation alongside other companies in the pharmaceutical and *in vitro* diagnostics sectors.

The Company is also a member of *G5 Santé* and the *Association Française des Entreprises Privées* (AFEP).

In 2019, €726,000 was spent on trade association fees.

Moreover, the Group's distribution subsidiaries are encouraged to join their local trade association. The costs incurred are not material.

The Company also complies with its obligations by declaring its French lobbying activities to the *Haute Autorité pour la Transparence de la Vie Publique* (French high authority for transparency in public life).

Finally, the Group prohibits any direct or indirect contribution (purchase of goods and services) to local, national or international activities and political parties[1].

3.4.4.4 Ethical marketing

The Global Code of Conduct reiterates that the ultimate aim of bioMérieux's interactions with healthcare professionals is to improve the standard of patient care and improve public health. It specifies that:

- local laws and regulations on promotion and marketing to healthcare professionals, industry rules of conduct (such as Advamed and Medtech), and the principles of the corruption prevention manual must be followed;
- information for healthcare professionals must be accurate, transparent and fair;
- a product must only be promoted for the locally-approved use, in accordance with local legislation;
- a healthcare professional must never be offered or supplied with a product with the aim of exercising undue influence on their prescribing decisions;
- under a range of national legislation, the Company is required to record and report to the government any transfer of value to a healthcare professional, and compliance with this is mandatory;
- comparison of the Company's products with the competition must be fair, substantiated, and compliant with all applicable laws and regulations. The Company's products or services must never be labelled or marketed in such a way as to confuse them with those of its competitors. Products, services and employees of competitors must never be denigrated.

3.4.4.5 bioMérieux's tax policy

bioMérieux's tax policy is responsible. Through its operations in over 160 countries, its tax contribution includes a wide range of direct and indirect taxes, corporate taxes, and social contributions, as well as customs duties, paid in many countries. bioMérieux's tax approach is aimed at ensuring compliance with local legislation and regulations, in letter and spirit,as well as with relevant international standards.

In accordance with bioMérieux's Code of Conduct, the Group's tax policy is defined according to the following principles:

- **Taxes follow the business:** bioMérieux's taxation is the result of its activities and operational choices. bioMérieux has no organisations in tax havens and does not allocate any functions/risks to organisations without economic substance.

(1) bioMérieux, Corruption Prevention Manual, p. 15. https://www.biomerieux.com/en/preventing-corruption

- The Group has no subsidiaries in any of the following jurisdictions: Andorra, Anguilla, Antigua and Barbuda, Aruba, the Bahamas, Bahrain, Barbados, Belize, Bermuda, Cyprus, Curaçao, Gibraltar, the Cayman Islands, the Cook Islands, the Isle of Man, Mauritius, the British Virgin Islands, Jersey, Luxembourg, Malta, Puerto Rico, or Samoa;
- For operational reasons, the Group has subsidiaries or a presence in the following fiscal jurisdictions offering attractive tax arrangements: the United Arab Emirates, Hong Kong, the Netherlands, the United Kingdom, Singapore, Switzerland, and Taiwan. The taxable profit in these countries is in line with OECD recommendations on fair compensation.
- The legal structure of the main companies owned by bioMérieux SA has been available for a number of years in section 1.2.2.1 Legal structure.

- **Full compliance**: bioMérieux ensures that all taxes and contributions are reported and paid in compliance with local regulations, and in accordance with recognised international standards such as the OECD guidelines. Furthermore, subsidiaries in the bioMérieux Group are required to follow the Global Code of Conduct, which promotes the financial integrity of staff and anti-money laundering measures in particular;
- **International balance**: bioMérieux has a transfer price policy, updated regularly, which complies with the arm's-length principle and, more generally, with OECD recommendations. This policy applies to all cross-border transactions within the Group.

  In setting its transfer prices, the Company conducted robust functional analysis of its activities, so as to compensate each company within the Group according to the functions performed, risk exposure, assets, and resources used. Through this analysis, it has identified a number of "key entrepreneurs" for the product and service lines on the market. These "key entrepreneurs" are primarily located in France and the United States. In accordance with OECD principles, they receive any residual compensation, *i.e.* the profit or loss once all entities involved in the economic process, particularly commercial companies, have been fairly compensated.
- **Full cooperation with tax authorities**: bioMérieux promotes open and proactive communication with tax authorities in all countries. bioMérieux helps to draft the annual Country-by-Country Reporting (CbCR), which is submitted to the French tax administration by the ultimate parent, Compagnie Mérieux Alliance, Institut Mérieux's parent company. France currently shares its CbCR data with 62 countries (including the 27 countries of the European Union, Australia, Brazil, Canada, China, India, Japan, South Korea, Russia and the United States).

The Tax Department reports to the Group's Administrative and Financial Department. It draws on a network of internal contacts and on external consultants, depending on the issue. This coordinates, raises awareness and supports the Financial Departments of each Group subsidiary so as to ensure they meet the standards of compliance required according to the Group's policy and standards.

The Group's income tax expense is explained in the section on consolidated statements (see section 6.1.2, Note 25). A more specific regional analysis is provided below.

The effective tax rate for the Americas region, which accounts for 45% of the Group's total revenue, is 21%. This rate, which is below the legal rate in the United States (around 25%), the main country in the region, is due to the positive effect of the research tax credits and the US tax reform which benefits those companies that produce in the United States and sell overseas (reduction of income tax expense through the deduction of FDII – Foreign-Derived Intangible Income). Without these factors, the effective tax rate for the Americas region would be 25%.

The effective tax rate for the EMEA region, which accounts for 36% of the Group's total revenues, is 22%. This rate, which is below the legal rate in France of 34.43%, is due to the positive effect, in France, of the research tax credits and the sponsorship tax cut. Without these factors, the effective tax rate for the EMEA region would be 30%.

The effective tax rate for the Asia-Pacific region, which accounts for 19% of the Group's total revenue, is 64%. The average rate for the region is negatively affected by the losses of Hybiome which benefits from a tax rate of 15%, and by the unrecognised deficits in manufacturing activities in India and China. Without these factors, the effective tax rate for the Asia Pacific region would be 30%.

Research tax credits for the "key entrepreneurs", located primarily in France and the United States, reflect a significant financial and human commitment, making it possible to maintain and develop highly qualified jobs at the local level, ensuring long-term development that reflects the bioMérieux values.

3.5 Promoting the development and well-being of our employees

bioMérieux's employees are its most important asset. As such, the management of human resources is a priority for bioMérieux.

Around 73% of employees are located in France and the United States. It is for this reason that the actions described below essentially refer to these two countries, which are thus being treated as pilots ahead of implementation in other countries where the Group is present. These actions act as reference points for the labour relations policy that bioMérieux strives to apply to all of its employees throughout the world, taking into account local regulations and customs. For example, the same recruitment procedures, pay policies, training policies and annual appraisals apply to all employees worldwide.

bioMérieux was recognised in 2020 by the Top Employers Institute as one of the best employers in terms of the standard of its working conditions in China for the second year running, France, the United States, and South Africa.

Based on the evaluation of 600 HR practices (for example, talent and performance management, training, compensation, and Corporate culture), a tool has been produced to aid decision-making with a view to developing strategies and implementing actions for continuous improvement.

bioMérieux ranks third among the most attractive companies in France, and, for the third year in a row, received an award at the 10th Randstad Awards(1).

3.5.1 A corporate culture based on social dialogue

The Company considers it essential to maintain good employee relations. There is a well-developed tradition of social dialogue with the employee representative bodies, in France but also within its subsidiaries.

In 2019, France defined a new entity representing employees, the Social and Economic Committee (SEC). An establishment-level SEC (ESEC) was thus put in place in each French facility (Marcy l'Etoile, Craponne, La Balme-IDC, Grenoble-Verniolle, and Ker Lann-Combourg-Ivry). Each ESEC meets at least once per month and is consulted on the establishment's economic, health, and safety issues. In addition to these five ESECs, a Central SEC was created at the level of the Company, grouping 16 incumbents and 16 alternates. It meets at least once every two months, even though the legal obligation is once every six months, and its mission is to handle subjects of interest to the Company as a whole. The CSEC met 11 times in 2019. Depending on the items on the agenda, the members of the Executive Committee attend these meetings, which have been a forum for discussing the Company's situation, environment, financial performance, five-year strategy, R&D policy, industrial strategy, organisational changes, social balance sheet, and gender equality report, as part of implementing the company-level agreements.

In addition, in 2008, a European Works Council (EWC) was created, and includes all European subsidiaries of bioMérieux. It met twice in 2019 and handles subjects that go beyond the scope of France.

Each of these bodies (ESEC, CSEC, EWC) is overseen by a chair and a secretary. Each ESEC and the CSEC has a commission in charge of the health, safety and working conditions of the employees. The collective agreements, negotiated by representative unions within the company (CGT and CFDT in 2019), all specify the constitution of a monitoring commission, composed of the signatories to the agreement. These commissions are in charge of monitoring the application of the agreements and making regular reports thereon. For example, the gender equality commission and the commission on persons with disabilities monitor quantitative performance indicators, and the central commission on health and safety and working conditions monitors the indicators of the Occupational Health Agreement signed in 2012.

The following agreements and addenda were entered into in 2019:

- an agreement on the Quality of Life at Work, unanimously signed on January 31, 2019. This innovative agreement, which received recognition from the French Ministry of Labour and an award at the *Assises du Droit Social* (French national labour law conference), establishes new ways of organising work, *e.g.* through an *ad hoc* remote working scheme called FlexJob, and commits the Company to a quality and well-being policy for employees;

(1) The Randstad Employer Brand Research survey was conducted on the general public in 2018 by the independent institute TNS, across a panel of 250 companies with several thousands of employees, who provided opinions on approximately ten major criteria such as salaries, job security, career prospects, social responsibility, etc.

- a Company-level agreement on the Mandatory Annual Negotiations on salaries, working conditions and gender equality, which was unanimously signed;
- a supplementary profit-sharing agreement for employees in France to share the fruits of significant growth in 2018;
- a new profit-sharing agreement was unanimously signed for the 2019-2021 period, enabling bioMérieux to share the fruits of its growth with its employees;
- a unanimously-signed agreement on social dialogue and the establishment of Social and Economic Committees within each entity in France sets out the rights and obligations of social partners at bioMérieux SA, particularly the advances in terms of social dialogue for employee representatives, whether elected by employees or appointed by representative unions at the national level;
- an agreement and an addendum on holding workplace elections within the five French entities;
- an addendum to the Employee Savings Plan, signed unanimously, enables each eligible employee in France to subscribe OPUS Fund shares and thus become shareholders in bioMérieux (see section 3.5.3.1 "Employee share ownership").

Moreover, plans are under way to negotiate the proactive management of retirement.

Certain agreements signed by bioMérieux have been recognised, thus illustrating the standard of social dialogue in France and encouraging the Company to pursue its commitment.

bioMérieux held a meeting at the Ministry of Work on June 28, 2019, for a social dialogue event, *Les Journées du Dialogue Social*, organised by minister Muriel Pénicaud, to present the advances contained in the Quality of Life at Work Agreement.

The same agreement was shortlisted by the *Assises du Droit Social* awards for the most innovative agreement of the year and was awarded second prize, presented by Myriam El Khomri, the former French Minister of Labour.

Furthermore, the organisation of working time has been structured with new agreements since the introduction of the 35-hour work week. As such, bioMérieux, has always been keen to promote the quality of worklife of its employees and to ensure greater flexibility and a better work-life balance. For example, flex time, staggered shifts, night shifts and substitution teams on Saturdays and Sundays have been introduced, with the compensatory measures for the difficulty of these non-standard working hours and for travels outside working hours.

The "Health in the Workplace" agreement, aimed at improving the health and welfare of employees at work, pays particular attention to workstations, organisation, night shifts, and the prevention of psychosocial risks and harassment, in accordance with the non-discrimination principle. This agreement establishes regular remote work for certain autonomous personnel, which can be applied continuously or during special events requiring a reduction in commuting between home and work (pregnancy, rehabilitation after an accident, etc.).

Psychosocial risks are among the main focuses of bioMérieux's attention section 3.5.5.3.

3.5.2 Skills and headcount management

3.5.2.1 Career and performance management

Professional development is a strategic and social matter for bioMérieux. It helps to support employees throughout their career. It is built on a relationship of trust and dialogue between employees and managers.

For a number of years, the Executive Committee and Human Resources have coordinated the Talent Pool & Succession Plan process to identify, develop and retain talent. In 2019, over 98% of identified talents remained with the Company. Identifying these high-potential employees allows succession plans to be developed for key positions, as identified during the Strategic Workforce Planning process. In collaboration with Mérieux Université, the Company has designed specific programs and courses to support their development and induction.

Based on the five-year strategic plan, the Regions draw up their own forward planning of employment and skills, taking into account the Group's priorities and their own specificities. The main strands for 2019 and the coming years include:

- managing new job skills (sales, supply chain, medical), that meet the requirements of changing markets, technologies and digitalisation;
- improving management practices with the introduction of the Leadership Competence Model, and the intercultural approach.

The training plans drawn up in the countries incorporate these themes as priorities for development and underpin the Company's major plans for transformation.

All Group employees take part in a specific Performance Management Process (PMP). This is a system for assessing employee performance over the past year (job proficiency and targets met), as well as a development tool (employees' individual needs and aspirations are identified), and, on the basis of these twice-yearly reviews, any actions required to increase collective and individual performance are taken. The goal of the mid-year interview is to define the employee development plan, in particular the training plan.

3.5.2.2 Training

bioMérieux's response to the development requirements of its employees is based on two pillars: on the one hand, Mérieux Université, the Company's university, which trains the Institut Mérieux Group's employees; and on the other hand, an organisation specific to bioMérieux, the better to meet local and regional requirements.

Mérieux Université's range of courses is rolled out across four regional hubs in France, the United States, China and Brazil, and includes:

- programs for managers aimed at disseminating a shared management culture across the entities of the Institut Mérieux Group:
  - a Manager and Leadership Essentials program is offered to all managers in the Group,
  - a New Leader Induction program, which familiarises participants with the Group's challenges and strategy and instils in them a shared management culture,
  - the Fit For the Future program was also held for the fifth year in December 2019. It is aimed at supporting the development of managers with the potential to access leadership positions, in particular through strategic projects;
- and training courses specific to certain functions, which are offered at academies. The goal is to adapt the skills of each category of job and anticipate and support the major transformations that affect them, and coordinate an active, innovative community of practice. These courses are designed in collaboration with the relevant business line heads. As of 2019, there are a number of "Core" courses, including Finance, Marketing, Sales, Manufacturing, Supply Chain, Project Management, R&D process;
- Coaching and Teambuilding.

Moreover, product training remains a key factor in responding effectively to the requirements of bioMérieux's clients.

Since March 2019, Mérieux Université has provided employees of Institut Mérieux with a digital language-learning solution which offers a resource centre called Essentials, for working on five languages: English, French, Spanish, German and Italian. It is comprised of practice in written and spoken comprehension, vocabulary, grammar, and pronunciation.

In order to develop office automation and digital skills at bioMérieux, another platform has been available for employees of the EMEA region since January 2018 and was expanded to include employees of the Asia Pacific and Americas regions in January 2019. This platform includes courses in over 400 systems and platforms (office automation, communications, internet, multimedia, operating systems, etc.) in the form of short videos (micro-learning).

bioMérieux is developing the use of digital tools to train its employees. A training platform that was rolled out in 2017 enables each employee to consult the full range of bioMérieux's courses centrally, irrespective of the learning format (classroom-based, e-learning, blended learning, video, etc.). The platform is accelerating the digitalisation of learning worldwide and responding to the new skill requirements of a wide audience such as adapting to new IT tools, new regulations or new working methods such as collaborative working. Moreover, bioMérieux encourages its employees to engage in self-learning so that they can train beyond their own business line.

In 2019, the total number of training hours amounted to 241,344, representing an average of more than 21 hours of training per employee (compared with 20 in 2018).

The rate of access to employee training in 2019 was 89%.

The average number of training hours per employee and by geographic area is 10 hours in the Americas, 25 hours in Asia-Pacific, and 31 hours in EMEA.

3.5.3 Attracting and retaining talent

bioMérieux strives to retain its employees and attract new talent. As such, it must offer them the best and most attractive working conditions. In a constantly changing world, and in order to maintain an independent, people-focussed business model, bioMérieux puts many measures in place to create a stable working environment that meets the needs of all its employees. In particular, bioMérieux aims to implement a global labour relations policy focussing on good social dialogue in support of ambitious economic performance with respect for local customs and legislation, attractive compensation and opportunities for internal mobility, whilst promoting diversity. Finally, bioMérieux is keen to establish close links with universities and educational institutions worldwide, in order to identify and attract young talent (see section 3.5.3.3).

3.5.3.1 Compensation

bioMérieux's policy provides for compensation in the form of a fixed and bonus salary and, emphasises fringe benefits such as retirement, death and disability insurance and health insurance.

Compensation structure	Compensation (fixed and variable) is set in each country on the basis of local conditions, the Company's results and individual performance. For executives, a worldwide grading of positions makes it possible to compare levels of responsibility and set compensation on the basis of local benchmarks.
	In order to align staff with bioMérieux values and strategic priorities, Group employees receive variable compensation. Moreover, employees in France and the United States, as well as Global leaders and Talent Poolers, receive variable compensation weighted by indicators linked to the Company's economic performance, which are reported to the market.
	For example, bioMérieux SA employees receive both a basic compensation (base salary, seniority pay, various bonuses, and extra pay) and a variable compensation, which includes the provisions required by law and a performance-related bonus, unilaterally decided by the employer. Since 2016, the Company has sent all French employees an individualised wage and benefits summary (*Bilan Social Individuel*).
Profit-sharing, incentives, and employee savings	bioMérieux SA has a non-discretionary profit-sharing plan calculated on the basis of the legal formula.
	The profit-sharing plan, from which the bioMérieux SA employees have benefitted since 2013, was renewed for the 2019-2021 financial years. This new agreement, signed in early 2019, includes an increase in the main profit-sharing plan. In 2019, an additional profit-sharing component of €1,000 gross was allocated to each employee equally at the end of the 2018 financial year.
	The Company wants to closely involve its employees in the fruits of its growth through these different systems and the employee savings plans available to them, particularly in France: an employee savings plan (*Plan d'Epargne Entreprise*, PEE, established in 1987), a Company retirement savings plan (*Plan d'Epargne Retraite Collectif*, PERCO), and an employee shareholding plan. The Company encourages the saving of the collective variable compensation with these two latter plans through a matching contribution. The Company retirement plan (PERCO) benefits from a matching contribution by the Company, which can amount to up to 1.5% of the employee's gross annual compensation.
	Discretionary profit sharing, including the Corporate social contribution (*forfait social*), amounted to €20 million compared to some €21 million in 2018.
Employee share ownership	As a result of the Company's initial public offering as well as the introduction of the employee savings plans and several employee share ownership plans for Group employees over the last few years, nearly one in two current employees are bioMérieux shareholders (see section 7.3.4).
	The Company was keen to build on this in 2019. Following two initial plans in 2017 and 2018 for employees outside France and the United States, a new employee share ownership plan (MyShare) has been implemented across all subsidiaries (except as per local restrictions). All employees with at least three months of service were given the option of joining this employee share ownership plan in the form of a discount of 30% and a matching contribution for the first €1,000. The participation rate was 65% in France and 44% in the rest of world.
Supplementary pensions	The Company pays special attention to preparing for its employees' retirement: Article 83 in France, 401K plan in the United States, and similar mechanisms in other countries. This differentiating aspect is included in the overall compensation package presented to employees at recruitment and is instrumental in attracting talented people.
Free share grant	In order to retain key people within the Company, including Global Leaders as well as those identified during the Talent Pool process, bioMérieux has had a free share grant policy (see section 7.4) for a number of years.
Days off	Most of the subsidiaries worldwide have a policy of awarding more days off than the legal minimum, and reward their employees with additional days off related to seniority within the Company.
On-site catering	The Company offers staff canteens at most of its sites and subsidises the price of meals in some countries. As such, some 75% of employees worldwide are able to have a balanced meal at work, thus preventing certain situations of food insecurity for its employees. In 2018, bioMérieux invested €1.2 million in improving the cafeterias at two sites in France (La Balme and Marcy l'Étoile), and €200,000 in improving the range of food offered to employees (more organic, local, and fresh produce, etc.).

At December 31, 2019, total personnel costs (salaries and wages, payroll taxes, and discretionary and non-discretionary profit-sharing plans) amounted to €1,014 million compared to €875 million at December 31, 2018 (see section 6.1.2, Note 20).

3.5.3.2 Promotions and internal mobility

Internal mobility is considered one of the key factors in the success of the employment policy. The issue of skills and changes in jobs over the next three-five years is addressed by the Company at a number of levels. There are technological factors with the ever greater impact of digital technology, but also economic factors related to the changing customer base or competition.

With its global presence and diverse range of technology, the Company can offer its employees professional development and internal mobility opportunities. Furthermore, belonging to the Institut Mérieux Group offers options for mobility within the Institute and its subsidiaries.

bioMérieux's policy encourages internal promotion by offering the required support and training.

3.5.3.3 Attracting and retaining young people

bioMérieux is pursuing its commitment to recruiting young professionals. bioMérieux is a partner to universities and educational institutions in France and overseas, a situation that allows it to strengthen its cooperation with academic research. This initiative is aligned with the Company's human resources policy to attract the talent and scientific profiles bioMérieux will need to address ongoing changes in its occupations.

bioMérieux has had a partnership with EMLYON Business School since 2015. Through this agreement, bioMérieux became one of the first companies to join the Global Business Network of major international Corporate partners. Thus it is becoming the expert life sciences partner as part of the IDEA program (Innovation, Design, Entrepreneurship & Arts), a new pedagogical approach implemented by EMLYON to train the innovative entrepreneurs of the future. In the area of research, bioMérieux supports the development of work carried out within the Institut français de gouvernement des entreprises (IFGE), the EMLYON research centre and social laboratory dedicated to Corporate Governance issues. The partnership also includes the possibility of training for bioMérieux employees to help them enhance their skills, notably in relation to the digital transformation

bioMérieux is also a founding member of the Fondation Université Grenoble Alpes, established in 2014. This Foundation's aim is to support high-level research and training and promote equal opportunity, providing guidance through the transitions of the 21st century. In 2019, the Company renewed its partnership with the Fondation UGA for a further five years.

Since 2015, bioMérieux has also been involved with the Université Grenoble Alpes's Master Excellence Health4Life Program, funding 31 grants in five years to enable the best students from this discipline to pursue their studies in an international environment. This Master's degree program from the School of Pharmacy at Université Grenoble Alpes combines multidisciplinary approaches, providing a unique interface among the disciplines of healthcare, computer engineering, and maths. This partnership enables the Company to recruit young graduates of this program.

bioMérieux has been a partner of the INSA Lyon Foundation SA since 2010. Every year, the Company also hosts interns from INSA, runs careers days at the school and takes part in its Company Forum.

Building on this partnership, the Company is now a Corporate Partner of the UNITECH program. This elite exchange program brings together nine European universities: INSA Lyon (France), Chalmers (Sweden), Trinity College (Dublin, Ireland), Aachen University (Germany), ETH Zürich (Switzerland), Polytecnico de Milan (Italy), TU Delft (Netherlands), Loughborough University (England), UPC Barcelona (Spain), and more than 20 Corporate partners. Through this program, the Company is involved in selecting the best engineering students and training them, with a strong focus on new technologies; offering the students study projects or internships; and recruiting candidates at every step of their program.

Long-term partnerships are also in place with Ecole Supérieure de Biologie, Biochimie, Biotechnologies (ESTBB), a school in the Catholic University of Lyon's scientific cluster. Nearly 180 bioMérieux employees are alumni, and the Company welcomes young people as interns or work-study students every year. Since 2008, the HRD of bioMérieux EMEA has chaired the school's Development Council, a forum for discussion with heads of departments where the opinions of professionals are gathered to improve the content of the curricula in order to adapt them to the new skills required by businesses. In October 2017, bioMérieux renewed its commitment to the school by signing an agreement formalising its partnership over the next three years.

bioMérieux has also been involved in training and, each year, offers willing candidates the opportunity to volunteer overseas for six to 24 months on an international internship program, *Volontariat International en Entreprise* (VIE).

3.5.3.4 Employee satisfaction surveys

In 2019, a survey was issued to over 2,000 employees in the United States in order to measure their engagement. The response rate was 71%. The engagement rate was 76%, four points higher than a sample of North-American companies and two points higher than a sample of international companies in the biotechnology and medical devices sector.

The Company also conducted a survey in the ASPAC (China, Japan, Korea) region, with a response rate of 82%. From 2020 onward, it intends to roll out this process with a global survey.

3.5.3.5 #LifeAtbioMerieux

bioMérieux organises initiatives and events that bring employees together and offers them innovative services. This approach contributes to employee well-being by helping to open up organisations and promote partnerships between teams. The table below sets out the highlights in 2019.

Day Idea Tank	Building on the day of participation launched in 2018, which gives all Group employees an opportunity to have their say, bioMérieux is continuing to implement and monitor the proposed actions (almost 19,000 ideas recorded). As such, the collaborative platform Enjoy&Share has introduced a third "classifieds" platform where employees can sell, donate or exchange goods and services. This module joins the two forerunners launched in 2018: home exchanges and language exchange trips for the children of employees.
Service desk	In November 2019, bioMérieux opened a multi-service desk at its Craponne, Marcy l'Étoile, Campus de l'Etoile and La Balme sites, which together make up about 85% of its employees in France, enabling its employees to save time during their working day. Some 50% of them are enrolled. This desk is funded by the Company. Access to the service is free for each employee who pays their own orders on the basis of a preferential price list.
Local organic market	At certain sites, bioMérieux offers its employees access to a farmers market promoting organic, environmentally-friendly agriculture. bioMérieux is regularly expanding the range of available products.
Family Days	bioMérieux sites regularly organise events for employees and their families. In 2019, French sites played host to over 5,700 people (employees and their families) at open days organised by each site providing an introduction to the different jobs at bioMérieux through themed workshops chaired by employees on a voluntary basis.
Health and prevention	• Free flu vaccinations are offered to employees at the sites in France, the United States and Asia Pacific. • In France, employees and their families have access to a service desk providing medical services and teleconsultation. Services include access to a physician 24 hours a day, seven days a week.
Community action by employees	*Entreprise des Possibles*: the Company is working alongside other companies in Lyon to offer assistance to the homeless and vulnerable populations (see section 3.3.4.2). Other initiatives by each of the Company's subsidiaries are implemented locally each year.

3.5.3.6 Indicators

The indicators below show the extent to which the Company's human resources policies affect its ability to attract and retain its employees.

NUMBER OF EMPLOYEES WHO WERE PROMOTED DURING THE YEAR

	2019		2018		2017	
Geographic areas	Number of promotions	% of workforce	Number of promotions	% of headcount	Number of promotions	% of headcount
France	314	8.0%	303	7.8%	246	6.4%
EMEA	87	2.1%	26	1.9%	26	2.0%
Americas	382	7.5%	307	6.7%	209	5.1%
Asia Pacific	65	6.0%	33	2.9%	34	3.2%
TOTAL	**848**	**7.3%**	**669**	**6.0%**	**515**	**5.0%**

The percentage is calculated on the total number of employees, excluding temps and defined duration contracts.

OVERALL VOLUNTARY TURNOVER RATE

New hires = 1,998		Departures = 1,445		O/w permanent contracts	O/w 3 years' service for permanent contracts
Permanent contract	1,591	Voluntary	937	855	469
Fixed-term contract	407	Involuntary	508	246	106

In 2019, the voluntary turnover rate for employees on permanent contracts was 7.9% and 4.3% for employees with less than three years of service (compared with 7.5% and 4.2%, respectively, in 2018).

ABSENTEEISM

Absenteeism: Value/theoretical working days	2019[d] No. of days absent	2019[d] Theoretical No. of days	2019[d] %	2018[d] No. of days absent	2018[d] Theoretical No. of days	2018[d] %
Americas[a]	56,511	1,103,776	5.1 %	12,564	992,319	1.3%
ASPAC[b]	1,196	218,987	0.6 %	3,145	237,753	1.3%
China	15	77,751	0.0 %	1,756	96,213	1.8%
EMEA[c]	56,995	1,050,682	5.4 %	43,776	1,028,441	4.3%
France	49,758	778,825	6.4 %	35,324	776,977	4.5%

(a) Argentina, Brazil, Canada, Chile, Colombia, United States
(b) Australia, China, South Korea, India, Japan, and Singapore.
(c) Germany, Belgium, Spain, France, Italy, Poland, United Kingdom, Russia and Turkey.
(d) as of 2018, Astute's headcounts have been included, following the acquisition of the company during the year.

3.5.4 Diversity and inclusion

Given that diversity is an undeniable factor in its economic performance, bioMérieux has introduced a policy to educate its employees and managers. This diversity policy is applied in recognition of the specific local context. bioMérieux implements specific actions in terms of HR processes and monitors indicators to measure the Company's progress in this area.

3.5.4.1 Promoting gender equality

bioMérieux's policy is based on "Gender Equality Agreements" that are renegotiated every three years. Through these measures have been introduced with the objective of ensuring equal pay and working conditions. bioMérieux has defined a policy for the Board of Directors and management bodies as described in section 4.2.6.3.

The most recent agreement on gender equality was signed unanimously in October 2017 and applied to the 2018-2020 period. It builds on previous work and focuses on the introduction of tools to monitor performance indicators reviewed by an *ad hoc* committee. It focuses on training all internal parties to prevent sexist comments and behaviour, with a gender equality training module for managers. Finally, this agreement includes specific provisions for employees undergoing fertility treatment. The Company has a non-discrimination policy whereby only the relevant skills are taken into account when assessing an internal or external application for a management position.

The Women Ready for Leadership Diversity (WoRLD) network, open to all bioMérieux women and men employees throughout the world, has been working since 2013 to promote greater gender balance in management positions along with actions carried out by the Human Resources Department. In France, in 2019, bioMérieux continued its partnership with the Alliance pour la Mixité en Entreprise (AME) (gender balance alliance), an association that includes the networks of some fifteen companies in the Auvergne-Rhône-Alpes region, enabling bioMérieux employees to attend inter-company events focused on issues of gender equality in business. Among the high points of the year were two networking events organised by the network. In addition, the WoRLD network helped organise a conference with the Healthcare Business women's Association (HBA).

GENDER EQUALITY INDEX: 88/100

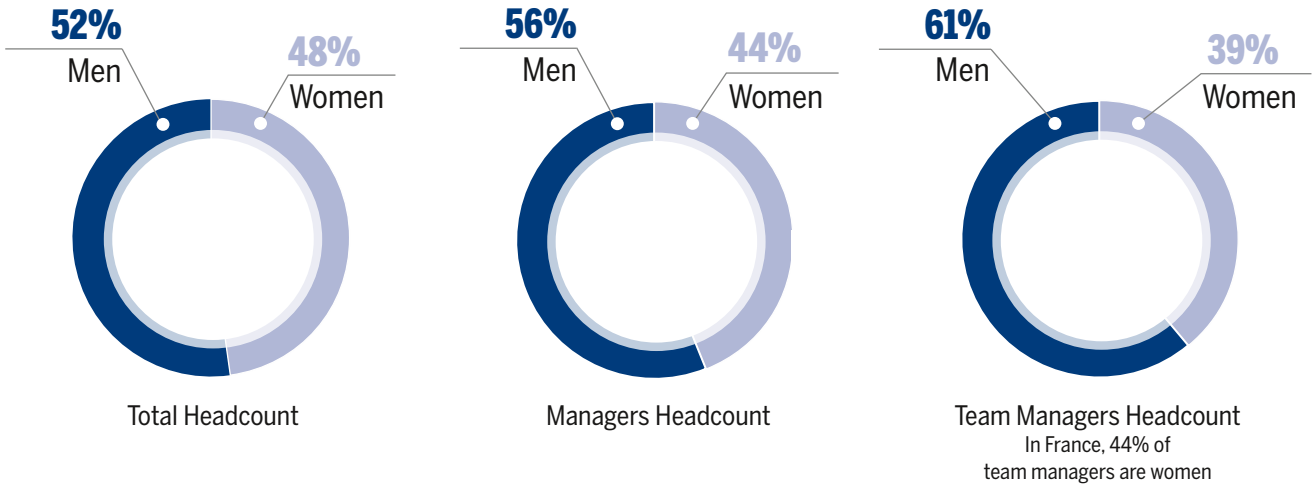
Since March 2019, French businesses have been required to publish their gender equality index so as to promote equal pay. This index is shared with their Social and Economic Committee and the Labour Inspectorate, and must be reported on the Company's website. Businesses with a score under 75 must implement corrective measures to achieve this score within a three-year period.

This index is based on the following 5 indicators:

- the gender pay gap;
- the pay increase gap;
- the promotion gap (only in companies with over 250 employees);
- the number of employees receiving a pay increase on their return from maternity leave;
- and parity in the 10 highest pay bands.

The index was published on the Company's website in March 2019 and is to be recalculated at the start of each year.

GENDER BREAKDOWN OF MANAGER AND TEAM MANAGER HEADCOUNTS



RATE OF INTERNAL PROMOTION (WOMEN/MEN)

	2019			2018		
	Number of Women promoted	% of Women promoted	Total number of promotions	Number of Women promoted	% of Women promoted	Total number of promotions
France	188	60%	314	166	55%	303
EMEA	54	62%	87	14	54%	26
Americas	148	39%	382	146	48%	307
Asia Pacific	27	42%	65	19	58%	33
TOTAL	**417**	**49%**	**848**	**345**	**52%**	**669**

3.5.4.2 Promoting the employment and integration of employees with disabilities

A Company-level agreement covering all French sites is signed every four years and was renewed in 2017. This agreement contains a direct employment commitment, all types of contracts combined, and a budget to implement the agreement, divided between the various categories according to the actions arising from its implementation.

Through this voluntary contribution in particular, the Company funds, to the tune of €257,000, a policy to hire, integrate and train people with disabilities, and wishes to raise awareness among, and offer training to the stakeholders involved in, accommodating these people. It also helps keep people in their jobs by making workplace adaptations (around 65% of the budget).

As part of its initiatives developed over many years to support persons with disabilities, "Handibio" days are organised in France. The aim is to raise awareness of disability among employees. Four such events were held in 2019: in Verniolle, where an escape game enabled many participants to experience life with a disability; in Saint Vulbas and La Balme; and in Marcy l'Étoile, where a meal in the dark was organised and met with great success.

As part of the Disability agreement and Corporate Social Responsibility, the EMEA Recruitment Department renewed the #HandiBioRecrutement program in 2019. The aim of this program is to promote the recruitment of people with disabilities through two actions: on the one hand, raising awareness among managers of #HandiBioRecrutement to prepare them for interviewing people with disabilities; on the other hand, an annual recruitment day with the support of local partners such as Cap' Emploi, *Groupements d'Employeurs Travailleurs Handicapés* (GETH) (Associations of Young Workers with Disabilities), and the region's schools. This day resulted in a pool of candidates as well as offers of jobs, work-study placements, and internships. Close contacts were made with various schools to recruit young people with disabilities.

In France, bioMérieux's policy in this area is helping to increase the proportion of employees with disabilities, as stated in the mandatory employment of disabled persons declaration (*Déclaration obligatoire d'emploi des travailleurs handicapés* – DOETH). In 2019, the gross percentage of employees[1] with disabilities stood at 6.07% of the headcount compared with 5.96% in 2018.

As part of its CSR, bioMérieux is also working with businesses in the sector to enable people with disabilities to gain employment in an adapted environment.

(1) The gross percentage of employees is a regulatory indicator that receives supplements based on the percentage of employees with disabilities

BREAKDOWN OF EMPLOYEES WITH DISABILITIES

Geographic areas	% employees with disabilities/2019 headcount	% employees with disabilities/2018 headcount
France	4.8%	4.5%
EMEA (excl. France)	1.2%	1.1%
Americas	2.1%	2.1%
Asia Pacific	0.0%	0.2%

3.5.5 Employee Health and Safety

3.5.5.1 Health and Safety policy and organisation

The Health and Safety initiative is part of a global Health, Safety and Environment (HSE) policy signed by the Company's General Management, which covers all activities of the value chain.

The HSE Department operates at Group level, in order to develop a harmonised and proactive approach aimed at preventing risks to individuals, property, and the environment. This department reports to the Manufacturing & Supply Chain director, a member of the Company's Executive Committee. The guidelines and policy are discussed at quarterly HSE Committees, attended by the Chairman and Chief Executive Officer, certain Executive Committee members, and business line experts.

A network of HSE facilitators is in place at each site and subsidiary:

- for each site, an HSE manager reports to the site manager. This function can be supplemented by other people (HSE engineers, HSE technicians) depending on the site's size and risks;
- for each subsidiary, an HSE representative is appointed and is in charge of managing the process.

An HSE management system is in place within each site, focusing on continuous improvement by following the PDCA (Plan-Do-Check-Act) principle.

2020 Target: OHSAS 18001 certification for the main bio-industrial sites.

As of the end of 2019, 9 sites were OHSAS 18001 certified (Marcy l'Étoile, Craponne, La Balme, Saint-Vulbas, Madrid, Florence, Combourg, Grenoble, and Verniolle), i.e. 100% of European sites and around 2/3 of the Group's bio-industrial sites (see section 1.7.2)

The sites at Durham, St. Louis, and Lombard in the United States, and at Rio de Janeiro in Brazil, are applying for this certification in 2020, which would bring the percentage of main sites covered to 93%.

3.5.5.2 Evaluation, prevention and management of occupational hazards

The Company measures its rate of occupational accidents and occupational diseases across all its activities. These events are taken into account when ranking the areas for improvement over time and reducing the number of accidents (See Vision 2020, Section 3.7.1 "Summary Table").

2020 Objective: 30% reduction in the frequency rate of lost-time occupational accidents, i.e. a rate of 1.3 or under.

2019 Result: -3% compared with 2015 (frequency rate of 1.8)

bioMérieux has a "toolbox" for managing health and safety at work which incorporates a number of processes and tools rolled out worldwide, such as:

- a reporting tool for hazardous situations and suggestions for improvements (about 5,000 cases reported annually by all employees);
- risk assessment at each workstation and regular updates;
- inspections and audits of activities to verify the adequacy of preventive measures;
- campaigns to raise awareness of the various risks, under the "Proud to be a daily hero" banner, to empower employees to take safety actions (*e.g.* falling in the stairs, falling on slippery surfaces, slip-and-fall accidents);
- bioMérieux is rolling out a program of specific courses:
  - each new arrival is given HSE training appropriate to the site and their activities,
  - all employees with a specific activity must take the courses resulting in a qualification (electrics, forklift operator, hot work, working at height),
  - some employees take the HSE and ISO 14001/OHSAS 18001 internal auditor training,
  - other training may be provided on a case-by-case basis (transporting hazardous goods, biohazards, chemical hazards, warming up before physical activity, fire safety officers, workplace first aid and lifesaving officers, etc.).

In 2019, bioMérieux offered an online road safety course across all of its sites and subsidiaries. This course is taken by around 2,000 employees worldwide. The aim of this course is to raise awareness among employees and improve their perception of road risk. Every month, employees log in and take a module that lasts a few minutes and is tailored to the conditions of the country where they are based, on a driving-related theme.

3.5.5.3 Well-being at work and promotion of healthy living

The Company integrates the prevention of psychosocial risks for its employees into its occupational hazards assessment process, and benefits, mainly in Europe, from many experiences and actions in their prevention and analysis. In France, for example, an occupational health agreement has been signed with union representatives (see section 3.5.1).

In addition to the prevention of occupational risks, the Company also takes its employees' health into account:

- all Group employees benefit from health insurance coverage (public, private, or both);
- the sites promote sporting activity through the provision of sports facilities or subsidies for gym memberships;
- the Company covers the cost of a seasonal influenza vaccination for its employees on most sites;
- in France, employees and their families have access to a service desk providing medical services and teleconsultation. Services include access to a physician 24 hours a day, seven days a week;
- the Company has rolled out a healthcare and health education pilot program at its North American sites, in the form of health days. These initiatives are deployed mainly through a medical centre dedicated to employees and their families in St. Louis. In this way, employees who so wish benefit from medical check-ups, early cancer screening and medical or nutritional advice given by professionals. The confidentiality of medical data is strictly observed, and the Company does not have access to personal data;
- the St. Louis and Durham sites have introduced initiatives to raise awareness among employees and their families of top public health priorities. The bioMérieux Live Well Centre provides primary healthcare services to the site's 800 employees and their families. Furthermore, a digital weight-loss program, Real Appeal, is available to employees;
- in the United States, paternity and maternity leave have been extended to two and 12 weeks, respectively.

The Company has organised a series of conferences on the theme of psychosocial risks (PSR) at a number of sites in France. These lectures, led by a specialised teacher-trainer doctor, are part of a reflection on prevention and the improvement of the quality of life of employees. Moreover, internal training has been expanded with a new one-day module entitled, "How to avoid burnout and to keep an eye on your employees", aimed at department heads. Moreover, a program for assessing PSRs is in the process of being rolled out. It is structured in five stages: creating a PSR Steering Committee; circulating a questionnaire to all employees; analysing, interpreting and reporting results; employees participating in targeted working groups on identified themes; and developing and implementing an action plan. In 2019, efforts were focussed on the last two stages in particular.

3.5.5.4 Occupational Health and Safety performance indicators

Occupational accidents are reported and analysed each month by the Executive Committee and the information is disseminated throughout the Company.

Safety indicators[1]	2019	2018	2017
Frequency rate of lost-time occupational accidents	1.8	2.0	2.8
Occupational accident severity rate	0.04	0.04	0.07
Number of occupational diseases	2	11	7

(1) Refer to section 3.8 for the organisational scope covered.

3.6 Promoting a responsible and sustainable value chain

3.6.1 Sustainable and responsible procurement

The Company works with many external partners: purchases of materials and services (see section 2.2.2).

To ensure CSR continuity, bioMérieux is committed to the sustainable management of its relationship with partners. bioMérieux involves its suppliers in its continuous improvement process and its sustainable growth strategy based on environmental protection, social progress, and fundamental human rights.

bioMérieux's commitments and requirements with respect to its suppliers are described in the "Ethical and Sustainable Development Charter between bioMérieux and its suppliers". This charter, which was reviewed in 2018, highlights the crucial aspects of the Company's approach to responsible purchasing. It was signed by the Chairman and Chief Executive Officer and the Vice-President, Purchasing, and published on the Company's website (www.biomerieux.com).

Every year, bioMérieux provides specific training to purchasing teams in the implementation of this policy.

Since 2015, bioMérieux has been intensifying its efforts in favour of responsible purchasing and includes in its new contracts clauses on ethics and compliance as well as those specific to health professionals.

In terms of responsible purchasing, bioMérieux has stepped up evaluation of its suppliers by incorporating CSR criteria connected with their activities in the selection process and monitoring the CSR performance of strategic suppliers annually.

Moreover, in 2018 bioMérieux launched a process to assess the CSR record of its suppliers with the help of a rating agency (Ecovadis). In 2019, 109 mainly strategic suppliers were rated by Ecovadis, representing over 20% of spending on purchases.

The minimum expected score of 45 out of 100 was exceeded by 84 suppliers. Action plans are being discussed with the 25 other suppliers that did not reach this minimum score.

The average score of bioMérieux suppliers was 56.1, while the average for Ecovadis was 42.4.

Since 2016, bioMérieux SA has used a service provider to enhance its procedures for monitoring its French suppliers, in particular in relation to the client's obligations under undeclared work regulations.

Indeed, bioMérieux has committed to a process of continuous improvement in managing its supply chain with the aim of ensuring business continuity. All raw materials are subject to a risk assessment aimed at determining the Group's exposure. Plans to secure the network, including the identification of a second source of supply are in place at each production site. They are regularly reviewed by the Executive Committee.

Furthermore, bioMérieux uses raw materials of animal origin for some of its products (for example sheep's blood and horse's blood). As such, the Company asks its suppliers to ensure animal well-being by putting in place the necessary structures, procedures and authorisations. For example:

- *Structure du Bien-Être Animal* (SBEA), which ensures that animal treatment complies with current regulations, that approved protocols are properly followed, that where these protocols are put in place they are properly adapted from the point of view of animal pain, and finally that the animals are treated in the appropriate conditions (food, care, light, pain relief);
- Ethics Committee;
- Authorisation for animal research issued by the Ministry in accordance with European regulation 2010/63.

As part of its veterinary activities, bioMérieux tests the effectiveness of its tests on animals. However, these studies are conducted *ex vivo* and do not affect the physical integrity of the animals tested.

Insofar as possible, bioMérieux strives not to use raw materials or components containing minerals that are known to prolong conflict (conflict minerals).

3.6.2 Distributors management

bioMérieux draws on a network of distributors to distribute its products. Depending on the scope of services, distributors provide services primarily in the following areas: marketing, sales, maintenance, and logistics.

bioMérieux is involved in a program of support for distributor's activities. It is aimed at optimising the service provided to end customers, whilst guaranteeing a service and service delivery quality that meets regulatory requirements and internal standards. After a robust distributor selection process, bioMérieux pays particular attention to their compliance with best practices, through the following commitments:

- training and awareness-raising in the business practices promoted by bioMérieux, as well as the Global Code of Conduct (see sections 3.4.4.1 and 3.4.4.4);
- implementation of stringent procedures for the transportation of bioMérieux products, particularly to respect the cold chain, which may ultimately affect product quality (see sections 1.5.1 and 3.3.2);
- training of distributors in the installation, use and maintenance of instruments aimed at ensuring the quality of diagnostics performed by customers;
- support for the implementation of vigilance procedures and customer complaint management (See sections 1.5.2.1 and 1.5.3);
- medical education aimed at promoting the value of bioMérieux products.

The Company uses a process of continuous improvement with regard to its distributors and, as such, is fostering a lasting and sustainable relationship with healthcare professionals and manufacturers.

The Company is currently revising the general process for selecting, assisting, and monitoring its distributors, as well as related indicators.

3.7 Limiting our impact on the environment and climate change

3.7.1 Governance and policy

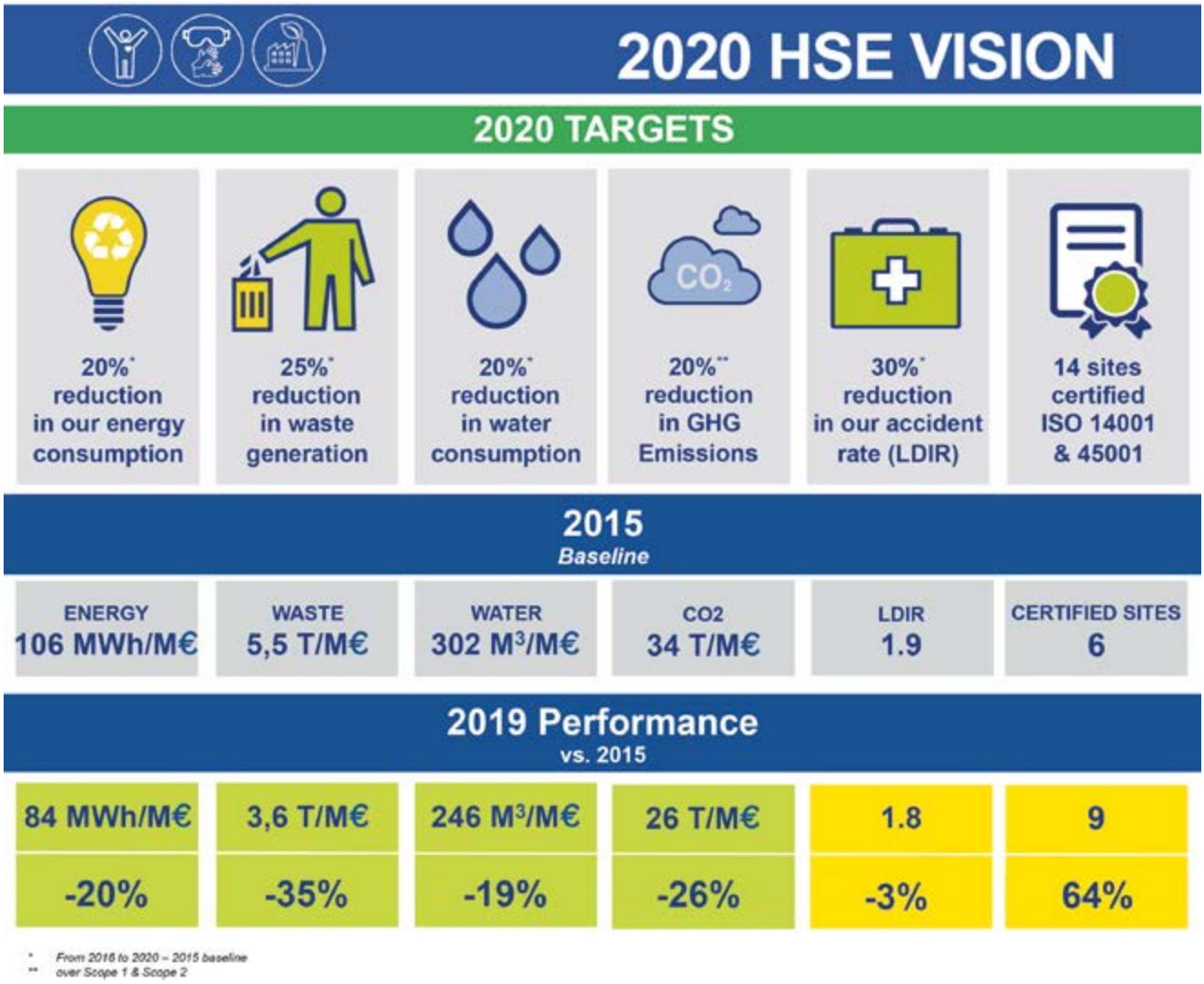
With a view to managing environmental risks and minimising its environmental footprint (see section 2.2.6), bioMérieux assesses its impacts on the environment (soil, water, air, noise, smells, energy, waste, etc.). The Company's initiatives are part of a circular economy approach based on non-wasteful and responsible use of natural resources and primary raw materials.

Environmental management is based on the principle of continuous improvement and includes planning environmental objectives, rolling out an action plan, an organisation empowering employee responsibility, the system of monitoring and measuring (indicators, inspections, audits) and the reviewing the achievement of objectives.

bioMérieux has introduced an Environmental, Health and Safety Management System. It covers the design, manufacture and maintenance of instruments and software, the design and manufacture of reagents enabling *in vitro* diagnostic test, on bio-industrial sites, R&D centres and subsidiaries worldwide. This management system has been rolled out within each site and is based on continuous improvement following the PDCA principle (Plan-Do-Check-Act).

In accordance with this policy, bioMérieux has set out its objectives in the "Vision 2020 Health, safety and the Environment" program. A new, more ambitious plan is currently being drawn up for the coming years, in accordance with international principles. The following targets have been set:

- improving environmental performance;
- assessing the environmental impact of products and the materials associated with them at every stage of their life cycle, in order to take into account current best practice and support an ambitious improvement plan;
- expanding the commitment to subsidiaries and sites, as well as to Group employees, in order to ensure the program's success;
- introducing bioMérieux's HSE standards into its relationship with suppliers, and supporting its implementation among logistics providers;
- putting tools in place for employees to gather information, suggest improvements, and efficiently implement the HSE policy (see section 3.5.5.1).



For the rollout of this policy, the Company offers a number of training courses on environmental protection:

- at the arrival of every new employee;
- for the deployment of the environmental management system on the sites, in accordance with ISO 14001: raising awareness of environmental impacts and best practices in prevention, and training in internal environmental auditing;
- for the projects to reduce waste and energy consumption: *ad hoc* training in the relevant functions (production operators, packaging teams) to reduce unwarranted product scrap (see section 3.7.3.3).

The Health, Safety and Environment (HSE) Department drafts, supports and monitors the implementation of environmental policy. This is approved and overseen by the HSE Committee (see section 3.5.5.1). Its implementation is the responsibility of each entity which is responsible for ensuring that the environmental consequences of bioMérieux's activities are managed.

The HSE Department also monitors all regulatory requirements in this area (at the international, national and local levels) and develops and implements processes and procedures to guarantee their compliance with these requirements. In particular, it monitors and ensures compliance with specific regulations concerning hazardous substances (REACH, Biocides, GHS, CLP and ROHS regulations).

It is also involved in managing the risk of breakdowns in production and the supply chain. The procedures and processes are devised and implemented in order to identify major risks and to manage them through business continuity plans.

In case of new investment projects (extensions, new sites, increase in production capacity, etc.), a preliminary analysis of environmental impact is conducted. For new constructions, detailed guidelines are provided in the document entitled "HSE requirements for new constructions and major renovations".

3.7.2 Eco-design of products

Eco-design involves incorporating environmental criteria from the product (or service) design stage. The aim is to reduce its impact and increase its performance throughout its life-cycle. This approach balances environmental, technical, economic and social requirements.

The product life-cycle refers to all the stages necessary for its production (extraction of raw materials, transport, processing, manufacture of raw materials and parts, product manufacture), its distribution, its use and end of life. Performance evaluation must be based on a multi-criteria approach and cover the categories of damages that are the most representative of the product or service under evaluation (health, climate change, resources and ecosystems).

The Company's commitment to eco-design was reaffirmed by the HSE Committee in 2019. An ambitious program is being developed with the R&D and HSE Departments to improve the environmental performance of the Company's products.

The first Life Cycle Analysis (LCA) was conducted by VIDAS® and its reagents using a methodology in accordance with international standards ISO 14040 et 14044. The analysis highlighted that:

- **the distribution of VIDAS® reagents to customers, and the customers' use of the instrument, are the two stages in the lifecycle that make the biggest contribution to the environmental footprint of the VIDAS® product;**
- **the product's life-cycle has an environmental impact, mainly related to global warming and eutrophication.**
  As such, the Company has confirmed that the modes of transport it chooses for its products is important for improving their global footprint (see Section 3.7.3.2). Moreover, on the basis of this analysis, bioMérieux is continuing to roll out LCA to its main product lines.

3.7.3 Impact of climate change on environmental performance and compliance

3.7.3.1 Certifications

At the end of 2019, 9 sites were ISO 14001:2015 certified (Marcy l'Étoile, Craponne, La Balme, Saint-Vulbas, Tres Cantos, Florence, Combourg, Grenoble, and Verniolle). The Durham, St. Louis, and Lombard sites in the United States, and Rio de Janeiro in Brazil, are applying for this certification in 2020, which would bring the percentage of main sites covered to 93%. This certification list also includes two commercial subsidiaries (bioMérieux Spain and bioMérieux Italy).

3.7.3.2 Greenhouse gas emissions

The Company has carried out Group-wide annual assessments of greenhouse gas emissions since 2013. Its international transport and logistics contracts contain requirements on greenhouse gas emissions generated by the services provided by its contractors, as well as recommendations to reduce their environmental impact. Since 2017, it has been involved in the CDP (Carbon Disclosure Project) and uses the results to structure its approach to climate change.

2020 Objective: 20% reduction in the intensity of direct greenhouse gas emissions (Scope 1) and those from energy purchases (Scope 2) compared to 2015.

2019 Result: -26% (68,200 tCO_2e)

As part of the HSE policy and vision, bioMérieux has introduced initiatives to reduce its carbon footprint.

Introduction of multi-modal transport: the Company is committed to increasing sea transport to 20% of air transport by 2020. Its actions have enabled it to significantly exceed this objective, since at the end of 2019, sea transport already represented 34% of the total, compared with 15% in 2018.

Business Travel: the Company is pursuing an active policy of reducing and optimising travel. It has been deploying an inter-site "telepresence" infrastructure so meetings can be conducted *via* videoconference in conditions similar to those of actual meetings. The main sites have been equipped since end-2016.

Car fleet: employees with a Company car are offered a range of hybrid vehicles. Furthermore, since 2018, the Company has been promoting this range by awarding an additional budget.

Remote maintenance and updating of instruments: the development of the VILINK™ IT solution, providing bioMérieux customers with remote incident resolution, maintenance, and update services, continued in 2018. Thanks to a fast and secure connection, this solution helps limit travel by engineers in the field and increases the speed of problem solving for customers.

Carbon offsetting: since October 2018, bioMérieux, in partnership with its natural gas supplier in France, has been offsetting all emissions from the consumption of this energy. As such, bioMérieux is helping fund projects to reduce CO_2 emissions in developing countries.

Commuting: bioMérieux promotes car-pooling and the use of public transport wherever possible, by paying subsidies to employees. The Marcy l'Étoile and Craponne (France) sites have been members of the Greater Lyon regional carpooling platform for several years. Similar arrangements are in place in the Company's other sites and subsidiaries. For a number of years the Company has had a remote working policywhich helps to reduce commuting.

Car fleet: employees with a Company car are offered a range of hybrid vehicles. Furthermore, since 2018, the Company has been promoting this range by awarding an additional budget.

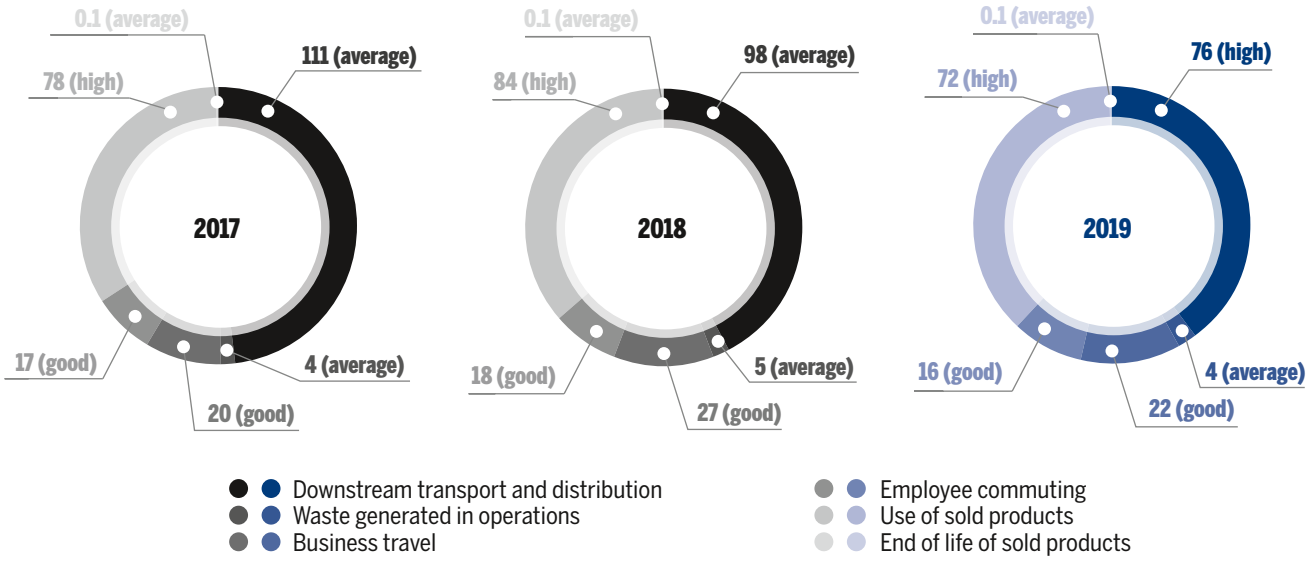
The emissions categories assessed include Scopes 1, 2 and 3 of the GreenHouse Gas (GHG) Protocol, as described in section 3.8.3. The assessment, conducted every year, covers the consolidated data from the previous year; as such, 2019 covers the 2018 data.

GHG emissions as calculated for each of the three scopes on the consolidation scope, expanded to include the Company's entire value chain, are the following:

Scope	Significant emissions categories	2019 emissions in thousands of tCO_2e (± uncertainty)	2018 emissions in thousands of tCO_2e (± uncertainty)	2017 emissions in thousands of tCO_2e (± uncertainty)
Scope 1	Direct emissions (Scope 1)	32 (good)	31 (good)	30 (good)
Scope 2	Energy purchases (Scope 2)	37 (good)	35 (good)	40 (good)
Scope 3*		192 (average)	231 (average)	231 (average)

- ** The following Scope 3 elements are not measured: "purchased goods and services", "upstream transportation and distribution", and "capital goods"*
  Definition of uncertainties:
  - *Good: uncertainly < ±20%*
  - *Average: ±20%< uncertainty < ±50%*
  - *High: uncertainty > ±50%*

Details of emissions calculated for Scope 3 (in thousands of tCO_2e and uncertainty) is represented in the chart below:



The reduction of emissions on downstream transport and distribution of goods is explained by the transfer of air transport toward more sea transport (nearly 4,000 tons).

3.7.3.3 Waste management

The Company is committed to optimising waste management, sorting waste at source and developing channels to recover and recycle materials and energy. As for hazardous waste, which is primarily made up of waste contaminated by chemical or biological agents connected with production or laboratory activities, the Company has implemented a strict policy of sorting at source and disposal by companies licensed to process such waste in an appropriate manner. All of the Company's sites have waste storage facilities.

2020 Target: 25% reduction in waste generation compared to 2015.

2019 Result: -35% (9,500 tons)

As part of its continuous improvement, bioMérieux has introduced initiatives to improve its waste management.

Waste reduction: the Company strives to optimise the quantity of materials used for packaging (wood, paper, cardboard, and plastic). For example, the switch from printed to electronic format for instruction notices for reagents has made it possible to reduce the size of secondary packaging.

Waste recovery: the Company is striving to increase the proportion of recycled, composted, regenerated or incinerated waste from which energy can be recovered. The Marcy l'Étoile, Grenoble, Combourg, La Balme and Saint-Vulbas sites in France, and the subsidiaries in the United Kingdom and Germany are all "zero-landfill" sites. Furthermore, organic waste at the Corporate restaurants in Marcy l'Étoile, Durham, Craponne and La Balme is sorted and sent to a composting facility.

Sorting and recycling guides are available to employees. The Company raises awareness among employees of best practices in waste management at events such as the National Sustainable Development Week in France.

Food waste: the Company contracts with a food services provider for the management of its Corporate restaurants, in particular for its sites in La Balme, Craponne and Marcy l'Étoile (France). As part of the fight against food waste, bioMérieux and its subcontractor periodically undertake an analysis of thrown-out food in order to assess its origins and reduce the phenomenon.

World Cleanup Day

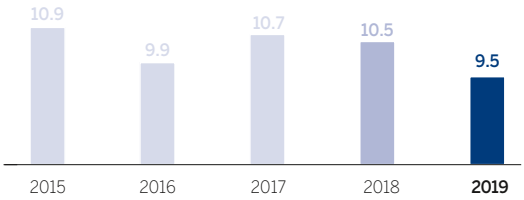
On this day, in 15 countries around the world, Company employees and their families voluntarily joined in with local initiatives to clean up rubbish in the outdoors.

Total quantity of waste generated, of which hazardous waste

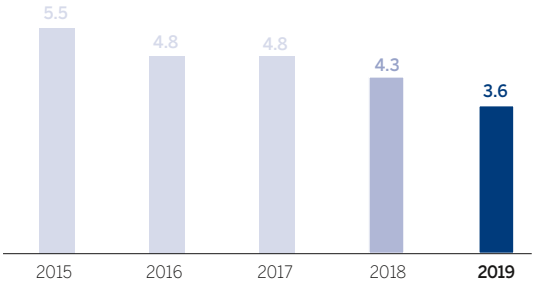
GROSS INDICATORS	INDICATORS IN RELATION TO SALES IN EUROS

TOTAL AMOUNT OF WASTE GENERATED

Waste.
Estimate in thousands of metric tons.

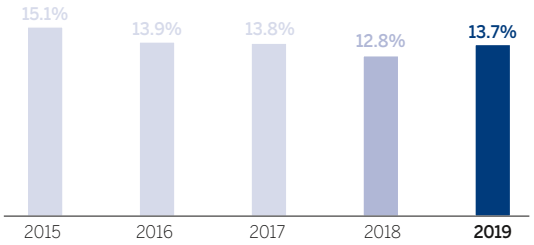


Waste in relation to sales.
metric tons per million euros of sales.



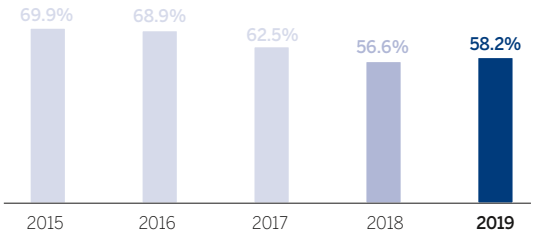
OF WHICH HAZARDOUS WASTE

Percentage of hazardous waste.



PERCENTAGE OF WASTE RECYCLED OR INCINERATED WITH ENERGY RECOVERY OR COMPOSTED

Percentage of recycled waste or incinerated waste with energy recovery or composted.



3.7.3.4 Water management

Water is used by the Company in formulating its products. Water is also used in refrigerating facilities, such as cold storage rooms, in controlled atmosphere areas and as a coolant in the manufacturing process. For this type of use, the Company prioritises closed-circuit systems.

2020 Target: 20% reduction in water consumption compared to 2015.

2019 Result: -19% (658,000 m^3)

bioMérieux uses the local water supply for the water needs of its manufacturing sites. bioMérieux does not directly extract water from the natural environment, except for the cooling requirements of its logistics platform located in Saint-Vulbas (France). At this site, a heat exchanger makes it possible to use the temperature difference with the local groundwater for cooling purposes. Water extracted from the groundwater is discharged after heat exchange, and has no direct contact with process water. Official authorisation is required to use the groundwater in this way.

The Company is not subject to any specific local restrictions on water supply on a permanent basis. As regards possible seasonal restrictions, bioMérieux strives to comply with specific guidelines issued by local authorities in the event of drought (for example, limiting water use for lawn care).

bioMérieux's initiatives to reduce water consumption at its industrial sites involve the optimisation of its manufacturing processes (reviewing water requirements and replacing old equipment with more efficient equipment or less wasteful technologies).

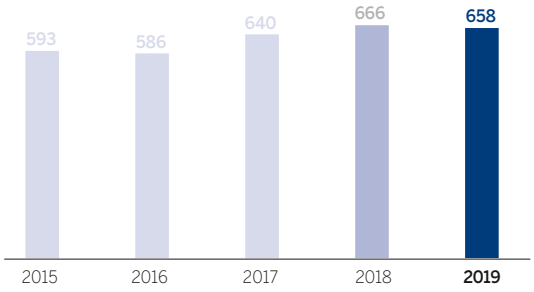
Water consumption is monitored on a regular basis, and steps are taken to reduce it.

Consumption of public water and groundwater and quantity of wastewater discharged

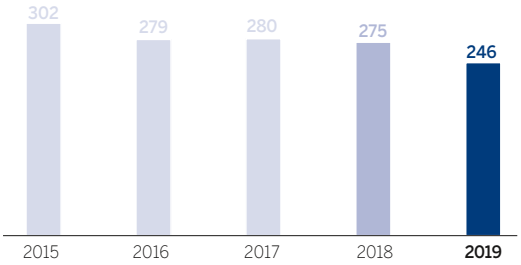
GROSS INDICATORS	INDICATORS IN RELATION TO SALES IN EUROS

CONSUMPTION OF PUBLIC WATER

Water consumption (all sources).
Estimate in thousands of cubic meters.

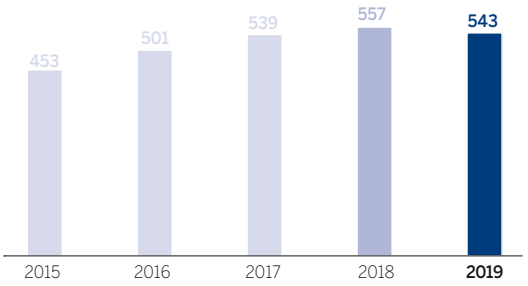


Water consumption (all sources) in relation to sales.
Cubic meters per million euros of sales.

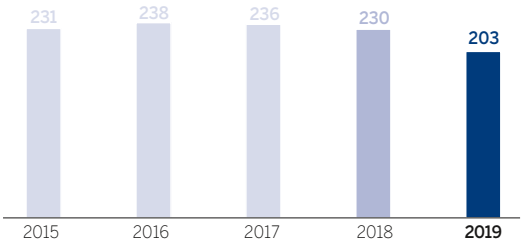


WASTEWATER DISCHARGED

Wastewater discharged.
Estimate in thousands of cubic meters.

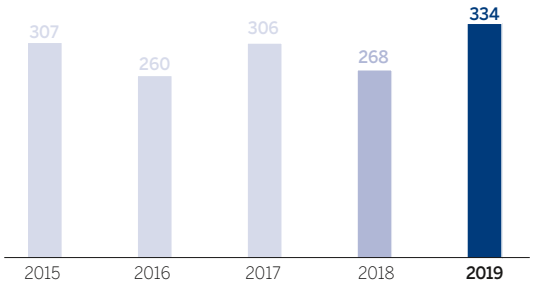


Wastewater discharged in relation to sales.
Cubic meters per million euros of sales.

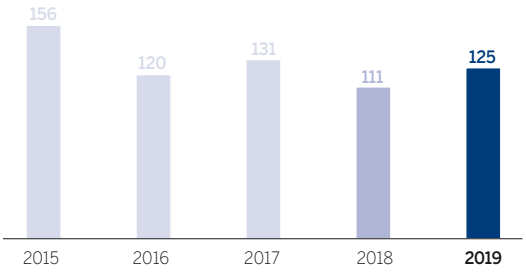


USE OF GROUNDWATER

Water from aquifer used*.
Estimate in thousands of cubic meters.



Water from aquifer used in relation to sales.
Cubic meters per million euros of sales.



* *99% of this water is reinjected into the groundwater*

3.7.3.5 Energy management

In order to improve energy efficiency, the Company implements an energy optimisation and saving program. Prior to constructing or refurbishing buildings, simulations are performed to measure their energy efficiency (*e.g.* lighting, heating, ventilation, and summer climate control). Efforts are made to find ways of reducing energy consumption to a low or very low level through systems that are researched, promoted and gradually applied.

2020 Target: 20% reduction in energy intensity compared to 2015.

2019 Result: -20% (225,000 MWh)

Renewable energy: even where no target has been set, the Company promotes the use of renewable resources for its energy supply, in areas of the world that offer acceptable alternatives:

- since January 1, 2018, all of bioMérieux's French sites have received 50% of their electricity supply from certified "green" sources, and that rate is 100% for the Florence (Italy) and Madrid (Spain) sites;
- the Company's Swiss, Austrian, Brazilian and Canadian subsidiaries use 100% hydropower, and the Colombian subsidiary uses 90% hydropower.

New eco-construction standards: the new buildings for tertiary activities of significant size are subject to HQE (La Balme, Craponne), LEED (St. Louis) or BREEAM (Marcy l'Étoile) environmental certification.

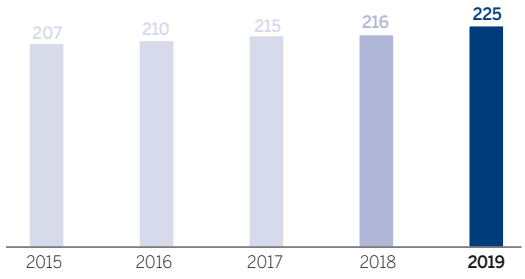
Energy audits: a second audit of the Combourg, Craponne, Marcy l'Étoile, La Balme, and Saint-Vulbas sites was conducted in 2019, after an initial session in 2015. The findings are currently being analysed and will be used to determine the future direction of energy management systems. The Durham and St. Louis sites were audited for the first time in 2018 and 2019, respectively.

Total energy consumption and percentage of energy consumption from renewable sources

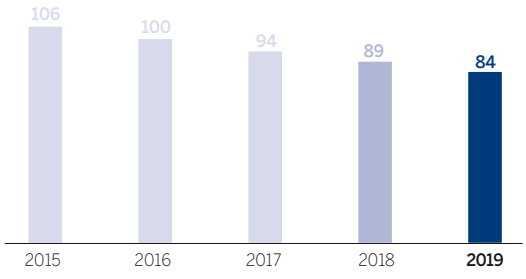
GROSS INDICATORS	INDICATORS IN RELATION TO SALES IN EUROS

TOTAL ENERGY CONSUMPTION

Total energy consumption.
In GWh.

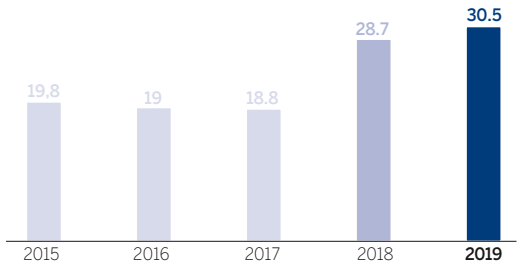


Total energy consumption in relation to sales.
MWh per million euros of sales.

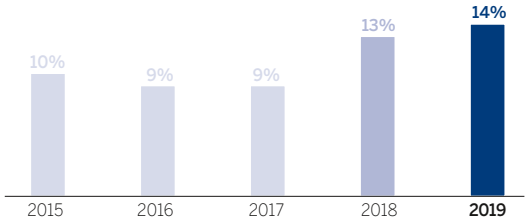


CONSUMPTION OF ENERGY FROM RENEWABLE SOURCES

Consumption of energy from renewal sources.
MWh per million euros of sales.



Percentage of consumption of energy from renewable sources.



3.7.4 Spread of new epidemics as a result of global warming

The effect of global warming on risks of epidemics is a complex issue at the heart of scientific thinking on how to anticipate the risks of future epidemics. In 2019, a consensus statement drafted by some 33 scientists from nine countries was published in Nature Reviews Microbiology to raise awareness of the issue and call for research on micro-organisms to be increasingly incorporated in the fight against climate change.

One of the first consequences of global warming is the proliferation of mosquitoes, which increase in number as a result of effects of heat and humidity. With higher temperatures and stretches of stagnant water following flooding, they proliferate and spread viral diseases such as malaria and dengue fever through their bites. Cases of these viral diseases have already been recorded in new geographical regions, such as the case of chikungunya in the south of France.

Another possible consequence is related to flooding, which worsens hygiene conditions in regions affected by extreme climate events (typhoons and cyclones). Contamination of drinking water sources is causing the re-emergence of cases of cholera and typhoid.

In this context, bioMérieux's remit is to provide health authorities, healthcare professionals, and patients with new tests for quickly and easily diagnosing these diseases. For example, bioMérieux is currently developing new tests for its automated VIDAS® system, to detect infections linked to arboviruses (dengue and chikungunya).

3.8 Scope and reporting of non-financial indicators

3.8.1 Calculation scope of quantified indicators

The scope corresponds to the bioMérieux Group, with the exception of Hybiome, across the human resources scope.

3.8.2 Data collection and consolidation

Health and Safety data are collected on a monthly basis, and environmental data on a quarterly basis, from HSE representatives in the Company's entities. Data are consolidated by the Group HSE team.

With regard to occupational Health and Safety, all consolidated data comply with regulations for recording occupational accidents and diseases for each country in question.

Reporting covers all entities with 20 or more full-time equivalent employees. A total of 23 full-time equivalent employees are not covered.

Human resources data is collected at year end through the information system used by all Group entities, except for absenteeism data, which are consolidated on the basis of information managed locally.

Environmental data is collected by quarterly campaigns managed by a dedicated computing system. In 2019, these campaigns were deployed among the following:

- 100% of the production or research and development entities;
- The commercial subsidiaries of the following countries: United States, Brazil, Spain, Italy, France, China and Australia, these large subsidiaries benefit from dedicated personnel qualified in health, safety and environmental matters.

The other commercial subsidiaries, however, were subject to the same environmental data collection campaigns from 2014 to 2018, and it has been established that their contribution to the environmental footprint of the company was limited to:

- 3.5% in waste production;
- 2.5% in energy consumption;
- and 1.6% in water consumption.

For the year 2019, the decision was made to consolidate these entities in the consolidation scope by reporting the same data as those collected in 2018, for the following reasons:

- these commercial subsidiaries often employ few employees, and have stable activity;
- they do not have any dedicated HSE staff, and the Group prefers to prioritise the first Health & Safety program specific to the commercial activities launched in 2019 (in particular, road safety and biosafety).

bioMérieux will focus on deploying a new collection campaign across all the entities, every five years, in order to re-evaluate their contribution in more detail.

3.8.3 Definition and method of calculating the indicators

Human resources

- Employees on the payroll, new hires, and departures: permanent and temporary employees (excluding interns, international volunteers (VIE), and agency staff).
- Training: all training hours recorded and delivered in the training management system used by all Group entities, whether *via* e-learning or classroom-based.
- Promotions: for an employee still employed by the Company at December 31 of year N, identification of career changes involving a change in level together with related reason, compared to December 31 of year N-1.

- Absenteeism: number of days' absence (excluding maternity leave, paternity leave and leave related to length of service) divided by the theoretical number of working days (excluding weekends, public holidays, paid vacation, and workweek reduction time) and multiplied by the average annual FTEs. Only entities with more than 50 FTEs are considered.

Health and Safety

- Number of lost-time occupational accidents: number of accidents occurring in the workplace and resulting in more than one day's lost time (the day on which the accident occurs is not counted as lost time). The number of accidents includes those involving both permanent and temporary employees.
- Accidents are categorised as follows: lost-time occupational accident, occupational accident without lost time, and non-reportable accident. The last category was created in 2017 to better standardise the way accidents are recorded across different countries, and includes accidents that bioMérieux considers it has no means of preventing (*e.g.* injury during team activity off work premises or during personal activities carried out on work premises, sickness unrelated to work, food poisoning, etc.).
- Number of days lost: number of days lost following a lost-time occupational accident that occurred during the year. The day of the accident's occurrence is not counted as lost time. The extension to work stoppage days is counted in the month and the year the accident occurred.
- Frequency rate of lost-time occupational accidents: number of occupational accidents with lost time per million hours worked.
- Frequency of total reportable occupational accidents: number of occupational accidents with or without lost time per million hours worked.
- Severity rate: number of days off work per thousand hours worked.
- Number of occupational diseases: an occupational disease is the result of exposure, of any duration, to a risk existing in the normal practice of the occupation.

Environment

Data for previous years may be modified following adjustments.

Water-related indicators:

- water consumption (thousand m^3);
- the performance indicator monitored is the total water consumption of the Company's entities in cubic meters in relation to the Company's sales (in m^3 per €million);
- discharge of industrial effluents (thousand m^3).

Indicators relating to energy:

- total energy consumption (GWh);
- consumption of energy from renewable sources (GWh);
- the performance indicator monitored is the total energy consumption (from all energy sources) of the Company's various entities in relation to the Company's sales (in MWh per €million).

Waste-related indicators:

- total quantity of waste produced (metric tons): one-off waste such as inert waste, construction/demolition waste, and waste from contaminated soil is excluded from the scope;
- hazardous waste: total amount of hazardous waste produced (metric tons). Hazardous waste is waste with one or more properties that poses a threat to human health or the environment, and requires special processing. This category includes chemical waste, infectious waste, or waste electrical and electronic equipment;
- recovery of materials or energy: the performance indicator monitored is the ratio, expressed as a percentage, of the total weight of waste composted, recycled or incinerated with energy recovery to the total weight of waste.

Indicators relating to greenhouse gas emissions:

- greenhouse gas emissions are assessed using GreenHouse Gas Protocol and Bilan Carbone® methodologies.

The following indicators are assessed:

Scope	Type	Input data	Emission factors
Scope 1	Direct emissions from fixed combustion sources	Fossil fuel consumption collected *via* environmental reporting	GHG Protocol
	Direct emissions from mobile sources equipped with a thermal combustion engine	CO_2 data collected from our suppliers	N/A
	Fugitive direct emissions	Cooling gas emissions after accidental leak. These data are collected *via* environmental reporting	IPCC 2016, *others*
Scope 2	Indirect emissions related to electricity consumption	Electricity consumption collected *via* environmental reporting	ADEME
	Indirect emissions related to the use of steam, heat or cooling	Heated water consumption collected *via* environmental reporting	ADEME
Scope 3	Commuting	Calculation of average distances by site	ADEME
	Business travel	CO_2 data collected from our suppliers	N/A
	Car rentals	CO_2 data collected from our suppliers	N/A
	Global freight	CO_2 data collected from our suppliers	N/A
	Local freight	CO_2 or mass x distance result collected from our suppliers depending on the transport type (air, road, sea)	Air: GHG Protocol Road: ADEME Sea: GHG Protocol
	Product use	Average energy consumption of equipment	ADEME
	End of product life		

Uncertainties are calculated as follows:

- uncertainty on input data: assessment based on experience and practice;
- uncertainty on the emission factor: take the value provided for the protocol used on the factor.

3.9 Report by the independent third party on the consolidated statement of non-financial performance

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the General Meeting,

In our capacity as an independent third party certified by COFRAC under number 3-1681 (scope of accreditation available at www.cofrac.fr) and member of the network of one of the Statutory Auditors of your Company (hereinafter the "entity"), we hereby report to you on the consolidated statement of non-financial performance (hereinafter the "Statement") for the year ended December 31, 2019, as presented in the management report in accordance with the legal and regulatory provisions of Articles L. 225-102-1, R. 225-105 and R. 225-105-1 of the French Commercial Code (*Code de Commerce*).

Responsibility of the entity

The Board of Directors is responsible for preparing a Statement that complies with the legal and regulatory provisions, including presenting a business model, describing the principal non-financial risks, presenting the policies applied in response to the risks and the results of these policies, including key performance indicators.

The Statement was prepared by applying the entity's procedures (hereinafter the "Guidelines"), whose main features are presented in the Statement (or available on request at the Company's registered office).

Independence and quality control

Our independence is defined by the provisions of Article L. 822-11-3 of the French Commercial Code and the French Code of Ethics governing the audit profession. We have also implemented a quality control system comprising documented policies and procedures to ensure compliance with the codes of ethics, professional auditing standards and applicable legal and regulatory texts.

Responsibility of the independent third party

On the basis of our work, it is our responsibility to provide a duly reasoned opinion expressing limited assurance on:

- the compliance of the Statement with the provisions set out in Article R. 225-105 of the French Commercial Code;
- the accuracy of the information provided pursuant to the third paragraph of part I and II of Article R. 225-105 of the French Commercial Code, namely, the results of policies, including key performance indicators, and actions, in relation to the principal risks, hereinafter the "Information".

It is not our responsibility to comment on the entity's compliance with other applicable legal and regulatory requirements, in particular, on the vigilance plan and the fight against corruption and tax evasion, nor on the compliance of the products and services with applicable regulations.

Nature and scope of our work

Our work, described hereinafter, was carried out in compliance with the requirements of Articles A. 225-1 et seq. of the French Commercial Code, with the professional standards applicable in France relating to this intervention, and international standard ISAE 3000:

- we reviewed all of the entities included in the scope of consolidation and the presentation of the principal risks;
- we assessed the suitability of the Guidelines in the light of their relevance, completeness, reliability, impartiality and comprehensibility, taking good industry practice into account when necessary;
- we ensured that the Statement covers each category of information stipulated in part III of Article L. 225-102-1 on social and environmental information, respect for human rights and combating corruption and tax evasion;
- we checked to make sure that the Statement presents the information specified in Part II of Article R. 225-105 when relevant with respect to the principal risks, and includes, as necessary, an explanation of the reasons for the absence of the information required by the second sub-paragraph of Part III of Article L. 225-102-1;
- we ensured that the Statement presents the business model and a description of the principal risks related to the activity of all the entities included in the scope of consolidation, including, where relevant and proportionate, the risks created by its business relationships, products or services, policies, actions, and results, including key performance indicators applicable to the relevant risks;
- we consulted with the documentary sources and conducted interviews in order to:
  - assess the process of selection and approval of the main risks as well as the consistency of the results, including the key performance indicators used, with respect to the principal risks and policies presented; and
  - corroborate the qualitative information (actions and results) that we considered most important, presented in Appendix 1. For some risks (business ethics, distributor management, responsible purchasing, and regulatory compliance of products), our work was carried out at the level of the consolidating entity. For the other risks, work was carried out at the level of the consolidating entity and in a selection of entities listed hereinafter: bioMérieux S.A. France (Combourg), bioMérieux Inc. USA (Durham), et bioMérieux España (Tres Cantos);

- we verified that the Statement covers the consolidated scope, namely, all of the entities included in the scope of consolidation in accordance with Article L. 233-16 within the limits specified in the Statement;
- we assessed the internal control and risk management procedures put in place by the entity, and we assessed the collection process aiming for the exhaustiveness and accuracy of the Information;
- for the key performance indicators and other quantitative results that we considered most significant, as presented in Appendix 1; we employed:
  - analytical procedures to verify that the data collected was consolidated correctly and the consistency of any changes;
  - detailed tests based on samples, to ensure that definitions and procedures were applied correctly and to reconcile the data in the supporting documents. This work was carried out on a selection of contributing entities listed below, covering between 13% and 32% of the consolidated data selected for these tests (13% of the workforce, 32% of energy consumption);
- we assessed the consistency of the Statement as a whole in relation to our knowledge of all of the entities included within the consolidation scope.

We believe that the work that we have performed in exercising our professional judgement allows us to provide a conclusion of limited assurance; a higher level of assurance would have required more extensive verification work.

Means and resources

Our work involved the skills of four people between October 2019 and February 2020 over a total period of activity of approximately five weeks.

We conducted approximately 10 interviews with the people responsible for preparing the Statement, representing the Quality, Risk Management, Compliance, Human Resources, Health and Safety, Environment, and Purchasing Departments.

Conclusion

Based on our work, no material irregularities came to light questioning the compliance of the statement of non-financial performance with the applicable regulatory provisions or questioning that the Information, taken as a whole, is presented fairly in accordance with the Guidelines.

Paris-La Défense, February 24, 2020

The independent third party

EY & Associés

Jean-François Bélorgey
Partner

Eric Duvaud
Partner, Sustainable Development

Appendix 1: information considered to be the most important

Human resources

Quantitative information (including key performance indicators)	*Qualitative information (actions or results)*
Change in employee numbers, breakdown of workforce by geographic area	New employment agreements
Overall voluntary turnover rate and for employees with less than three years of service	Take-up of the employee share ownership plan
Absenteeism	Profit-sharing, incentives and employee saving agreements
Promotion/internal mobility	Talent Pool, Development Plan, and Succession Plan
Overall breakdown by gender and among managers	Results of the training policy with Mérieux Université
OHSAS 18001 certification	Results of the diversity and equality policies
Number of hours of training and training access rate	HSE (Health, Safety and Environment) organisation and management system: *Vision 2020 HSE*
Employment rate of people with disabilities	
Frequency rate of lost-time occupational accidents	
Severity rate of occupational accidents	
Number of occupational diseases	

Environmental information

Quantitative information (including key performance indicators)	*Qualitative information (actions or results)*
Number of ISO 14001 certified sites	Vision 2020 SSE and results of the environmental policy with respect to managing energy, waste and water
Scope 1 and 2 greenhouse gas emissions	Initial results of the product life-cycle analysis program
Total waste and hazardous waste generated	Climate change (significant emission categories due to activity, and reduction targets)
Consumption of public water and groundwater	
Discharges into water	
Total energy consumption and % of energy consumed from renewable sources	

Social information

Quantitative information (including key performance indicators)	*Qualitative information (actions or results)*
ISO 9001 and ISO 13485 certification	Preliminary results of the distributor management policy
Number of impact analyses carried out with respect to the GDPR law	Results of sustainable purchasing actions
Number of applications recorded in the GDPR risk register	Results of the personal data protection policy
Number of suppliers evaluated by an external rating agency on CSR criteria, and % of expenditure covered	Results of the product quality and regulatory compliance policy
Results of product quality audits and inspections during the year	Local impact (employment, development, local residents, dialogue, etc.)
Completion of anti-corruption, third-party management, and conflict of interest management training courses	Results of business ethics policies
	Actions taken to prevent corruption and tax evasion

3.10 Vigilance plan

The law of March 27, 2017 on the duty of vigilance of parent companies and contracting companies (the so-called Vigilance law) introduced a requirement to produce a vigilance plan containing reasonable vigilance measures for identifying and preventing the risks to human rights and fundamental freedoms, the risks of physical or environmental harm, as well as the health risks arising from their activities or those of their subsidiaries, sub-contractors or suppliers, whether in France or overseas.

For the first time, bioMérieux has published its vigilance plan. The scope of this plan covers bioMérieux SA and the subsidiaries under its control, as defined by article L.233-16 of the French Commercial Code (*Code de commerce*), as well as first-tier suppliers managed by the Purchasing Department, with which the Group has a commercial relationship.

This plan was drawn up with all Group departments: CSR, Risks, Legal, Ethics & Compliance, HSE, Purchasing, and Quality.

BREAKDOWN OF THE VIGILANCE PLAN

	Human rights and fundamental freedoms	Environment	Health and safety of persons
		RISK MAPPING	
Activities of bioMérieux SA and its subsidiaries		Non-financial risk-mapping (see section 3.2.4)	
Activities of subcontractors or suppliers		Non-financial risk mapping (see section 3.2.4) *A materiality analysis, begun in 2019, is ongoing*	
		RISK MAPPING – REGULAR EVALUATION PROCEDURES	
Activities of bioMérieux SA and its subsidiaries	Ecovadis (see section 3.2.2)	Ecovadis (see section 3.2.2) Reporting by industrial sites, subsidiaries and central functions (see section 3.7.3)	Ecovadis (see section 3.2.2) HSE Management System (see section 3.5.5.1) Process and tools for managing health and safety at work (see section 3.5.5.2) Occupational risk assessment process (see section 3.5.5.2 and section 3.5.5.3) Assessment of the rate of occupational accidents and occupational diseases (see section 3.5.5.4)
Activities of subcontractors or suppliers	Ecovadis (see section 3.6.1) Automated screening of third parties against a risk grid (see section 3.4.4.1) Procedure for assessing certain suppliers and subcontractors, including prequalification audits and verification audits during the contractual relationship. Supplier self-assessment questionnaire (including commitment to comply with bioMérieux's or supplier's Code of Conduct)		
		TARGETED ACTIONS FOR MITIGATING RISKS OR PREVENTING SERIOUS BREACHES	
Activities of bioMérieux SA and its subsidiaries	bioMérieux's Global Code of Conduct (see section 3.4.4.1) Diversity (see section 3.5.4): gender equality, integration of employees with disabilities	bioMérieux Code of Conduct (see section 3.4.4.1) Global HSE policy: Vision 2020 Environment (see section 3.7.1) Certification: ISO 14001 (see section 3.7.1)	bioMérieux Global Code of Conduct (see section 3.4.4.1) Global HSE policy: Vision 2020 HSE (see section 3.5.5.1) Certification: OHSAS 18001 (see sections 3.5.5.1 and 3.5.5.2)
Activities of subcontractors or suppliers	Global Code of Conduct (see section 3.4.4.1) Subcontractor approval form and business practices applicable to third parties (see section 3.4.4.1) Responsible Procurement Charter (see section 3.6.1) Specific article within contracts: reference to the Responsible Procurement Charter and business practices applicable to third parties		
		WHISTLE-BLOWING PROCEDURE AND RECORDING REPORTS	
Activities of bioMérieux SA and its subsidiaries	Whistle-blowing process available to employees and third parties (see section 3.4.4.2)		Whistle-blowing process available to employees and third parties (see section 3.4.4.2) Reporting tool for hazardous situations and suggestions for improvement (see section 3.5.5.2)
Activities of subcontractors or suppliers	Whistle-blowing process available to employees and third parties (see section 3.4.4.2)		Reporting tool for hazardous situations and suggestions for improvements (see section 3.5.5.2) for service providers working on-site
		PROCESS FOR MONITORING MEASURES AND EVALUATING THEIR EFFECTIVENESS	
Activities of bioMérieux SA and its subsidiaries	HSE Committee (see section 3.2.3) Monitoring and renegotiating Company-level agreements (see 3.5.1 and 3.5.4)	CSR Committee (see section 3.2.3) HSE Committee (see section 3.5.5.1)	CSR Committee (see section 3.2.3) HSE Committee (see section 3.5.5.1)
Activities of subcontractors or suppliers	Review of Ecovadis scores by the Purchasing Department	Review of Ecovadis scores by the Purchasing Department	Review of Ecovadis scores by the Purchasing Department

3.11 Other initiatives and indicators followed by the Company

3.11.1 Other environmental initiatives followed by the Company

Discharges into water

- Tests are carried out regularly on the Company's main production sites, based on several parameters. The Craponne and Marcy l'Étoile sites in France have invested in facilities to neutralise their wastewater on site before discharging it into the network feeding the municipal treatment plants to which they are connected. This aims to improve water quality and ensure compliance with the parameters set in their discharge agreements.
- In connection with its contribution to the fight against antimicrobial resistance, bioMérieux has implemented measures at its industrial sites to collect at source and eliminate, through specialised channels, preparations containing antibiotics used in manufacturing or R&D.
- The Marcy l'Étoile site was monitored for mercury discharges by the French national program for the reduction of hazardous substances in water (RSDE). In 2015, a supplementary order from the local Prefect validated the effectiveness of the measures taken by bioMérieux to eliminate mercury in its discharge, and ended the monitoring in place.

Discharges into the soil

- The Company's sites are equipped with systems designed to retain or confine fire-water runoff in order to prevent discharge into the natural environment.

Discharges into the air[1]

- The Company does not have any facilities that discharge significant levels of emissions into the air and therefore does not collect consolidated data on air emission indicators at the Group level. SO2 and NOx emissions from boiler operation are monitored at each site in accordance with applicable regulations.

Paper management

Initiatives are being implemented across all of the Company's sites and subsidiaries to reduce paper consumption, including incentives for greener printing practices.

- A new printing solution resulting in improved management of paper consumption was rolled out across the Company.
- The use of recycled paper is encouraged.
- More broadly, the Company is keen to modify its processes to replace hard copies with electronic media: an Electronic Document Management system, with an electronic review and approval system, has been in place since 2010. This solution enables all employees, regardless of where they are, to access original documents through a Web interface. Thanks to this system, the utilisation, circulation and archiving of paper-based documents has been significantly reduced.
- The use of paper consumables (notes, labels) to provide information on products to customers has been reduced. A project to eliminate instruction notices included with reagents is under way for all reagents when permitted by local regulations in the reagents' destination. Electronic instructions will instead be downloadable from the Company's technical library.

Biodiversity

The Company's facilities are located in industrial and urban areas and are not in places where nature, fauna and flora are protected. The Company puts special emphasis on the appearance of its facilities and on the landscaping and attractive architecture of its sites. It has also discontinued the use of pesticides at several sites.

In first-half 2016, bioMérieux acquired Hyglos, which owns an innovative endotoxin assay technique. Previously such assays required the use of the blood of horseshoe crabs, an endangered species. With this acquisition, bioMérieux can now offer an alternative solution, thereby preserving a protected species.

(1) Excluding greenhouse gas emissions, see section 3.7.3.2.

3.11.2 Other indicators followed by the Company

	2019	2018	2017
Human Resources Indicators			
• Overall change in headcount			
End of period headcount (FTE)	11,795	11,094	10,367
Average headcount (FTE)	11,425	10,788	10,111
EMEA	46%	48%	50%
AMERICAS	45%	42%	40%
ASPAC	9%	10%	10%
• Headcount by gender and age			
Headcount – Women	48%	48%	48%
< 25	2%	2%	3%
25-34	13%	13%	13%
35-44	14%	14%	14%
45-54	12%	12%	12%
55 and over	7%	7%	6%
Headcount – Men	52%	52%	52%
< 25	2%	2%	2%
25-34	15%	15%	14%
35-44	16%	16%	16%
45-54	13%	13%	13%
55 and over	6%	6%	7%
• Part-time headcount (%)			
Men	1.8%	1.5%	1.6%
Women	10.6%	10.8%	11.5%
• Women in management positions in the income-generating departments	456	431	NC
• % of headcount on temporary contracts	6%	3%	7%
HSE indicators[1]			
• Number of fatal occupational accidents	0	0	0
• Number of lost-time occupational accidents	39	40	52
• Number of occupational accidents without lost time	38	39	28
• Number of days lost	892	900	1,275
• Frequency rate of total reportable occupational accidents	3.6	4.0	4.3
• Number of reportable commuting accidents with or without lost time	22	22	24
• Frequency of total reportable commuting accidents	1.1	1.2	1.3

(1) See section 3.8 for the organisational scope covered.


BIOMÉRIEUX

4

CORPORATE GOVERNANCE

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4.1 Corporate Governance: principles and framework for implementation

The Company complies with applicable Corporate Governance requirements. It refers to the AFEP-MEDEF Corporate Governance Code, which summarises current Corporate Governance principles applicable in France, revised in January 2020. This code may be viewed online on the MEDEF website:

https://afep.com/wp-content/uploads/2020/01/Code-Afep_Medef-révision-janvier-2020_-002.pdf

The provisions of the code that have not been applied and the reasons for such non-compliance are set out in the following table.

The recommendations of the HCGE, received by letter in 2015, and then in 2018, and to which the Company has responded, are listed in the table below where the Company has decided not to follow them or to comply with them.

SUMMARY TABLE OF PROVISIONS REJECTED

Shares held by the directors	Each of the directors held a number of Company shares in accordance with the internal rules, which specify a minimum holding of 10 shares.
Independent directors	Harold Boël is a director of Mérieux NutriSciences Corporation, a company consolidated by the Institut Mérieux. Marie-Paule Kieny is a director of the Fondation Mérieux, an independent foundation with public interest status. The Board of Directors, after discussion with the Human Resources, Appointment and Compensation Committee, considers that Harold Boël and Marie-Paule Kieny's status as independent directors remains unchanged and that there are no conflicts of interest (see section 4.2.5).Nevertheless, Harold Boël and Marie-Paule Kieny will abstain from discussions and votes held by the Board of Directors regarding any circumstances relating to Mérieux NutriSciences Corporation and the Fondation Mérieux.
Presence of the director representing employees on the Human Resources, Appointment and Compensation Committee	The Board of Directors' internal rules stipulate that the Human Resources, Appointment and Compensation Committee (HR Committee) comprise three directors. The Company does not wish to increase the number of members of this Committee or revise its composition as it considers its current operation to be efficient. The Company will assess the possibility of including the director representing employees when one of the current members ceases to be a member of the HR Committee. In addition, the director representing employees participates in Board of Directors' meetings during which issues related to executive compensation are discussed and decided. More generally, the HR Committee systematically reports on its work to the Board of Directors, and its recommendations are discussed during Board meetings. All directors, including the director representing employees, thus have the opportunity to express their opinions on the subjects handled by the Committee.
Annual variable compensation of executive corporate officers	bioMérieux ensures the precision of the indicators the Board of Directors uses, at the recommendation of the Human Resources, Appointment and Compensation Committee, to determine and then evaluate the performance of its executives, while taking into account the confidentiality of certain data (see section 4.3).

4.2 General Management, Executive Committee, Board of Directors and Board Committees

4.2.1 General Management and Executive Committee

The Chairman and Chief Executive Officer

The Company chose to entrust General Management to the Chairman of the Board of Directors. The Company believes that, as a controlled company, this method of governance is best suited to its operations and to protecting its interests.

Mr Alexandre Mérieux has been Chairman and Chief Executive Officer since December 15, 2017.

The Chairman and Chief Executive Officer has the broadest powers to act in all circumstances in the name of the Company. He exercises his powers within the limits of the Corporate purpose and subject to the powers expressly granted by law to Shareholders' Meetings and to Board of Directors' meetings. He represents the Company in its dealings with third parties. He does not make any major decision without the agreement of the Board of Directors, which rules collectively. The Board of Directors has not specifically limited the powers of the Chief Executive Officer, except as regards certain provisions set out in its internal rules and defined in section 4.2.6.2.

The Company ensures that the prerogatives of each Corporate body (Annual General Meetings, the Board of Directors and General Management) are fully respected. Distribution of powers between the Chairman and Chief Executive Officer and the Chief Operating Officer, the Board of Directors' review of all major matters relating to the Company and the presence of fiveindependent directors on the Board prevent any centralisation of powers and promote compliance with the rules of good governance.

Chief Operating Officer

At the recommendation of the Chairman and Chief Executive Officer, and through a decision of the Board of Directors on February 25, 2020, the Company has appointed a Chief Operating Officer, Pierre Boulud. He was appointed for a three-year term beginning on March 1, 2020. He is not a director of the Company. His powers are as extensive as those of the Chairman and Chief Executive Officer.

Executive Committee

The Executive Committee is responsible for implementing decisions validated by the Board of Directors regarding the Company's general strategy. The committee is responsible for overseeing strategic projects, deciding on priorities and implementing the necessary resources within the Company's various departments, such as deciding on significant capital expenditure (property, plant and equipment or intangible assets). It meets once every three months. At each meeting, the committee reviews the Company's operations as well as its regulatory and quality management, financial situation, sales and workforce, and monitors the Group's major projects. It also meets every month using telepresence technology.

It is chaired by Alexandre Mérieux, Chairman and Chief Executive Officer, and is composed, at the publication date of this URD, of:

- Pierre Boulud, Chief Operating Officer, Clinical Operations;
- Guillaume Bouhours – Chief Financial Officer, Executive Vice President Purchasing & Information Systems;
- Pierre Charbonnier – Executive Vice President, Quality, Manufacturing & Supply Chain;
- François Lacoste – Executive Vice President, R&D;
- Valérie Leyldé – Executive Vice President, Human Resources and Communications;
- Mark Miller – Executive Vice President, Chief Medical Officer;
- Yasha Mitrotti – Executive Vice President, Industrial Microbiology;
- Esther Wick – Executive Vice President, Legal Affairs, Intellectual Property and Compliance.

4.2.2 Summary presentation of the Board of Directors (as at the publication date of this URD)

The percentage of women directors is calculated without counting the director representing employees.

	Personal information				Experience		Position on the Board			
	Age	Sex	Nationality	Number of shares	Number of directorships in listed companies*	Indepen-dence	Initial appointment date	Term expiration	Longevity on the Board	Participation in Board Committees
Alexandre Mérieux *Chairman and Chief Executive Officer*	46 years old	M	French	60	2		04/16/2004	2022	16 years	Member of the Strategy Committee
Philippe Archinard *Non-Independent director*	60 years old	M	French	30	3		06/10/2010	2023	10 years	Member of the Audit Committee Member of the Strategy Committee
Jean-Luc Belingard *Non-Independent director*	71 years old	M	French	150	4		09/15/2006	2022	14 years	Chairman of the Strategy Committee Member of the HR Committee
Harold Boël *Independent director*	55 years old	M	Belgian	150	2	✓	05/30/2012	2020	8 years	Chairman of the Audit Committee Member of the Strategy Committee
Marie-Hélène Habert-Dassault *Independent director*	54 years old	F	French	57	4	✓	05/30/2012	2020	8 years	Member of the Strategy Committee Member of the HR Committee
Marie-Paule Kieny *Independent director*	64 years old	F	French	180	1	✓	08/28/2017	2021	3 years	Member of the Strategy Committee
Fanny Letier *Independent director*	40 years old	F	French	30	3	✓	05/30/2017	2021	3 years	Chairman of the HR Committee Member of the Strategy Committee
Agnès Lemarchand *Independent director*	65 years old	F	French	150	3	✓	05/28/2014	2023	6 years	Member of the Audit Committee Member of the Strategy Committee
Frederic Besème *Director representing employees*	63 years old	M	French	2,940	1		05/17/2018	2022	2 years	Member of the Strategy Committee

**Including the position held at bioMérieux.*

4.2.3 Board of Directors

The Board of Directors is composed of at least three members and up to the maximum number permitted by law.

At December 31, 2019, it had nine members, five of whom were independent and one a director representing employees.

The directors

The Annual General Meeting of May 23, 2019 renewed the terms of office of: Mrs Agnès Lemarchand and Mr Philippe Archinard, for a term of office of four years, *i.e.* expiring at the close of the Annual General Meeting held to approve the financial statements for the year ended December 31, 2022.

Mrs Marie-Paule Kieny and Mrs Fanny Letier were also appointed directors during the Annual General Meeting of May 30, 2017 for a four-year term, *i.e.* until the close of the Annual General Meeting to be held in 2021 to approve the financial statements for the year ending December 31, 2020.

The terms of office of Mr Alexandre Mérieux and Mr Jean-Luc Bélingard were renewed by the Annual General Meeting of May 17, 2018, and will end at the close of the Annual General Meeting to be held in 2022 to approve the financial statements for the year ending December 31, 2021.

The Board of Directors will propose the renewal of the terms of office of Mrs Marie-Hélène Habert-Dassault and Mr Harold Boël to the Annual General Meeting of May 19, 2020, for a period of four years until the close of the Annual General Meeting to be held in 2024 to approve the financial statements for the year ending December 31, 2023.

Biography of the directors for whom renewal of terms of office will be proposed by the Board of Directors:

Mrs Marie-Hélène Habert-Dassault

Mrs Marie-Hélène Habert-Dassault holds a post-graduate diploma in Business Law and Taxation, a degree in Business Law Assas (1988), and a master's degree in Strategy and Marketing from Sciences Po (1989). She began her career at DDB Advertising in London as a media-planning consultant. She joined the Dassault Group in 1991 as Deputy Communications director. Since 1998, she has been director of Communications and Corporate Sponsorship of the Dassault Group.

She has been a member of the Board of Directors of bioMérieux since 2012 as an independent director, and serves on the Strategy Committee as well as the Human Resources, Appointment and Compensation Committee.

A description of his directorships and positions is included in section 4.2.4.

The Board of Directors, meeting on February 25, 2020 and having debated the matter, concluded that Mrs Marie-Hélène Habert-Dassault is an independent director (see section 4.2.5).

The Board of Directors recommends to the Annual General Meeting the renewal of the directorship of Mrs Marie-Hélène Habert-Dassault for the following reasons:

- having been a director of the Company for the past eight years, she has in-depth knowledge of the Company and its challenges,
- her independence,
- her experience with major French industrial groups,
- her role as the representative of Groupe Industriel Marcel Dassault, one of the main shareholders of the Company (see section 7.3.2).

Mr Harold Boël

Mr Harold Boël holds a Bachelor of Science degree in chemistry from Brown University (United States) and a diploma in Materials Science from the Ecole Polytechnique Fédérale de Lausanne. He has held various managerial positions in the steel industry within the Corus Group. He has been Chief Executive Officer of Sofina (Belgium – listed company) since 2008.

He has been a member of the Board of Directors of bioMérieux since 2012 as an independent director. He chairs the Audit Committee and is a member of the Strategy Committee.

A description of his directorships and positions is included in section 4.2.4.

The Board of Directors, meeting on February 25, 2020 and having debated the matter, concluded that Mr Harold Boël is an independent director (see section 4.2.5).

The Board of Directors recommends to the Annual General Meeting the renewal of the directorship of Harold Boël for the following reasons:

- having been a director of the Company for the past eight years, he has in-depth knowledge of the Company and its challenges and contributes his expertise as Chairman of the Audit Committee,
- his independence,
- his experience as an investor in growth companies,
- his role as the representative of Sofina, one of the main shareholders of the Company (see section 7.3.2).

The director representing employees

Mr Frédéric Besème was appointed director representing employees during 2018 for a period of four years. The General Meeting of May 17, 2018 amended the bylaws to allow for the terms and conditions of his appointment by the Central Works Council.

The Founding Chairman

Mr Alain Mérieux was appointed the Founding Chairman by the Board of Directors, to take effect from August 28, 2017, for a four-year term expiring at the end of the Annual General Meeting called to approve the financial statements for the year ending December 31, 2020. The General Meeting of May 30, 2017 approved the amendment of the bylaws enabling the Board of Directors to "appoint an honorary Founding Chairman, a natural person, selected from among the former Chairpersons of the Company". The Founding Chairman is eligible indefinitely. He is invited to all Board meetings and attends the Board of Directors sessions in an advisory role. He must nevertheless comply with the internal rules of the Board of Directors. His right to information and communication is identical to that of the members of the Board of Directors.

Representatives of the Central Social and Economic Committee (CSEC)

There are four representatives who who are convened to each meeting of the Board of Directors.

Changes in the composition of the Board of Directors and its committees during the financial year

Situation as of February 25, 2020.

	Departure	Appointment	Renewal
Board of Directors	Mr Michele Palladino and Mr Philippe Gillet (May 23, 2019)	NA	Mr Philippe Archinard and Mrs Agnès Lemarchand (May 23, 2019)
Audit Committee	NA	NA	Mr Philippe Archinard and Mrs Agnès Lemarchand (May 23, 2019)
Human Resources, Appointment and Compensation Committee	NA	NA	NA
Strategy Committee	Mr Michele Palladino and Mr Philippe Gillet (May 23, 2019)	Mr Alexandre Mérieux Mr Philippe Archinard Mr Harold Boël Mrs Marie-Hélène Habert-Dassault Mrs Agnès Lemarchand Mrs Fanny Letier Mr Frédéric Besème (May 23, September 3, 2019)	

4.2.4 Description of the terms of office of the directors

The table below presents all of the directorships and positions held in other companies by each of the Company's corporate officers based on the information they have submitted.

Alexandre MÉRIEUX

CHAIRMAN AND CHIEF EXECUTIVE OFFICER
MEMBER OF THE STRATEGY COMMITTEE

Non-independent director

Born on 01/15/1974 (aged 46)
Nationality: **French**
First appointed on: **04/16/2004**
Term expires: **2022**
Number of shares in the Company: **60**

Alexandre Mérieux earned a degree in biology from Lyon I University and is a graduate of HEC Montréal Business School. He worked for Siliker Group Corporation from 1999 to 2004. During this period, he held marketing positions in the United States and Europe before becoming Marketing and Business Unit Director in France.He joined the bioMérieux Group in 2005 as Executive Vice President, Industrial Microbiology. Then, from 2011 to 2014, Mr Mérieux was Corporate Vice President of the Microbiology and Industrial Operations unit. He became Chief Operating Officer in April 2014 and led bioMérieux's Executive Committee. He was appointed Chairman and Chief Executive Officer by the Board of Directors on December 15, 2017. Alexandre Mérieux is Vice-Chairman of the Institut Mérieux since December 2008. In 2009, he took over the chairmanship of Mérieux Développement and has chaired the Board of Directors of Mérieux NutriSciences since 2013.

Other directorships and positions held at 12/31/2019 (all companies)

Within the Group [(a)] :

- Chief Operating Officer and Vice-Chairman of the Institut Mérieux
- Chairman of Mérieux Développement SAS, Mérieux NutriSciences Corp. (Chairman) (United States)
- CEO of Compagnie Mérieux Alliance
- Director of IM US Holding (US)
- Manager of SCI ACCRA
- Director of the Christophe and Rodolphe Mérieux Foundation and the Mérieux Foundation

Outside the Group [(a)]

- Director of Plastic Omnium (France - listed company)
- Permanent representative of Mérieux Participations 2, director of Financière Senior Mendel SAS (France)

Directorships and positions that have expired in the past five years

Within the Group [(a)] :

- bioMérieux Inc. (United States) (term expired: 2014)
- bioMérieux China Ltd (China), bioMérieux Shanghai Ltd (China), Sysmex bioMérieux Ltd (Japan), SGH, Foncière de Montcelard SAS (term expired: 2015)

Outside theGroup [(a)]

N/A

(a) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of article L.233-16 of the French Commercial Code (Code de commerce).

Philippe Archinard

MEMBER OF THE AUDIT COMMITTEE
MEMBER OF THE STRATEGY COMMITTEE
Non-independent director

Born on 11/21/1959 (aged 60)
Nationality: **French**
First appointed on: **06/10/2010**
Term expires: **2023**
Number of shares in the Company: **30**

Philippe Archinard is a graduate of the Ecole Nationale Supérieure de Chimie in Montpellier and holds a PhD in biochemistry from the University of Lyon. He has also completed the PMD management program from the *Harvard Business School*. He was the Chief Executive Officer of Innogenetics (Belgium) until 2004. He began his working career at bioMérieux in 1985 in various roles in France and the United States, where he managed the US subsidiary, bioMérieux Inc. Mr Archinard was appointed Chairman and Chief Executive Officer of Transgene in 2010; he had been Chief Executive Officer since 2004. Since 2014, Philippe Archinard has been Chairman of BIOASTER (Foundation for scientific cooperation), a technology research institute focusing on infectious diseases and microbiology. He chaired the Lyon competitiveness cluster, Lyon Biopôle, for 11 years. He is a director of Erytech Pharma SA and of the School of Chemistry, Chemical Engineering and Digital Sciences in Lyon (CPE), representing the University of Lyon Foundation (FPUL) in Lyon. He has been a director of bioMérieux since 2010 and Chairman of the Immunotherapy Department of the Institut Mérieux.

Other directorships and positions held at 12/31/2019 (all companies)

Within the Group [(a)] :
- Chairman and Chief Executive Officer of Transgene SA (France - listed company)
- Chief Executive Officer of TSGH (France)
- Permanent representative of TSGH, director of ABL Inc. (USA)

Outside theGroup [(a)]
- Director of Erytech Pharma SA (France – listed company)
- Director of CPE Lyon – Representative of FPUL
- Chairman of BIOASTER (Foundation for scientific cooperation)
- Director of NH Theraguix (France - unlisted company)

Directorships and positions that have expired in the past five years

Within the Group [(a)] :
N/A
Outside theGroup [(a)]
N/A

(a) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of article L.233-16 of the French Commercial Code (Code de commerce).

Jean-Luc BELINGARD

CHAIRMAN OF THE STRATEGY COMMITTEE
MEMBER OF THE HUMAN RESOURCES, APPOINTMENT AND COMPENSATION COMMITTEE
Non-independent director

Born on 10/28/1948 (aged 71)
Nationality: **French**
First appointed on: **09/15/2006**
Term expires: **2022**
Number of shares in the Company: **150**

Jean-Luc Belingard is a graduate of HEC Paris and holds an MBA from *Cornell University* (United States). He was CEO of Roche Diagnostic and a Member of the Executive Committee of Roche Group from 1990 to 1999. He was also a member of the Management Board and Chairman and Chief Executive Officer of bioMérieux-Pierre Fabre between 1999 and 2001. He then became Chairman and Chief Executive Officer of IPSEN from 2001 to 2010, and Chairman and Chief Executive Officer of bioMérieux between 2011 and 2017.

Other directorships and positions held at 12/31/2019 (all companies)

Within the Group [(a)] :
- Director of the Institut Mérieux (France),
- Director of Transgene SA (France - listed company)

Outside theGroup [(a)]
- Director of Pierre Fabre SA (France)
- Director of LabCorp of America (United States - listed company)
- Director of Lupin (India - listed company)

Directorships and positions that have expired in the past five years

Within the Group [(a)] :
- Director of ABL Inc. (term expired: 2018),

Outside theGroup [(a)]
- Director of Starllergene Greer (UK - listed company - term expired: 2019)

(a) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of article L.233-16 of the French Commercial Code (Code de commerce).

Frédéric BESÈME

MEMBER OF THE STRATEGY COMMITTEE

Director representing employees

Born on 09/23/1956 (aged 63)
Nationality: **French**
First appointed on: **05/17/2018**
Term expires: **2022**
Number of shares in the Company: **2,940**

Frédéric Besème holds a PhD in Biology, University of Montpellier. He worked at INSERM from 1984 to 1987. He was R&D Researcher for bioMérieux from 1987 to 2002. He has held various personnel representation roles at bioMérieux as union delegate and social partner between 1997 and 2016. He became CSR Manager in 2016. Since becoming a director representing employees in 2018, in due time and in accordance with the law, he has abandoned all personnel representation and union functions within the Company. To perform his role as a director, he completed a training course at the IFA (Institut des Administrateurs Français) in 2018.

Other directorships and positions held at 12/31/2019 (all companies)

N/A

Directorships and positions that have expired in the past five years

N/A

(a) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of article L.233-16 of the French Commercial Code (Code de commerce).

Harold BOËL

CHAIRMAN OF THE AUDIT COMMITTEE
MEMBER OF THE STRATEGY COMMITTEE

Independent director [(a)]

Born on 08/27/1964 (aged 55)
Nationality: **Belgian**
First appointed on: **05/30/2012**
Term expires: **2020**
Number of shares in the Company: **150**

Harold Boël holds a Bachelor of Science degree in chemistry from Brown University (United States) and a diploma in Materials Science from the Ecole Polytechnique Fédérale de Lausanne. He has held various managerial positions in the steel industry within the Corus group. He has been the Chief Executive Officer of Sofina (Belgium – listed company) since 2008.

Other directorships and positions held at 12/31/2019 (all companies)

Within the Group [(b)] *:*

- Director of Mérieux NutriSciences Corporation (United States)

Outside the Group [(b)]

- Deputy director of Sofina SA (Belgium - listed company)
- Deputy director of Société de Participations Industrielles (Belgium)
- Chairman of Conseil de Domanoy (Belgium)
- Director of SODAVI (Belgium)

Directorships and positions that have expired in the past five years

Within the Group [(b)] *:*

N/A

Outside the Group [(b)]

- Member of the Supervisory Board of Eurazeo (France – listed company, term expired: September 2017)
- Director of Caledonia Investment plc (UK – listed company, term expired: May 2017)
- Director of Suez Environnement (France – listed company, term expired: 2016)
- Director of Henex (term expired: 2014)
- Director of Electrabel (term expired: 2014)

(a) Independent director according to the assessment made by the Board of Directors (see section 4.2.5).
(b) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of article L.233-16 of the French Commercial Code (Code de commerce).

Marie-Hélène HABERT-DASSAULT

MEMBER OF THE STRATEGY COMMITTEE
MEMBER OF THE HUMAN RESOURCES, APPOINTMENT AND COMPENSATION COMMITTEE

Independent director[a]

Born on 04/04/1965 (aged 54)
Nationality: **French**
First appointed on: **05/30/2012**
Term expires: **2020**
Number of shares in the Company: **57**

Marie-Hélène Habert-Dassault holds a post-graduate diploma in Business Law and Taxation, a degree in Business Law from the University Paris 2 Panthéon-Assas (1988), and a master's degree in Strategy and Marketing from Sciences Po (1989). She began her career at DDB Advertising in London as a media planning consultant. She joined the Dassault Group in 1991 as Deputy Communications Director. Since 1998, she has been Director of Communications and Corporate Sponsorship of the Dassault Group.

Other directorships and positions held at 12/31/2019 (all companies)

Within the Group [b] :

N/A

Outside the Group[b]:

- Member of the Supervisory Board of GIMD
- Director of Dassault Aviation SA[c] (France – listed company) since 2014, Dassault Systèmes SA[c] (France – listed company) since 2014, and Artcurial SA[c]
- Director and Vice-President of the Serge Dassault Foundation
- Vice-President on the Supervisory Board of Immobilière Dassault SA[c] (France - listed company)
- Member of the Supervisory Board of Rond-Point Immobilier (SA)
- Manager of H Investissements SARL, HDH, and HDH Immobilière
- Director of SIPAREX
- Director of Fondation Fondamental
- Manager of SCI Duquesne
- Member of the Strategy Committee of HDF (SAS)

Directorships and positions that have expired in the past five years

Within the Group[b]:

N/A

Outside the Group[b]:

- Chair of the Supervisory Board of GIMD
- Chair of the Supervisory Board of Rond-Point Immobilier

(a) Independent director, based on the Board of Directors' evaluation (see section 4.2.5).
(b) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of Article L.233-16 of the French Commercial Code (Code de commerce).
(c) Companies controlled by GIMD within the meaning of Article L. 233-16 of the French Commercial Code (Code de Commerce).

Marie-Paule KIENY

MEMBER OF THE STRATEGY COMMITTEE

Independent director[a]

Born on 04/24/1955 (64 ans)
Nationality: **Française**
First appointed on: **28/08/2017**
Term expires: **2021**
Number of shares in the Company: **180**

Marie-Paule Kieny obtained her doctorate in microbiology at the University of Montpellier (France). She has published more than 350 articles and reviews, mainly in the fields of infectious diseases, immunology, vaccinology and healthcare systems.
Until June 2017, she occupied the position of Assistant Director General responsible for health systems and innovation at the World Health Organisation. She notably coordinated the WHO's R&D work during the Ebola epidemic in West Africa from 2014 to 2016. She also designed the WHO's master plan for R&D (global preparedness plan against emerging diseases epidemics). Before joining the WHO, Marie-Paule Kieny occupied first-rate research positions in the public and private sectors in France. She is currently research director at Inserm in Paris, in charge of the priority research program on antibiotic resistance initiated by France in 2019 under the Future Investments Programme. She also represents France on the Board of Directors of the Joint Programming Initiative on Antimicrobial Resistance, JPIAMR. Marie-Paule Kieny is Chairman of the Board of Directors of the Drugs for Neglected Diseases initiative (DNDi, Geneva, Switzerland) and the Medicines Patent Pool Foundation (MPPF, Geneva, Switzerland). She is also Vice-President of the Board of the Global Antibiotic Research and Development Partnership (GARDP, Geneva, Switzerland), and a member of the Board of Directors of the Human Vaccine Project (HVP, New York, United States), the Fondation Mérieux (Lyon, France), and Solidarité Thérapeutique et Initiatives pour la Santé (Solthis, Paris, France). She sits on the scientific advisory boards of several organisations that are active in the healthcare field. She is a director of the Fondation Mérieux.
She received the title of Chevalier in the Ordre National de la Légion d'Honneur in France in 2016, and Chevalier in the Ordre National du Mérite in France in 2000. She received the title of *Honorary Doctor* from the Autonomous University of Barcelona (Spain) in 2019 and won the Inserm International Prize in 2017, the Prix Génération 2000-Impact Médecin in 1994, and the Prix Innovation Rhône-Poulenc in 1991.

Other directorships and positions held at 12/31/2019 (all companies)

Within the Group [b] :

N/A

Outside the Group [b] :

N/A

Directorships and positions that have expired in the past five years

N/A

(a) Independent director according to the assessment made by the Board of Directors (see section 4.2.5).
(b) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of article L.233-16 of the French Commercial Code (Code de commerce).

Agnès LEMARCHAND

MEMBER OF THE AUDIT COMMITTEE
MEMBER OF THE STRATEGY COMMITTEE

Independent director[a]

Born on 12/29/1954 (aged 65)
Nationality: **French**
First appointed on: **05/28/2014**
Term expires: **2023**
Number of shares in the Company: **150**

A graduate of the Ecole Nationale Supérieure de Chimie de Paris (ENSCP) and of MIT (USA), with an MBA from INSEAD, Agnès Lemarchand began her professional life with various operational responsibilities within the Rhône-Poulenc Group from 1980 to 1985.
In 1986, she was appointed Chief Executive Officer of Industrie Biologique Française (IBF), and in 1987, she founded IBF Biotechnics in the United States, a subsidiary of the Rhône-Poulenc group and the Institut Mérieux, where she was appointed Chairman and Chief Executive Officer.
In 1991, she joined the Ciments Français Group as Chief Executive Officer of Prodical, an industrial minerals subsidiary that she managed from 1991 to 1996. She joined the Lafarge Group in 1997 as Strategy Director of the Speciality Materials Division, and in 1999, was appointed Chairman and Chief Executive Officer of Lafarge Chaux. In 2004, together with the managers, she took over the subsidiary of Lafarge Chaux in the United Kingdom and founded Steetley Dolomite Limited, where she was Executive Chair for 10 years before selling the company to the Lhoist industrial group.
Agnès Lemarchand was a member of the Economic, Social and Environmental Council (economic activities section) from 2012 to 2015. She is a member of the ESG Committee of the IFA (Institut Français des Administrateurs).

Other directorships and positions held at 12/31/2019 (all companies)

Within the Group [b] :
N/A

Outside the Group [b] :
- Director of Saint-Gobain (France - listed company)
- Director of Solvay SA (Belgium - listed company)

Directorships and positions that have expired in the past five years

Within the Group [b] :
N/A

Outside the Group[b]:
- President of Orchad SAS (October 2019)
- Member of the Supervisory Board of CGG (listed company – term expired: October 2017)
- Member of the Supervisory Board of Areva (listed company – term expired: January 2015)
- Member of the Supervisory Board of Vivescia Industries (SCA), representing Bpifrance Participations (term expired: 12/31/2015)
- Executive Chairman of Steetley Dolomite Limited (term expired: 2014)
- Member of the Economic, Social and Environmental Committee, working in the economic division (term expired: 2015)

(a) Independent director according to the assessment made by the Board of Directors (see section 4.2.5).
(b) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of article L.233-16 of the French Commercial Code (Code de commerce).

Fanny LETIER

CHAIRMAN OF THE HUMAN RESOURCES, APPOINTMENT AND COMPENSATION COMMITTEE
MEMBER OF THE STRATEGY COMMITTEE

Independent director[a]

Born on 03/15/1979 (aged 40)
Nationality: **French**
First appointed on: **05/30/2017**
Term expires: **2021**
Number of shares in the Company: **30**

Fanny Letier is a graduate of Sciences Politiques Paris, the ENA, and the Institut français des administrateurs (IFA). She was a senior civil servant in the French Treasury Department (Ministry of Finance) from 2004 to 2012, Secretary General of the Inter-Ministry Committee on Industrial Restructuring (CIRI) from 2009 to 2012, Deputy Director of the Office of the Minister of Industrial Recovery from 2012 to 2013, and Director, then Executive Investment Director of SME funds for Bpifrance from 2013 to 2018. She co-founded GENEO Capital Entrepreneur in 2019, and is a director of Nexans, Aéroports de Paris, and the IFA (Institut Français des Administrateurs).

Other directorships and positions held at 12/31/2019 (all companies)

Within the Group [b] :
N/A

Outside the Group [b] :
- Director of Nexans (listed company)
- Director of Aéroports de Paris (France - listed company)

Directorships and positions that have expired in the past five years

Within the Group[b]:
N/A

Outside the Group[b]:
N/A

(a) Independent director according to the assessment made by the Board of Directors (see section 4.2.5).
(b) Any company controlled by Compagnie Mérieux Alliance SAS within the meaning of article L.233-16 of the French Commercial Code (Code de commerce).

Professional address of directors

The members of the Board of Directors can be contacted at the Company's registered office in Marcy l'Étoile, France (Rhône).

Limit on directorships

The laws currently in force on the maximum number of directorships are applied within the Company.

Corporate officers' interests in the company and the Group

In accordance with Delegated Regulation (EU) 2019/980 of March 14, 2019, it is noted that Alexandre Mérieux is one of the main shareholders of the Compagnie Mérieux Alliance, which itself holds 100% of the holding Institut Mérieux, the Company's majority shareholder with 58.90% of the share capital and 70.65% of the voting rights of the Company as at February 29, 2020 (see sections 7.3.2 and 7.3.3).

4.2.5 Independent directors, conflicts of interest and other declarations

Evaluation of the independence of directors

	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8
Alexandre Mérieux			✓	✓	✓		NA	
Philippe Archinard		✓	✓	✓	✓	✓	✓	✓
Jean-Luc Belingard			✓	✓	✓			✓
Harold Boël		✓	✓	✓	✓	✓	✓	✓
Marie-Hélène Habert-Dassault	✓	✓	✓	✓	✓	✓	✓	✓
Marie-Paule Kieny	✓	✓	✓	✓	✓	✓	✓	✓
Agnès Lemarchand	✓	✓	✓	✓	✓	✓	✓	✓
Fanny Letier	✓	✓	✓	✓	✓	✓	✓	✓
Frédéric Besème		✓	✓	✓	✓	✓	✓	✓

Table prepared based on the information provided by the relevant party.

Criteria 1: Employee corporate officer during the 5 preceding years
Not being or having been during the preceding five years:
- *an employee or executive corporate officer of the Company;*
- *an employee, executive corporate officer, or director of a company that the Company consolidates;*
- *an employee or executive corporate officer or director of the parent company of the Company or of a company consolidated by this parent company.*

Criteria 2: Cross-directorships
Not being an executive corporate officer of a company in which the Company directly or indirectly holds a director seat or within which an employee designated as such or an executive corporate officer of the Company (current or having been one within the last five years) holds the position of director.

Criteria 3: Material business relationships
Not being a customer, supplier, Corporate banker, investment banker, consultant:
- *in a significant capacity for the Company or its group;*
- *or for whom the Company or its group represents a material share of business.*

The assessment of the materiality or immateriality of the relationship between the Company or its group is discussed by the Board of Directors and the quantitative and qualitative criteria underlying this assessment (continuity, economic dependence, exclusivity, etc.) are explained in the annual report.

Criteria 4: Family ties
Not having any close family ties with a corporate officer.

Criteria 5: Statutory Auditor
Not having been a Statutory Auditor of the Company during the 5 preceding years.

Criteria 6: Being a director for more than 12 years
Not having been a director of the Company for over 12 years. The loss of status as an independent director occurs on the anniversary date of the twelve years.

Criteria 7: Status of non-executive corporate officer
A non-executive corporate officer cannot be considered as being independent if receiving variable compensation in cash, or securities, or any type of compensation linked to the Company's or the Group's performance.

Criteria 8: Status of major shareholder
Directors representing major shareholders of the Company or the parent company may be considered independent as long as these shareholders do not participate in the control of the Company. However, beyond a threshold of 10% of the share capital or the voting rights, the Board, based on a report from the Appointment Committee, systematically evaluates the independence of the director, in view of the composition of the Company's share capital and the existence of a potential conflict of interest.

The Board of Directors, during its meeting of February 25, 2020, reviewed the analysis of the Human Resources, Appointment and Compensations Committee regarding the independence of directors, according to the criteria contained in the AFEP-MEDEF Code. After having debated it, the Board of Directors confirmed the independent capacity of the following 5 directors out of the 9 who composed it: Mr Harold Boël, Mrs Marie-Hélène Habert-Dassault, Mrs Marie-Paule Kieny, Mrs Agnès Lemarchand and Mrs Fanny Letier.

In particular, the Board of Directors deemed the following directors to be independent: Mr Harold Boël to be independent, despite the fact that he is director of Mérieux NutriSciences Corporation, a US company held by the Institut Mérieux, and Mrs Marie-Paule Kieny, a director of Fondation Mérieux (see section 4.1).

Evaluation of conflicts of interest

The Board of Directors of February 25, 2020 assessed the business ties and potential conflicts of interest that could arise from the terms of office of some of its directors.Although Harold Boël is a director of Mérieux NutriSciences Corporation, the Board of Directors deems that there is no conflict of interest. The two companies are independent and each act in different areas. The existing business relations are not significant and are not likely to call into question their independence. Accordingly, Harold Boël will abstain from discussion and votes held by the Board of Directors regarding any circumstances relating to Mérieux NutriSciences Corporation. Marie-Paule Kieny is a Director of the Fondation Mérieux. The Board of Directors also decided that there was no conflict of interest that would call her independence into question. This is because the Fondation Mérieux is an independent foundation with public interest status. It specifically receives grants from the Company. Accordingly, Marie-Paule Kieny will abstain from discussions and votes held by the Board of Directors regarding any circumstances relating to the Fondation Mérieux.

Other than Harold Boël and Marie-Paule Kieny, since the independent directors have no relationship of any kind with the Company, the Group or the Management, there is no conflict of interest which the Board of Directors could be required to discuss.

Other declarations

To the best of the Company's knowledge:

- no member of the Board of Directors of the Company has been convicted of fraud in the past five years;
- no member of the Board of Directors has been involved, in the past five years, in any bankruptcy, court-ordered receivership or liquidation, in their capacity as member of an administrative, management or supervisory body or as Chief Executive Officer;
- no sentence has been pronounced in the past five years against any member of the Board of Directors of the Company barring them from serving on an issuer's administrative, management or supervisory body or from participating in the management or conduct of the affairs of an issuer;
- no member of the Board of Directors of the Company has been charged with an offence or had any official public disciplinary action taken against them by a statutory or regulatory authority (including recognised professional bodies).

To the best of the Company's knowledge, there is no potential conflict of interest between the duties to the Company of any member of the Board of Directors, and their private and/or other interests. The agreements involving certain directors are subject to the procedures concerning related-party agreements and are described in section 7.8.

To the best of the Company's knowledge, no commitments have been undertaken by members of the Board of Directors that restrict their freedom to dispose of their bioMérieux shares, other than the rules on insider trading and closed periods.

4.2.6 Practices and work of the Board of Directors and its committees

4.2.6.1 Directors' attendance at Board of Directors and committee meetings in 2019

	Board of Directors		Audit Committee		Human Resources, Appointment and Compensation Committee		Strategy Committee	
Directors	Attendance rate	Number of meetings	Attendance rate	Number of meetings	Attendance rate	Number of meetings	Attendance rate	Number of meetings
Mr Jean-Luc Belingard	100%	4/4	-	-	100%	3/3	100%	2/2
Mr Alexandre Mérieux[1]	100%	4/4	-	-	-	-	-	-
Mr Philippe Archinard[1]	100%	4/4	100%	6/6	-	-	-	-
Mr Harold Boël[1]	100%	4/4	100%	6/6	-	-	-	-
Mr Philippe Gillet[2]	100%	2/2	-	-	-	-	100%	1/1
Mr Frédéric Besème[1]	100%	4/4	-	-	-	-	-	-
Mrs Marie-Hélène Habert-Dassault[1]	100%	4/4	-	-	100%	3/3	-	-
Mrs Agnès Lemarchand[1]	75%	3/4	83%	5/6	-	-	-	-
Mr Michele Palladino[2]	100%	2/2	-	-	-	-	100%	1/1
Mrs Fanny Letier[1]	100%	4/4	-	-	100%	3/3	-	-
Mrs Marie-Paule Kieny	100%	4/4	-	-	-	-	100%	2/2

(1) Directors appointed to the Strategic Committee as from September 3, 2019
(2) Directors whose term of office ended on May 23, 2019

4.2.6.2 Practices of the Board of Directors and its internal rules

The Board of Directors is responsible for defining and implementing the Company's strategies. It has powers to act on all questions concerning the smooth running of the Company and settles all matters affecting the Company by its deliberations, within the limits of the Corporate purpose and subject to the powers expressly granted to Shareholders' Meetings. The Board of Directors carries out all controls and procedures that it deems appropriate.

The Chairman organises and oversees the Board's work and reports thereon to the Shareholders' Meeting. He ensures that the Company's management bodies operate effectively and that the directors are able to perform their duties.

The Chairman of the Board of Directors is responsible for shareholder relations. He therefore works in close cooperation with the Investor Relations Department (see 7.5.1). The Chairman reports on his activities to the Board of Directors, where appropriate.

The committees of the Board of Directors are in charge of examining issues assigned to them by the Board of Directors or the Chairman of the Board, preparing the Board of Directors' work on these issues, and reporting their findings to the Board of Directors in the form of reports, proposals, communications or recommendations.

The committees act in an advisory capacity. The Board of Directors determines at its own discretion how to follow up on the findings reported by the committees. Each director remains free to vote as he wishes, without being bound by these studies, investigations or reports. Nor is he bound by any recommendations made by the committees.

On the date of filing of this Universal Registration Document, the Board of Directors of the Company had set up three committees: the Audit Committee, the Human Resources, Appointment and Compensation Committee, and the Strategy Committee, as described in section 4.2.6.6.

Internal rules of the Board of Directors

The internal rules, adopted in 2004 by the Board of Directors and intended to define its operating procedures, in addition to legal, regulatory and statutory requirements, are regularly updated to reflect new legal provisions and the recommendations of the AFEP-MEDEF Corporate Governance Code. It is regularly updated. All Board members have agreed to comply with the internal rules.

The internal rules provide that directors must first ensure that they are fully informed of the general and specific obligations attached to their duties and are familiar with securities regulations pertaining to breaches of stock exchange regulations before accepting their duties. They must familiarise themselves and comply with the laws and regulations, the bylaws, the Board of Directors' internal rules and any additional information that the Board of Directors may provide to them, the rules concerning the Board provided for in the AFEP-MEDEF Corporate Governance Code (particularly the rules of ethics for directors) as well as the Global Code of Conduct adopted by the Company.

The internal rules also provide that directors:

(i) represent all the shareholders, even though they are shareholders themselves holding at least ten shares, and must act in the Company's interests in all circumstances;

(ii) must inform the Board of any actual or potential direct or indirect conflict of interest between the interests of the Company and their own interests or those of the shareholder or group of shareholders they represent, and must abstain from voting on the issues concerned;

(iii) undertake to devote the necessary time and attention to their duties;

(iv) undertake to remain independent in their analysis, judgement, decision-making and actions, and to resist all direct or indirect pressure that may be placed on them by directors, specific groups of shareholders, creditors, suppliers and other third parties. Similarly, if they believe that decisions taken by the Board are not in the interests of the Company, they undertake to clearly express their opposition and strive to convince the Board of the merits of their opinion;

(v) must attend and participate in all meetings of the Board of Directors and, if applicable, of the committees on which they serve;

(vi) are bound by a strict duty of confidentiality beyond the exercise of discretion required by law with respect to non-public information acquired in connection with their role as directors;

(vii) are bound by a duty of loyalty;

(viii) must trade in the Company's shares only in compliance with the Global Code of Conduct adopted by the Company; and

(ix) must provide the Board with all relevant information concerning compensation and benefits-in-kind paid to them by the Company or a Group entity, and their directorships and positions held in all companies and other legal entities, including details on their attendance at all committees of French or foreign companies.

The Board of Directors' internal rules provide that the Board of Directors must decide on (i) the approval of the strategic plans of the Company and its subsidiaries, (ii) the approval of the annual budget and, on a quarterly basis, its implementation, and (iii) the authorisation of all key transactions (acquisitions, exchanges, settlements, granting of security interests, all financing arrangements, etc.) exceeding €30 million and not provided for in the strategic plan or the budget.

The internal rules also provide that the Board of Directors must be notified of any significant event affecting the operation of the Company and more specifically its financial and cash position and commitments.

4.2.6.3 Diversity policy within the Board of Directors and the management bodies

On the recommendation of the Human Resources, Appointment and Compensation Committee, the Board of Directors, pursuant to article L.225-37-4, paragraph 6, of the French Commercial Code, has defined a diversity policy that applies to the Board of Directors and management bodies.

Accordingly, the Board of Directors has established a policy of promoting cultural and cross-border diversity among its members; seeking a balance in the distribution of skills, both as regards the age and experience of its members, and their fields of expertise (management, medical or scientific, knowledge of listed companies); and, aiming for a balanced representation of women and men. The purpose of this policy is to provide a balanced and harmonious Board membership facilitating fruitful, varied and high quality discussions to support the Company's interests and strategy.

The Board will endeavour to implement this policy for every reappointment or new appointment.

Nonetheless, it should be noted that the Company does fulfil its legal obligations. In particular, in accordance with article L.225-18-1 of the French Commercial Code, the Board of Directors comprises eight members (plus a director representing employees), of whom four are women: Mrs Marie-Hélène Habert-Dassault, Mrs Marie-Paule Kieny, Mrs Agnès Lemarchand and Mrs Fanny Letier. In addition, in accordance with Article L.225-27-1 of the French Commercial Code, the Company amended its bylaws in 2018 in order to allow the Central Works Council to appoint a director representing employees. Mr Frédéric Besème was appointed to this position during 2018.

The self-assessment process debated by the Board of Directors demonstrates that the Board operates smoothly and that each director contributes in an effective way (see Section 4.2.6.5).

In addition, the Company is committed to strengthening the representation of women within its Executive Committee. It is therefore seeking to develop the skills of women and to promote them, without discrimination, in order to enable them to take up senior positions. The Executive Committee will, as a matter of priority, be refreshed through the appointment of women until parity has been achieved, unless the skills required prevent this.

Finally, the Company supports the balanced representation of women and men in its senior management posts. In particular, women represent around 34% of bioMérieux's employees in the most senior positions (levels 1-6), representing almost 10% of the workforce, compared with around 32% in 2017.

4.2.6.4 Work of the Board of Directors

During the financial year ended December 31, 2019, the Company's Board of Directors met four times and:

- approved the parent company financial statements and the consolidated financial statements for the financial year ended December 31, 2019, along with the related press release; prepared the Annual General Meeting, namely by approving the various reports required by law and the description of the share buyback program; approved the interim financial statements and Interim Financial Report, along with the related press release; analysed the quarterly reviews of the Company's operations and affairs and major projects;
- approved the budget;
- reviewed and approved, where applicable, the Business Development opportunities;
- took note of the reports and recommendations, if any, of its committees;
- reviewed the Company's sustainable development and CSR policies, in particular the new format of the declaration of non-financial performance;
- discussed the Company's policy in terms of equality and equal pay in the workplace;
- approved the principles and criteria for setting compensation for the executive corporate officers for fiscal year 2020 (Say on Pay Ex ante) and compensation for the corporate officers for the previous fiscal year (Say on Pay Ex post);

- modified the composition of the Strategy Committee and defined the new rules on compensation granted to director members of the Strategy Committee;
- heard some Company executives review their sales (particularly the EMEA and Asia Pacific regional departments and the Risk Department);
- analysed the ethics and compliance plans implemented;
- reviewed international expansion projects and approved the refinancing or restructuring of some subsidiaries and the reasons for these transactions;
- granted free shares to some employees of the Group; decided on the issuance of the freely granted shares; authorised implementation of an employee share ownership plan; decided on a discretionary profit-sharing supplement;
- evaluated the independence of the directors, the potential conflicts of interest and the effective contribution of each of the directors; defined a diversity policy for the Board of Directors and management bodies;
- implemented a new share buyback program;
- approved a new internal charter on related party agreements and evaluation of current agreements;
- approved the delegation of authority to the Chairman and Chief Executive Officer for 2020, with respect to sureties, endorsements and guarantees, under the new terms of the law.

4.2.6.5 Self-assessment of the Board of Directors and assessment of the effectiveness of the contribution made by each director

In addition, as stipulated in its internal rules, each year the Board of Directors devotes an agenda item to the Board's operations in order to (i) evaluate the quality and effectiveness of the Board's deliberations, (ii) assess the Board of Directors' actual roles and duties, (iii) analyse the reasons for any shortcomings as perceived by the Chairman, directors or shareholders, and (iv) analyse the independence criteria applicable to directors.

At its meeting of February 25, 2020, the Board of Directors carried out a self-assessment based on a questionnaire in which each director was able to state his or her opinion.

- The Board of Directors discussed the responses received and confirmed that its responsibilities and duties were fulfilled and it was operating effectively, both in terms of the standard and effectiveness of its meetings. Areas of improvement are proposed by the Company and, the following year, the Board of Directors ensures they are addressed or continues its efforts, where applicable.
- The directors consider that their access to information concerning the Group and its environment is sufficient, and that such information is of a high quality and is sent to them in a timely manner. Nevertheless, these time frames could still be improved. The Board of Directors' digitalisation tool is appreciated;
- The majority of directors consider that the information provided for the discussion of topics on the agenda is presented with sufficient internal or external analysis on which to base decisions. The Audit Committee appreciate the presentation on the Company's risk approach. The Executive Board, also consulted on this subject, would like to have even more details. The directors appreciate the monitoring of the topics presented to the Board since 2018. The directors appreciate taking part in the discussions of the Strategy Committee, which enables them to have a better vision of the Company's strategy;
- The directors consider their training to be appropriate, and appreciate the regular presentation of the members of the Executive Committee at the meetings of the Board of Directors, which participates in their continuing education;
- With respect to General Management, directors believe they are fully independent and able to speak freely and appreciate the efforts made to explain and share knowledge. They consider that they have sufficient access to other information than that provided by the General Management, and particularly at the Audit Committee level;
- They deem it important that the independent directors meet outside of these Board meetings, irrespective of the transparency and openness shown by the Management and the standard of discussion at those meetings. As a result, since 2018, a meeting of independent directors has been held once a year. They also consider that the independent directors are duly independent (see section 4.2.5).
- The members of the Board committees believe that the committees on which they sit function effectively, and that the frequency with which the committees are held and duration of committee meetings are fully satisfactory. They also express great satisfaction with the standard of work produced by the committees. They appreciate the division of work between the committees and the Board and the high standard of discussion within the committees as well as the effective communication of information. The members of the Human Resources, Appointments and Compensation Committee appreciated the efforts made in preparing and organizing this work.

Finally, the Board of Directors debated the effectiveness of the contribution made by each director to the work of the Board, after hearing the analysis of the Human Resources, Appointments and Compensation Committee. Having highlighted the individual and varied skills of each director (scientific, medical, financial and management skills within both listed and unlisted companies) and the complementary nature of its members, the Board of Directors concluded that each member's involvement, in their field of expertise, led to high quality discussions. As a result, their significant personal contributions, as well as regular attendance, are criteria that ensure the smooth running of the Board and the appropriate membership.

4.2.6.6 Practices and work of the committees of the Board of Directors

The Board of Directors' internal rules provide that the Board of Directors may set up one or more permanent or temporary committees to help it accomplish its work and contribute effectively to the preparation of its decisions.

The committees are in charge of examining issues referred to them by the Board of Directors or the Chairman of the Board, preparing the Board of Directors' work on these issues, and reporting their findings to the Board of Directors in the form of reports, proposals, communications or recommendations.

The committees act in an advisory capacity. The Board of Directors determines at its own discretion how to follow up on the findings reported by the committees. The directors remain free to vote as they choose and are not bound by the committees' studies, investigations or reports, nor by any recommendations they may issue.

Audit Committee

Breakdown

The Audit Committee has three members appointed by the Board of Directors from among its members who are not members of the Company's Management. It consists of a majority of independent directors.

The Audit Committee, set up in 2002, was composed, on December 31, 2019, of Mr Harold Boël, its Chairman, Mrs Agnès Lemarchand, and Mr Philippe Archinard. Mr Harold Boël and Mrs Agnès Lemarchand are independent directors within the meaning of the Board of Directors' internal rules. Two-thirds of the committee are therefore independent members.

All of the committee's members have specialised financial or accounting expertise. Mrs Agnès Lemarchand, Mr Harold Boël and Mr Philippe Archinard each possess "financial or accounting expertise" as set out in article L.823-19 of the French Commercial Code (*Code de commerce*) and in the AMF's July 22, 2010 working group report on Audit Committees. They acquired this expertise through their general management experience in major industrial groups (in the case of Mrs Agnès Lemarchand and Mr Harold Boël) and in pharmaceutical groups (in the case of Mr Philippe Archinard).

Practices - Missions

The committee meets (including by conference calls) as often as it deems necessary and at least twice a year, before the review by the Board of Directors of the annual and interim financial statements. The Audit Committee appoints a Chairman from among its members, who may hold a directorship but no management or other position as corporate officer within the Company or the Group. Depending on the points on its agenda, the Audit Committee invites members of the Finance, Internal Audit, Risk and Compliance, and Investor Relations Departments, or the Statutory Auditors and exceptionally General Management, to its meetings. External experts may be called upon as required. In consultation with the Chairman of the Board of Directors, the Audit Committee is provided with all of the resources it considers necessary to properly perform its duties.

Pursuant to the Board of Directors' internal rules, as modified in 2016 to take into account the audit reform within the European Union applicable as of June 17, 2016, the Audit Committee's duties are to assist the Board of Directors. It is primarily responsible for (i) ensuring the monitoring of the preparation of financial information, (ii) ensuring the effectiveness of internal control and risk management systems as well as the internal audit, (iii) making a recommendation on the Statutory Auditors proposed for appointment by the Shareholders' Meeting, (iv) monitoring the Statutory Auditors' performance of their duties, (v) monitoring the independence of the Statutory Auditors, (vi) approving the provision of services other than the statutory audit and (vii) reviewing the draft financial press releases in particular relating to the interim financial statements and quarterly sales.

Work

The Audit Committee meets between one and four days before the Board of Directors' meeting held to approve the annual and interim financial statements and prepares a systematic report on its meeting. It met six times in 2019.

The Audit Committee reviewed the annual and interim financial statements, including the notes thereto and the year-end accounting options and off-balance sheet commitments as well as the scope of the consolidated companies. It reviewed the press releases relating to the annual financial statements for 2018, the 2019 interim financial statements, and sales for the first, second and third quarters of 2019. The Committee also reviewed the draft Universal Registration Document including the risk factors, Management Report, corporate governance report, and declaration on the Company's non-financial performance. The Audit Committee reviewed the Company's foreign exchange policy and its implementation. It also reviewed the budget process. It reviewed the internal audit reports, the results of internal audit missions, and the action plan for the current year. It reviewed the implementation of the action plan for the Sapin II Law and General Data Protection Regulation. It reviewed the updates to the risk map, including financial and non-financial risks and the methodology used. It also reviewed the changes in the information security system implemented. It approved the terms of the internal charter on related-party agreements and the evaluation procedure for ordinary agreements. Finally, the Audit Committee pre-approved the services performed by the Statutory Auditors other than the certification of the financial statements and approved, on a case-by-case basis, specific assignments.

The Statutory Auditors issued a detailed report on their audit engagement relating to the annual and interim financial statements and on auditor independence, and regularly informed the Audit Committee of changes in accounting rules and legal regulations.

The Statutory Auditors also held private discussions with the members of the Audit Committee.

Human Resources, Appointment and Compensation Committee

Breakdown

Pursuant to the Board of Directors' internal rules, the Human Resources, Appointment and Compensation Committee comprises three members appointed by the Board of Directors from among its members. It consists of a majority of independent directors.

The Board of Directors set up the Compensation Committee in 2004 and changed the committee's roles and responsibilities in 2010 by including human resources functions. As a result, it became the Human Resources, Appointment and Compensation Committee.

At December 31, 2019, the Human Resources, Appointment and Compensation Committee was composed of Mrs Fanny Letier, who chairs the committee, Mrs Marie-Hélène Habert-Dassault, and Mr Jean-Luc Belingard. Mrs Marie-Hélène Habert-Dassault and Mrs Fanny Letier are independent directors within the meaning of the Board of Directors' internal rules. Two-thirds of the Human Resources, Appointment and Compensation Committee are therefore independent members. In addition, the Chairman and Chief Executive Officer is involved in the committee's work on the selection and appointment of directors as well as on the compensation policy applicable to the main non-officer executives.

Practices - Missions

The Human Resources, Appointment and Compensation Committee meets at least once a year. Meetings are called by the Chairman of the Board of Directors.

With respect to appointments, the committee is responsible for making recommendations on the composition of the Board after considering all relevant information prior to making a decision: desirable balance in Board membership to reflect the Company's shareholding structure, identifying and evaluating possible candidates, and renewal or non-renewal of terms of office. In particular, the committee defines and implements the procedure for selecting future independent directors and reviews potential candidates before any action is taken in their regard.

The committee must establish a succession plan for executive corporate officers to fill any unforeseen vacancy. The Committee reviews the succession plan for all of the Company's key positions on an annual basis; the Chairman and Chief Executive Officer may participate in discussions with the Committee.

With respect to the compensation, the committee is primarily responsible for (i) making recommendations to the Board of Directors concerning fixed and variable compensation, supplementary and specific pension and personal protection plans, benefits in kind and other financial benefits to which the Chairman and Chief Executive Officer and, where applicable, the Chief Operating Officer, may be entitled; (ii) recommending to the Board an overall amount of directors' fees, as well as rules governing the distribution of such fees and the individual amounts payable to each director based on their attendance record at Board meetings and committee meetings; and (iii) where applicable, proposing to the Board of Directors the rules governing the variable portion of corporate officers' compensation and ensuring that these rules are applied. The Human Resources, Appointment and Compensation Committee is also informed of the compensation policy applicable to the main non-officer executives.

With respect to stock options and free share grants, where appropriate, the committee submits to the Board of Directors its observations regarding the Company's stock option and free share plans proposed by the Chairman and Chief Executive Officer and makes recommendations on the different categories of beneficiaries. The options or free shares granted to corporate officers are examined on a case-by-case basis by the committee.

Work

The Human Resources, Appointment and Compensation Committee met three times in 2019. The main topics discussed during these meetings were the following: the review of the renewal of the terms of office of two directors whose terms were due to expire; the 2019 compensation policy for corporate officers and review of the criteria for awarding their variable compensation in 2018; the succession plans for key positions; the independence of directors; and the diversity policy of the Board of Directors and the Executive Committee.

In addition, the Committee discussed and approved other topics, such as: annual salary negotiations, the compensation policy for members of the Executive Committee and the one applied to all employees in the Group (validation of the variable compensation matrix applicable to employees for the 2019 financial year and application of a multiplier of 140% to the variable compensation for 2018), the amount of the 2018 profit-sharing as well as the additional profit-sharing distributed equally, the implementation of free share grant plans, the validation of performance criteria for free shares, the policy implemented for identified talent pools, the new composition of the Strategic Committee, the implementation of an employee shareholding plan, and the Gender Equality Index.

In 2019, there were no changes to the directors' fees. The Committee recommended that the Board of Directors no longer compensate directors for their participation in the Strategy Committee

In accordance with its operating rules, the Strategy Committee reports to the Board of Directors regarding the performance of its tasks and will provide any observations it deems useful.

The Strategy Committee

Breakdown

The Strategy Committee, created in 2017, is composed of at least three members appointed by the Board of Directors from among its members. A Chairman ensures the proper operation of the committee.At December 31, 2019, all of the directors were members of the Strategy Committee: Marie-Paule Kieny, Marie-Hélène Habert-Dassault, Agnès Lemarchand, and Fanny Letier, and Alexandre Mérieux, Philippe Archinard, Harold Boël, Frédéric Besème, and its Chairman, M. Jean-Luc Bélingard. Other than Jean-Luc Bélingard and Marie-Paule Kieny, the other members were appointed by the Board of Directors on September 3, 2019.

Practices - Missions

The Committee meets as often as it deems necessary and at least once a year, when convened by the Chairman. The committee may invite members of the Company's management and may also call upon external experts.

The Strategy Committee's purpose is to discuss the main strategic topics with General Management, particularly changes in the technological, medical and market environments, and to guide the strategic choices of the Company, both in terms of technologies and its business model.

Work

The committee met once twice during 2018 in meetings to which all directors were invited, to discuss the Company's strategic plan.

In accordance with its operating rules, the Strategy Committee reports to the Board of Directors regarding the performance of its tasks and provides any observations it deems useful.

4.3 Compensation policy of corporate officers, including other benefits

The information and tables in this chapter were prepared in accordance with Order No. 2019-1234 of November 27, relative to the compensation of corporate officers of listed companies, supplemented by Decree 2019-1235 of the same date transposing the Shareholders' Rights Directive 2 (SRD 2).

They are also compliant with the AFEP-MEDEF Corporate Governance Code and its user guide, and comply with AMF Recommendation 2012-02 (updated on December 3, 2019), "Corporate Governance and executive compensation in companies referring to the AFEP-MEDEF Code – Consolidated presentation of the recommendations contained in the AMF annual reports" and AMF Recommendation 2009-16 (updated on July 25, 2019), "Guide for the preparation of Registration Documents".

This chapter specifies (i) the policy on the compensation of corporate officers of the Company for 2020, namely the Chairman and Chief Executive Officer, the Chief Operating officers, and the directors, as well as (ii) the fixed, variable and exceptional elements composing the total compensation and benefits of any kind paid during the previous fiscal year or allocated pursuant to the same year to these same directors.

It repeats the provisions of articles L.225-37-2 and L.225-100 of the French Commercial Code and is included in the report on Corporate Governance mentioned in article L.225-37 of the Commercial Code. These principles were decided by the Board of Directors at their meeting on February 25, 2020, upon the recommendation of the Human Resources, Appointment and Compensation Committee. It will be put to a vote during the Annual General Meeting of May 19, 2020.

It should be noted that the compensation policy for corporate officers (Chairman and Chief Executive Officer, Chief Operating Officer, and members of the Board of Directors) for 2020 described below is subject to an overall vote, which does not prejudice the outcome of individual votes on the manner in which this policy is applied to the Chairman and Chief Executive Officer, the Chief Operating Officer, and members of the Board of Directors.

4.3.1 Compensation policy 2020 – *ex ante* voting

4.3.1.1 General description

Upon a recommendation from the Human Resources, Appointment and Compensation Committee, the Board of Directors proposes a policy on the compensation of corporate officers (the "Policy") that is compliant with the Corporate interest of the Company, which contributes to its sustainability and fits within its commercial strategy.

Thus, the directors' compensation takes into account their actual presence at meetings of the Boards and Committees. This is because the variable portion linked to the rate of attendance at or participation in the Board of Directors or a Committee outweighs the fixed portion. This compensation encourages directors to invest in the Company's strategy. The compensation package allocated to directors is also reviewed from time to time to take into account changes in the composition of the Board.In addition, the compensation policy for corporate officers explicitly provides that variable compensation is linked to the Company's short- and long-term performance. The fixed compensation portion is reviewed only occasionally, to ensure that it is consistent with the Company's performance and developments. The Company is attentive to the adequacy of the terms and conditions of compensation of its employees and those of its corporate officers.

Thus, to define the Policy, the Board of Directors takes into account:

- the Company's interest and strategy;
- the performance and development of the Company and the executive, where applicable, on an annual and multi-annual basis;
- the compensation policy for all the Group's senior executives;
- the compensation paid directly by Institut Mérieux, if any;
- analysis of market practices which allow them to compare the level and structure of compensation for corporate officers and executive corporate officers with that in force in other SBF 120 companies of a similar size (compensation level and trends, respective position and weight of each component of compensation) and in international companies operating in similar businesses; and
- if applicable, specific situations that may give rise in exceptional circumstances to extraordinary compensation.

This Policy and its elements are analysed and reviewed every year by the Human Resources, Appointment and Compensation Committee. The committee makes its recommendations to the Board of Directors, which debates them in meetings, then determines the terms of the Policy. Any proposed modification is studied by the Human Resources Committee, then submitted for approval to the Board of Directors. In particular, that the corporate officers not participate in the discussions and evaluation of their performance, and leave the meeting, if applicable, in order to avoid any risk of a conflict of interest.

Except in the case of provisions to the contrary, the Policy is applicable to all corporate officers, whether they are reappointed during the year or newly appointed.

The Policy is unchanged compared to the one presented in 2019. The Policy was approved at the Annual General Meeting of May 23, 2019.

Finally, the Board of Directors may, exceptionally, deviate from the Policy in the event of a change in the Company's organisation or governance.

4.3.1.2 Components of the fixed and variable compensation of corporate officers for the 2020 financial year

At the publication date of this URD, the executive corporate officers are Alexandre Mérieux, Chairman and Chief Executive Officer; and Pierre Boulud, Chief Operating Officer.

The current term of office of the Chairman and Chief Executive Officer is four years, renewable, corresponding to the duration of his term office as director. The term of office of current directors is also four years. The term of office of the Chief Operating Officer is set at three years. All corporate offices may be revoked *ad nutum* by the Company's shareholders, and also by the Board of Directors. The employment contract of Mr Pierre Boulud, Chief Operating Officer, is an open-ended contract under French law, and provides for a three-month notice period. In addition, the Board of Directors has provided that Pierre Boulud hold a minimum of 100 shares in the company before December 31, 2020.

4.3.1.2.1 Compensation allocated to directors

Upon a recommendation from the Human Resources, Appointment and Compensation Committee, the Board of Directors proposes to the Annual General Meeting an overall budget for the compensation allocated to directors.

In particular, the maximum amount of compensation allocated to directors is €400,000 per year, as arising from the 11th resolution of the Ordinary General Meeting of the Company on May 30, 2017 (for the financial year ending on December 31, 2017).

SUMMARY TABLE OF COMPENSATION ASSIGNED TO DIRECTORS

On December 15, 2017, the Board of Directors set the rules on the breakdown of compensation allocated directors. On September 3, 2019, the Board of Directors decided to no longer compensate Directors for their participation on Strategic Committees. These decisions followed the recommendations of the Human Resources, Appointment and Compensation Committee.Thus, for fiscal year 2020, the compensation allocated to Directors breaks down as follows:

In euros	Annual fixed amount[(a)]	Variable amount *(per meeting and per director)*
Board of Directors	5,000	5,000
Audit Committee	2,000	4,000
Human Resources, Appointment and Compensation Committee	2,000	3,000
Strategy Committee		No compensation

(a) *Calculated pro rata to the number of months in office of the directors.*

In accordance with the AFEP-MEDEF Corporate Governance Code, the variable portion linked to directors' rate of attendance or participation on the Board of Directors or a committee is greater than the fixed portion.

4.3.2.1.2 Compensation of executive corporate officers

General principles

The Human Resources, Appointment and Compensation Committee and the Board of Directors analyse the overall compensation for executive corporate officers taking into account all of the components:

- fixed portion;
- annual variable portion;
- deferred variable portion;
- multi-annual variable portion;
- if applicable, extraordinary compensation;
- entirely conditional stock option plans and performance shares;
- compensation allocated to directors;
- benefits-in-kind;
- termination benefits; and
- supplementary pensions.

Moreover, the Human Resources, Appointment and Compensation Committee and the Board of Directors have decided:

- that no benefits in connection with a non-compete clause will be paid in the event of departure; and
- that no additional compensation will be paid by a Group subsidiary outside of directors' fees.

Fixed compensation

Fixed compensation for executive corporate officers is determined by taking into account the level and difficulty of responsibilities, experience in the function and area of the Company's business, seniority in the Group and practices in force in groups or companies of a similar size.

Fixed compensation may only be reviewed at fairly long intervals – in theory every two or three years – excluding the overall pay review for all Company employees and barring exceptional events.

In addition to their functions within the Company, the executive corporate officers can exercise functions within the Institut Mérieux, for which they may be paid under the terms of an employment contract or mandate. This compensation is not rebilled to bioMérieux. The compensation paid directly by Institut Mérieux is therefore excluded from the Shareholders' Meeting's vote.

The fixed compensation of the Chairman and Chief Executive Officer will increase to €500,000 gross, starting on April 1, 2020. This increase is justified by the implementation of a new organisation of the Company, strengthening its client focus around business expertise. He previously enjoyed an increase in fixed compensation on June 1, 2018, when it went from €380,000 to €450,000, following his appointment as Chairman and Chief Executive Officer.The fixed compensation of the Chief Operating Officer is €510,000 starting on March 1, 2020, of which €450,000 relates to his employment agreement and €60,000 to his service as a corporate officer.

Annual variable compensation

Principle applied in the Company

The same caps and rules apply to the variable portion of compensation payable to executive corporate officers as apply to compensation for all Company employees.

The variable portion is expressed as a percentage of basic pay at December 31 of the year. This percentage depends on the grade of the employee. It represents a theoretical target for the variable portion in the event that the employees achieve 100% of their objectives. For the purpose of calculating variable compensation, a maximum achievement rate of 120% is applied.

The Company's multiplier coefficient is then applied (applicable to all French and US employees excluding sales teams, and "Global Leaders") according to a matrix defined annually in accordance with the achievement of growth, revenue, and contributive operating income before non-recurring items objectives (MBO matrix). This matrix is set annually by the Human Resources, Appointment and Compensation Committee and the Board of Directors.In 2020, this matrix presents 20 levels of sales growth and 10 levels of contributive operating income, with assumptions below and above the targets announced by the Company at the beginning of the fiscal year. The intersection of each of these variables defines the percentage of the applicable multiplier coefficient. This matrix defines a minimum multiplier coefficient of 70% and a maximum of 150%. In particular, the 2020 MBO matrix takes into account the two 2020 targets announced by the Company, which are:

- organic growth in sales of 5%-7% at constant exchange rates and scope of consolidation; and
- a contributive operating income based on contributive operating income before non-recurring items of €395-€415 million at current exchange rates.

Thus, the amount of variable compensation cannot exceed 168% of the reference salary at December 31, 2020.

Variable compensation is calculated as follows:

Fixed compensation at December 31 x target bonus x

% achievement rate x Company coefficient

Specific application to executive corporate officers

For executive corporate officers, objectives are set for the financial year. These objectives take into account the performance criteria selected based on the Company's strategy.

They comprise quantitative and qualitative targets which are reviewed each year and defined according to the strategic priorities set for the Group.

The 2020 quantitative targets are based on targets announced by the Company and used in the MBO matrix as defined above.

Chairman and Chief Executive Officer

The annual variable target of the Chairman and Chief Executive Officer is 100% of his fixed compensation in accordance with his corporate office at bioMérieux. He does not receive any variable compensation indexed to his compensation paid by the Institut Mérieux.

In 2020, the targets will be as follows:

- the Group's quantitative financial targets (according to the MBO 2020 matrix) will represent 60% of the variable target. The Board of Directors, on a recommendation of the Human Resources, Appointment and Compensation Committee, will validate the criteria for achieving this target by applying the MBO matrix applicable to all employees; and
- the qualitative targets representing 40% of the variable target. They are composed of criteria related to (i) strategy for 60%, taking into account the execution of the Company's roadmap (in particular deployment of the new organisation, the BioFire transition project), (ii) CSR for 15% (execution of the roadmap presented to the Board of Directors in February 2020, including the definition of a CSR strategy, a new HSE plan, and the materiality analysis of the Company), and (iii) 25% progress on R&D projects (execution of the project portfolio). The Company decided not to disclose the details on some criteria for confidentiality reasons.

Chief Operating Officer

The annual variable target for the Chief Operating Officer is 70% of his fixed compensation. In 2020, the targets will be as follows:

- the Group's quantitative financial targets (according to the MBO matrix) will represent 60% of the variable target. The Board of Directors, on a recommendation of the Human Resources, Appointment and Compensation Committee, will validate the criteria for achieving this target by applying the MBO matrix;
- the qualitative targets representing 40% of the variable target. They are composed of criteria related to (i) the definition of the Clinical Operations Department strategy, for 30%, (ii) the definition and implementation of new organisation of the Clinical Operations Department, for 40%, and (iii) implementation of the BioFire transition, for 30%.

The extent to which the objectives have been met ("achievement rate") and the amount of variable compensation are determined by the Board of Directors based on a recommendation of the Human Resources, Appointment and Compensation Committee during the meeting held to approve the financial statements for the year. The Chairman and Chief Executive Officer is not present when the Board of Directors discusses his performance.

The Company does not foresee any cases in which the variable compensation must be returned.

Deferred variable compensation

The Board of Directors may decide upon a variable compensation component that is based on qualitative and quantitative criteria and subject to continued employment by the Company. In 2020, no deferred variable compensation will be offered to the Chairman and Chief Executive Officer or to the Chief Operating Officer.

Multi-year variable compensation

Multi-year variable compensation may be granted to executive corporate officers. In 2020, no variable multi-year compensation will be offered to the Chairman and Chief Executive Officer or to the Chief Operating Officer.

Extraordinary compensation

Executive corporate officers may benefit from extraordinary compensation in the event of specific performance or the particularly successful implementation of certain projects by these executives. In 2020, no extraordinary compensation will be offered to the Chairman and Chief Executive Officer or to the Chief Operating Officer.

Stock option plans and performance shares

General principles

The level of shares awarded takes into account all of the elements used to determine the executive corporate officers' compensation as well as the market practices adopted by comparable listed companies.

Generally speaking, the respective proportion of stock options and performance shares awarded varies in line with the grade and performance of the beneficiaries, with the proportion of stock options and performance shares increasing with the beneficiary's degree of responsibility and performance.

Under IFRS 2, the value of any share-based payment award is limited to one year of fixed and target variable compensation, with the target variable corresponding in this case to the compensation due when the beneficiary has an achievement rate of 100%. The total amount of annual awards to corporate officers must not exceed 2.5% of the total compensation pool approved by the Shareholders' Meeting for stock option and free share grants within the Group, or 5% of the annual total award (calculated where applicable in equivalent stock options for combined stock option and performance share grants).

Balance and proportionality

The conditions for the award and exercise of stock options and for the award and vesting of performance shares for executive corporate officers are contingent on demanding and appropriate internal and/or external performance criteria, which must be met over several consecutive years. The share-based payment plan formally states that executive corporate officers must be employed by the Group at the end of the vesting period in order to exercise their options or for their performance shares to vest.

Total stock option and performance share awards represent a low percentage of equity.

Mandatory holding period ("lock-up") for shares awarded by the Company

In accordance with French law and with the AFEP-MEDEF Corporate Governance Code, the Board of Directors sets the number of shares that corporate officers are required to hold:

- for performance shares, executive corporate officers must hold a number of shares equal to 40% of the performance shares, that will ultimately be awarded upon expiry of the vesting period;
- for stock options, executive corporate officers must hold a number of shares resulting from each exercise of options equal to 40% of the theoretical net capital gain (after tax and social security levies) calculated at the option exercise date.

The mandatory holding requirement will cease to apply three years after the award or at the end of the corporate officer's term of office.

Given the restrictive holding requirement set, it was not considered appropriate to require the executive corporate officers to purchase a specific quantity of shares in the Company when their performance shares become available, as recommended by the AFEP-MEDEF Corporate Governance Code.

The executive corporate officers are required to hold their shares in registered form, whether they are subject to the holding requirement or not.

The laws and the Group's internal Code of Conduct aimed at preventing insider trading forbids any sale of the Company's shares for a period of 60 calendar days preceding the date of publication of the Company's annual and interim financial statements (or 21 calendar days preceding the publication of quarterly information). This requirement to refrain from trading in the Company's shares expires one day after the clear publication of privileged information (*e.g.*, in an official press release). During authorised trading periods, the Legal Department should be consulted in the event of any doubt about a possible transaction. In accordance with the AFEP-MEDEF Corporate Governance Code, executive corporate officers may not exercise the stock options allocated to them during these closed periods, even when the exercise of options is not followed by a sale of shares.

The directors' performance share grant plans, like all of those implemented within the Company, expressly state that it is prohibited to corporate officers to perform financial transactions that would have the effect of hedging the risk inherent to these shares. The ban applies for the whole vesting period and, if relevant, any lock-up period.

In 2020, no stock options or performance shares will be granted to the Chairman and Chief Executive Officer. The Chief Operating Officer will benefit from a maximum total number of free share grants representing approximately 125% of his compensation on the grant date.

Supplementary pensions

Supplementary pensions for executives are the same as those for Company managers, *i.e.* a so-called "article 83" defined contribution plan.

Benefits-in-kind

Executive corporate officers are provided with a Company car.

The Chairman and Chief Executive Officer receives a Company car provided by the Institut Mérieux that is not re-billed to bioMérieux. This item is therefore excluded from the vote of the 2020 Annual General Meeting.

The Chief Operating Officer benefits from a Company car and other advantages linked to his expatriate status, such as housing, school fees for his children, a cost-of-living bonus, and an expatriation bonus.

Termination benefits

The Board of Directors may decide to allocate termination benefits according to market conditions and according to the rules of the AFEP-MEDEF Corporate Governance Code.

The Chairman and Chief Executive Officer and the Chief Operating Officer do not collect termination benefits.

4.3.2 Elements composing the total compensation and benefits of any kind paid during the 2019 financial year or allocated pursuant to this year to directors – *ex post* vote

The paragraph below describes all of the compensation paid or allocated to corporate officers by bioMérieux or one of its subsidiaries (the "Scope"), as well as that paid by the Institut Mérieux, the parent company of bioMérieux. Within the meaning of article L.225-37-3 of the French Commercial Code, only the compensation paid within the Scope is subject to the vote of shareholders. The other compensation is communicated for purposes of transparency.

During fiscal year 2019, the corporate officers were the directors and Alexandre Mérieux, Chairman and Chief Executive Officer.

The compensation described below concerns all directors, including those for whom the term of office has ended, and those who are newly appointed during the 2019 financial year..

4.3.2.1 General policy and vote by the Annual General Meeting - overall *ex post* vote

The total compensation for 2019 described below complies with the compensation policy adopted at the Annual General Meeting of May 23, 2019.

This policy contributes to the Company's performance in the long term by associating a significant portion of the executive corporate officer's variable compensation with priorities such as CSR, R&D, and the completion of major transformations or external growth.

The Annual General Meeting of May 23, 2019 decided on the policy for the compensation of the Chairman and Chief Executive Officer (Resolution No. 12) and approved it by 94.19%. The Company continues to pay particular attention to any comments from its shareholders, taking them into account where possible, with the aim of continuous development.

In particular, the Company has provided more details on the description of the performance criteria for the variable compensation of the Chairman and Chief Executive Officer.

4.3.2.1.1 Equity ratios

Pursuant to Article L.225-37-3 of the French Commercial Code (*Code de Commerce*), information is presented below on the equity ratios between the level of compensation of executive corporate officers and the average and median compensation of the Company's employees in France.

These ratios should be compared with the Group's performance. bioMérieux experienced, during the period 2015-2019, a significant growth in sales, from €1,965 million in 2015 to €2,675 million in 2019. The Group's contributive operating income before non-recurring items experienced continued growth, increasing from €260 million in 2015 to €389 million in 2019.

Methodology for calculation of the ratios

The methodology that the Company applied is based on the AFEP guidelines published in December 2019.

The ratios are calculated by taking into account the following:

- scope of the French legal entity bioMérieux SA, excluding compensation and benefits paid by the Institut Mérieux, if applicable;
- components of fixed and variable compensation (MBO) paid during the year under review;
- performance shares recognised at IFRS value in the year they are granted;
- other elements of compensation for executive corporate officers paid during the year under review, such as exceptional compensation and compensation allocated to directors;
- other compensation for employees, such as discretionary profit-sharing, additional discretionary profit-sharing and benefits-in-kind;
- all employees of bioMérieux on permanent, fixed-term, PhD, and CIFRE fixed-term contracts present over two financial years; excluding alternates, trainees, temporary workers, and expatriates.

CHANGE IN THE EQUITY RATIO BETWEEN THE LEVEL OF COMPENSATION OF EXECUTIVE CORPORATE OFFICERS AND THE AVERAGE AND MEDIAN COMPENSATION OF EMPLOYEES IN FRANCE, PAID BY THE COMPANY

	Equity ratio	2015	2016	2017	2018	2019
Alexandre Mérieux[(a)]	Individual Compensation/Average compensation of other employees	7	20	20	19	23
	Individual compensation/Median compensation of other employees	9	25	25	24	29
Jean-Luc Bélingard[(b)]	Individual compensation/Average compensation of other employees	39	116	70	/	/
	Individual compensation/Median compensation of other employees	49	151	88	/	/

(a) in his capacity as Chief Operating Officer until December 2017, then in his capacity as Chairman and Chief Executive Officer.
(b) in his capacity as Chairman and Chief Executive Officer until December 2017.

ANNUAL CHANGE IN COMPENSATION, PERFORMANCE OF THE COMPANY, AVERAGE COMPENSATION OF EMPLOYEES, AND EQUITY RATIOS

	2015-2016	2016-2017	2017-2018	2018-2019
Compensation of Mr Alexandre Mérieux[(a)]	188%	2%	0%	27%
Compensation of Jean-Luc Bélingard[(b)]	217%	-39%	/	/
Average employee compensation	7%	1%	4%	5%
Performance of the Company (ROCC)	14.5%	12.4%	7.8%	6.9%
Average ratio relative to Alexandre Mérieux[(a)]	168%	1%	-4%	17%
Average ratio relative to Jean-Luc Bélingard[(b)]	195%	-40%	/	/
Median ratio relative to Alexandre Mérieux[(a)]	177%	-2%	-4%	21%
Median ratio relative to Jean-Luc Bélingard[(b)]	205%	-42%	/	/

(a) in his capacity as Chief Operating Officer until December 2017, then in his capacity as Chairman and Chief Executive Officer.
(b) in his capacity as Chairman and Chief Executive Officer until December 2017.

4.3.2.1.2 Components of the compensation of directors for the 2019 financial year

Upon recommendation from the Human Resources, Appointment and Compensation Committee, the rules on the distribution of compensation allocated to directors, fixed by the Board of Directors on December 15, 2017, were the following

In euros	Annual fixed amount[a]	Variable amount *(per meeting and per director)*
Board of Directors	5,000	5,000
Audit Committee	2,000	4,000
Human Resources, Appointment and Compensation Committee	2,000	3,000
Strategy Committee	2,000	3,000

(a) Calculated pro rata to the number of months in office of the directors.

SUMMARY TABLE OF COMPENSATION ASSIGNED TO DIRECTORS

Board members	Directors' fees paid in 2019 (in euros)	Directors' fees paid in 2018 *(in euros)*
Alexandre Mérieux	25,000	25,000
Philippe Archinard	51,000	55,000
Jean-Luc Belingard	44,000	41,000
Harold Boël	51,000	55,000
Philippe Gillet[a]	15,917	30,000
Marie-Hélène Habert-Dassault	36,000	36,000
Marie-Paule Kieny	33,000	30,000
Agnès Lemarchand	42,000	46,000
Fanny Letier	36,000	36,000
Michele Palladino[a]	15,917	30,000
Frédéric Besème[b]	25,000	13,123
TOTAL	**374,833**	**397,123**

(a) Mr Philippe Gillet and Mr Michele Palladino have not been directors of the Company since May 2019.
(b) Mr Frédéric Besème has been a director since May 17, 2018, as a director representing employees.

OTHER COMPENSATION RECEIVED BY NON-EXECUTIVE CORPORATE OFFICERS (TABLE 3)

Jean-Luc Bélingard - director

Jean-Luc Bélingard is a director and Vice-Chairman of Institut Mérieux. The portion paid by Institut Mérieux is re-billed in part to bioMérieux within the scope of the service agreement between the two companies, because of its contribution to strengthening the role of medical diagnostics in France and abroad. Jean-Luc Bélingard is not an employee of bioMérieux, and the re-billing does not contravene the rules against having an employment contract and holding corporate office. The re-billed services are not related to the corporate office of Jean-Luc Bélingard within bioMérieux.

In euros	**Amounts paid for the 2019 financial year**	Amounts paid for the 2018 financial year
Compensation allocated pursuant to appointment as director[(a)]	44,000	41,000
Other compensation[(b)]	131,440	132,848
TOTAL	**175,440**	**173,848**

(a) As a director of bioMérieux. No compensation is paid to Jean-Luc Bélingard for his directorship within the Institut Mérieux.
(b) Compensation paid: in 2019, by the Institut Mérieux, €120,000 in fixed compensation, €9,072 in benefits-in-kind, and €2,368 under Article 83.

It should also be noted that Jean-Luc Bélingard received performance shares from the Company, which were delivered to him during 2019.

Plan date	Number of shares granted during the year	Value of shares[(a)]	Acquisition date	Availability date	Performance criteria[(c)]
May 26, 2016	60,000[(b)]	€2,394,000	May 26, 2019	Termination of the term of office of Jean-Luc Bélingard as executive corporate officer	Yes

(a) At the share allocation date (May 26, 2016), according to IFRS 2 accounting method.
(b) Quantity updated from the 2016 Registration Document following the stock split that took place on September 20, 2017.
(c) Presence conditions and performance criteria. Performance criteria incorporate (i) 50% qualitative criteria, taking into account the integration of BioFire, and (ii) 50% quantitative criteria, relating to the improvement of the Group's contributive operating income before non-recurring items in 2016 and, as of 2017, free cash flow (FCF). If the 2016 contributive operating income before non-recurring items, on a like-for-like basis, is greater than or equal to the 2015 contributive operating income before non-recurring items, one third of the quantitative criteria will be validated; if the 2017 FCF, on a like-for-like basis, is higher than the 2016 FCF, one third of the quantitative criteria will be validated; if 2018 FCF, on a like-for-like basis, is higher than 2017 FCF, one third of the quantitative criteria will be validated. Certain qualitative performance criteria are kept confidential for strategic reasons.

The Board of Directors meeting on February 26, 2019 approved the presence and performance conditions set out above. The shares were vested and delivered to Jean-Luc Bélingard on May 26, 2019.

Philippe Archinard – director

Philippe Archinard is the director of the Immunotherapy Division of the Institut Mérieux. His compensation for his functions within the Institut Mérieux is partly re-billed to bioMérieux, under the service provision agreement between the two companies. Philippe Archinard is not an employee of bioMérieux, and the re-billing does not contravene the rules on having employment contract and holding corporate office. The re-billed services are not related to the corporate mandate of Philippe Archinard within bioMérieux. A portion of Philippe Archinard's compensation is paid directly by Transgene.

His gross variable compensation is based on his individual performance assessed against objectives set at the beginning of the year and is paid in the following year.

In euros	**Amounts paid for the 2019 financial year**	Amounts paid for the 2018 financial year
Compensation allocated pursuant to appointment as director[(a)]	51,000	55,000
Other compensation[(b)]	284,127	281,860
TOTAL	**335,127**	**336,860**

(a) As a director of bioMérieux. No compensation is paid to Philippe Archinard for his directorship within Institut Mérieux.
(b) Compensation paid by Institut Mérieux:
- *in 2019, €137,309 in fixed compensation, €135,000, in variable compensation, €8,856 in benefits-in-kind, and €2,961 under Article 83;*
- *in 2018, €135,074 in fixed compensation, €135,000, in variable compensation, €8,856 in benefits-in-kind, and €2,929 under Article 83.*

Frédéric Besème - director representing employees

Frédéric Besème is CSR Manager within bioMérieux.

In euros	Amounts paid for the 2019 financial year	Amounts paid for the 2018 financial year
Compensation allocated pursuant to appointment as director[(a)]	25,000	13,123
Other compensation[(b)]	89,506	87,477
TOTAL	**114,506**	**100,600**

(a) As a director of bioMérieux.
(b) Compensation paid by bioMérieux in respect of his employment contract:
- *in 2019, €77,714 in fixed compensation, €10,744 in variable compensation, and €1,048 under Article 83;*
- *in 2018, €76,545 in fixed compensation, €9,878 in variable compensation and €1,054 for Article 83.*

Other directors

In 2019, the Company's other directors did not receive any compensation or benefits-in-kind from the Company, companies controlled within the meaning of Article L. 233-16 of the French Commercial Code, or the company that controls the Company in which the director's term of office is served, within the meaning of said Article, except for the above-mentioned directors' fees.

4.3.2.2 *Ex post* vote on the compensation for the Chairman and Chief Executive Officer in 2019

SUMMARY TABLE OF COMPENSATION ASSIGNED TO EACH EXECUTIVE CORPORATE OFFICER

Alexandre Mérieux in his role as Chairman and Chief Executive Officer

Components of compensation due or granted in respect of the financial year ended	Amounts or accounting value subject to vote	Presentation
Fixed compensation	**€538,020**	The total fixed compensation for 2019 was paid by Institut Mérieux €88,020 (not subsequently re-billed to bioMérieux) and bioMérieux (€450,000). This compensation was the re-assessed as at June 1, 2018.
Annual variable compensation (payment of which is subject to shareholder approval)	**€495,000** (110% of fixed compensation)	The Chairman and Chief Executive Officer's variable compensation is reviewed annually by the Board of Directors, without him being present, on the basis of a recommendation from the Human Resources, Appointment and Compensation Committee, and based on his performance. The pre-established **quantitative targets** represent 60% of his variable compensation and are based on the Company's financial performance summarised in the 2019 MBO matrix (see section 4.3.2.1.2 - Annual variable compensation). In 2019, the MBO matrix took into account the two targets announced by the Company, which are: • organic growth in sales of between 7% and 8.5% at constant exchange rates and scope of consolidation; and • contributive operating income, based on contributive operating income before non-recurring items, of between €385 and €400 million at current exchange rates. The Human Resources, Appointments and Compensation Committee validated the result of the MBO matrix with regard to the Company's performance, and set a multiplying coefficient of 100% applicable to all eligible employees. Thus, the Board of Directors validated the achievement of the quantitative targets at 100%. The predefined **qualitative targets** are based on the individual performance of Alexandre Mérieux within the Company. They represent a 40% share of his annual variable compensation. In particular, three criteria had been adopted by the Board of Directors in 2019: implementation of the Company's roadmap for 60% (acquisitions, transformation projects), progress of R&D projects for 25%, and improvement of CSR results for 15%. The Board of Directors meeting held in February 2020, on the recommendation of the Human Resources Committee, considered that these targets were 120% met, due in particular to: • **Execution of the roadmap**. This target was achieved at 130%, in particular as a result of (i) the acquisition of Invisible Sentinel and the acquisition of a majority stake in Hybiome, (ii) the deployment of the Company's ERP in BioFire, (iii) the implementation of the Digital Transformation, and (iv) the new organization of the Global Commercial Performance and Global Customer Service Departments. • **Progress on R&D projects**. This target was achieved at 120% (inclusion of NEPHROCHECK® TIMP-2 and IGFBP7 test biomarkers in the recommendations for perioperative care in cardiac surgery, accreditation by the Chinese authorities for resin-based blood culture vials and the BACT/ALERT® VIRTUO® system, and four new ETEST® tests to strengthen the fight against antimicrobial resistance). • **Improvement in CSR results.** This target was achieved at 120% because (i) the Gender Equality Index reached 88% instead of the minimum 75% required by law, and (ii) in terms of the environment, the reduction in energy consumption continued (total energy consumption in relation to sales of 84 MWh per million euros in 2019, vs 89 MWh per million euros in 2018), and greenhouse gas emissions generated by freight transport were also reduced (reduction of these emissions included in Scope 3, in particular thanks to the increase in the share of maritime transport in total freight, which rose from 15% in 2018 to 34% in 2019). All variable compensation for a given year is paid during the following year by bioMérieux. The amount of variable compensation awarded to Alexandre Mérieux for 2019 in respect of his duties as Chairman and Chief Executive Officer was set at €495,000 (representing 110% of his fixed compensation at December 31, 2019 in respect of his duties within bioMérieux), calculated based on an achievement rate of 120% and application of the Company's 100% coefficient for 2019.
Deferred variable compensation	NA	Alexandre Mérieux does not receive any deferred variable compensation.
Multi-year variable compensation	NA	Alexandre Mérieux does not receive any multi-year variable compensation.
Extraordinary compensation	NA	Alexandre Mérieux does not receive any extraordinary compensation.
Stock options, performance shares and other long-term compensation	NA	No stock options were granted during the 2019 financial year. Alexandre Mérieux does not receive any performance shares.
Compensation allocated pursuant to appointment as director	**€25,000**	Alexandre Mérieux receives directors' fees in accordance with the terms and conditions set by the Board of Directors.
Valuation of benefits	**€7,692**	Alexandre Mérieux has the use of a Company car provided by Institut Mérieux.
Termination benefits	NA	Alexandre Mérieux does not receive any termination benefits.
Benefits in connection with a non-compete clause	NA	Alexandre Mérieux does not receive any benefits in connection with a non-compete clause.
Supplementary pension plan	**€10,941**	Alexandre Mérieux is eligible for a supplementary pension plan with the following characteristics: defined contribution pension in accordance with Article 83, to which the Company contributes up to salary bracket C on behalf of bioMérieux (€10,190) and the Institut Mérieux (€752).

4.3.2.3 Commitments made in favour of corporate officers

In 2019, the Company made no other commitments whatsoever to its corporate officers regarding compensation, indemnities or benefits due or likely to be due in connection with their appointment, termination or change of office or subsequent thereto.

4.3.3 Other information on the compensation of executive corporate officers

The information below corresponds to the information on compensation of executive corporate officers that appears in the AMF recommendation that had not already been provided above.

SUMMARY OF COMPENSATION, STOCK OPTIONS AND FREE SHARES GRANTED (TABLE 1)

Alexandre Mérieux, Chairman and Chief Executive Officer

In euros	2019	2018
Compensation allocated for the financial year*	1,065,712	1,292,894
Value of stock options granted during the year	0	0
Value of performance shares granted during the year	0	0
Value of the other long-term compensation plans	0	0
TOTAL	**1,065,712**	**1,292,894**

* *Compensation due for the financial year in 2019.*

SUMMARY OF COMPENSATION, STOCK OPTIONS AND FREE SHARES GRANTED (TABLE 2)

Mr Alexandre Mérieux, Chairman and Chief Executive Officer of bioMérieux

	Amounts paid for the 2019 financial year		Amounts paid for 2018	
In euros	**Allocated**	**Paid[a]**	Allocated	Paid[a]
Fixed compensation (bioMérieux)	450,000	490,833	420,833	380,000[c]
Fixed compensation (Institut Mérieux)	88,020	88,020	83,369	83,369
TOTAL FIXED COMPENSATION	**538,020**	**578,853**	**504,202**	**463,369**
Variable compensation (bioMérieux)[b]	495,000	756 000	756,000	592,800
Variable compensation (Institut Mérieux)	0	0	0	0
Extraordinary compensation	0	0	0	0
TOTAL VARIABLE COMPENSATION	**495,000**	**756,000**	**756,000**	**592,800**
Target variable compensation as a % of total compensation (bioMérieux portion only)[b]	100%	100%	100%	100%
Actual variable compensation as a %[b]	110%	154%	168%	156%
Maximum variable compensation[b]	168%	168%	168%	168%
Compensation allocated pursuant to appointment as director	25,000	25,000	25,000	25,000
Benefits-in-kind[c]	7,692	7,692	7,692	7,692
TOTAL	**1,065,712**	**1,367,545**	**1,292,894**	**1,088,861**
Value of stock options granted during the year	N/A	N/A	N/A	N/A
Value of performance shares granted during the year	N/A	N/A	N/A	N/A

(a) Details per relevant financial year
Variable compensation is calculated based on the reference fixed compensation at December 31, i.e. €450,000. All percentages are calculated on this basis when they concern amounts payable for the financial year. Maximum variable compensation for 2018 takes into account the 2019 multiplier coefficient of 100% applicable to all employees.
(b) Company car provided by Institut Mérieux.
(c) The gross annual compensation of €450,000 approved at the Annual General Meeting of May 26, 2018 and effective as of June 1, 2018 was not implemented for 2018. It was subjected to a retroactive over the 2019 financial year.

SUMMARY OF THE INFORMATION PRESENTED ABOVE (TABLE 11)

	Employment contract[a]		Supplementary pension plan[b]		Indemnities or benefits due or likely to be due as a result of a termination or change of office		Indemnities relating to a non-compete clause	
Executive corporate officers	Yes	No	Yes	No	Yes	No	Yes	No
Mr Alexandre Mérieux Chairman and Chief Executive Officer First appointment as director: 04/16/2004 Term expires: at the end of the 2022 AM		✓	✓			✓		✓

(a) Mr Alexandre Mérieux receives compensation paid by Institut Mérieux which is not re-billed to bioMérieux. He does not have an employment contract with bioMérieux for his compensation as executive corporate officer.
(b) Mr Alexandre Mérieux benefits from a supplementary pension plan as part of his compensation paid by Institut Mérieux. This compensation has the following characteristics: defined contributions pension as per Article 83 to which the Company contributes up to salary bracket C. Mr Alexandre Mérieux also benefits from a supplementary pension plan as part of his compensation paid by bioMérieux.

OTHER TABLES REFERRED TO IN AMF RECOMMENDATION NO. 2009-16 THAT ARE NOT INCLUDED IN THIS DOCUMENT

The other tables in AMF Recommendation No. 2009-16 are not listed in the table below.

Table 4 (Subscription or purchase options awarded during the year to each executive corporate officer by the issuer and by any Group company), table 5 (Subscription or purchase options exercised during the year by each executive corporate officer), table 6 (Performance shares awarded during the financial year to each executive corporate officer by the issuer or any Group company) and table 7 (Performance shares that have become available during the year for each executive corporate officer) are not required as no stock options have been granted or exercised by the executive corporate officers and no performance shares became available during the year.

Table 8 (Past awards of subscription or purchase options) and table 9 (Subscription or purchase options granted to the top 10 grantees other than corporate officers and options exercised by them) are not required as no stock options or performance shares were awarded by the Company to corporate officers/executive corporate officers.

Table 10 (Past free share grants) is shown in section 7.4.3.3.

4.3.4 Loans and securities granted to corporate officers

N/A.

4.3.5 Amounts provisioned or recognised by the Company or its subsidiaries for the payment of pensions, retirement or other benefits

N/A.

4.4 Internal control and risk management procedures regarding the preparation and processing of accounting and financial information

Internal control is a process implemented by the Board of Directors, senior management and employees designed to provide reasonable assurance that the following objectives are achieved:

- consistency of operations with General Management's directives;
- reliability of financial information;
- compliance with applicable laws and regulations;
- management and control of operational and financial risks.

However, internal control does not provide absolute assurance that these objectives will be achieved.

The Group's internal control system is based on:

- the "Internal Control – Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO);
- the AMF Reference Framework: "Internal Control and Risk Management Systems";
- recommendations published by the AMF.

The internal control system applies to all of the companies included in the Group's scope of consolidation.

In particular, internal accounting and financial control applies to all Group processes relating to the preparation and reporting of financial and accounting information and ensures that such information is reliable and complies with statutory and regulatory requirements.

General Management and the Board of Directors, through the Audit Committee, help monitor and oversee the internal control system. For this purpose, General Management relies on audits carried out by the Internal Audit, Risk and Compliance Department, under the responsibility of the Institut Mérieux, as described below.

Under the authority of the Corporate Vice-President, Finance, Purchasing and Information Systems, who is a member of the Executive Committee, the Finance Department oversees Group-level functions and the administrative and financial functions of each Group entity.

4.4.1 Parties involved

Accounting/Finance

bioMérieux has compiled a manual of accounting and consolidation principles for use by the Group's entities. This manual lists the principal items in the consolidated financial statements and specifies their content. It also defines the valuation methods to be used.

For bioMérieux SA and its main subsidiaries, the accounting procedures required by the application of these principles and local regulations when recognising ordinary and recurring transactions are incorporated in the accounting software, in order to ensure that data are processed securely and automatically.

Management control

The annual budget is prepared by the Executive Committee and validated by the Board of Directors. This budget enables the Group's resources to be allocated to its various projects and activities.

bioMérieux and its subsidiaries all have a management control unit, the duties of which include verifying compliance with the budget. In addition, each function and each region has a dedicated management control unit in charge of drawing up and monitoring the annual budget.

Consolidation

The consolidation process is centralised within the Group. The consolidation team checks that the financial statements of the subsidiaries are prepared in accordance with the Group's accounting principles, as set forth in procedure manuals provided to all Group entities. It has a consolidation software package which includes all the financial statements of the subsidiaries and consolidates them in accordance with the Group's chart of accounts.

The consolidation process includes an in-depth analysis of the financial statements. A quarterly analysis report is prepared and provided to the General Management.

Cash Management and Finance

In light of the large number of countries in which bioMérieux operates, this function also plays a key role in the accounting and financial internal control system. As such, it has notably set up a system of cash pooling, for which bioMérieux SA is the leader, and implements a prudent management of temporary cash surpluses, which are invested in compliance with an investment procedure validated by the Audit Committee.

bioMérieux SA is responsible for managing exchange rate risks in accordance with the Group's policy set out in section 2.3.3. This involves, in a context of the billing of sales in customers' local currency, the setting up of currency hedges on the Group's net exposure for currencies that allow such hedging at a reasonable cost, and a monthly adjustment in hedges depending on transactions. This exchange rate policy aims to protect the exchange rate levels used in the budget.

Tax

bioMérieux has a Tax Department that draws on a network of internal contacts and on external consultants, depending on the issues. This department coordinates, raises awareness and supports the financial departments of each Group subsidiary so as to ensure they meet the level of compliance required by the Group's policy and standards (see § 3.4.4.5).

Control of subsidiaries

Operational control of subsidiaries is achieved through:

- regional Finance Departments which verify the pertinence of the human, financial and business resources available locally with the assistance of support functions;
- the presence of members of certain operational and/or finance functions on the Boards or committees (Board of Directors or its equivalent) overseeing the activities of subsidiaries;
- the existence of financial and administrative support, particularly through shared service centres (see section 4.4.2);
- a monthly review of their reporting. The subsidiaries' main performance indicators, pertaining primarily to sales, contributive operating income and financial structure, are compared to the same indicators of the previous year and to the budget.

Investor Relations Department

The Company's financial publications (annual and interim reports, press releases, etc.) are drafted on the basis of specific discussions and are submitted to the Group's General Management and Finance, Purchasing and Information Systems Departments for review. Press releases relating to results and sales are reviewed by the Audit Committee.

4.4.2 Process

Control activities are put in place by the financial and operational departments based on Group procedures.

The Group has various written procedures (project management, investment management, processing of financial information, etc.), in French and in English which are accessible *via* its intranet and/or specific servers.

The Risk Department oversees the updating of the Company's risk mapping, and regular risk identification, evaluation, and monitoring (see section 2), in coordination with the Internal Audit, Risk and Compliance Department of the Institut Mérieux.

bioMérieux's internal control environment is based on the elements described below:

Internal control manual

The Finance Department has compiled an internal control manual which sets out the main rules and controls with which all Group companies must comply. Training sessions for the Group's local finance teams were organised to accompany the distribution of this manual. After an initial update to strengthen controls for the fight against corruption, a reworking of the Internal Control Manual was started.

This manual includes information on the rules governing the separation of duties, rules relating to commercial management and the management of spending commitments, banking flows and payments, payroll verification arrangements, the principles governing internal control, financial reporting and the approval of the financial statements.

Internal control in the regions and subsidiaries

The heads of each region and subsidiary and Chief Financial Officers are responsible for ensuring the effectiveness of internal control procedures within their organisation and undertake to implement a system that ensures operating efficiency, reliability of financial and accounting information and optimal use of resources, while safeguarding assets and combating fraud.

In order to combat the increase in attempted external fraud, bioMérieux has set up a process for centralising information about these attempts, and for managing corrective and preventive measures. In particular, the Company regularly informs employees about commonly used fraud techniques.

Introduction of Shared service centres in Poland and Argentina

Shared service centres in Poland and in Argentina. As at end-2019, these two centres help to manage the accounting and sales administration activities of 24 subsidiaries. They also help to harmonise internal processes and, through an improved separation of duties, to strengthen internal control in smaller Group companies.

Launch of an integrated management software application

The Company has an integrated management software application in 37 of its subsidiaries. It aims to facilitate the definition of consistent procedures and the implementation of a more effective internal control system.

Introduction of a financial training course

The Finance Department trains all new finance managers or directors within the subsidiaries in procedures and tools (several sessions are held each year) and teaches financial skills to certain non-financial employees of the Company.

4.4.3 Implementation and monitoring of the internal control and risk management system

Implementation of internal control and risk management, under the responsibility of the General Management and the Board of Directors, is based on the audit work as described below.

Internal Audit and Risk Departments

The Group Audit Department of Institut Mérieux carries out Internal Audit activities in close collaboration with the Management of Institut Mérieux and in accordance with identified risks. The teams dedicated to internal audit ensure that the procedures defined by the Group are correctly applied in the subsidiaries and corporate departments. They conduct audits performed by thirty or so employees with different functions and skills.

The conclusions are shared with the Risk teams, thereby ensuring the continuous improvement of operational processes *via* a risk analysis system and advisory services.

A charter defines the role of internal audit, its duties, the scope of its authority and powers and the methodology used, which complies with professional standards.

From the basis of a central risk analysis, the Internal Audit and Risk teams establish an annual audit plan, updated regularly, as well as a summary and conclusions regarding the work carried out, which are regularly presented to the Audit Committee and the Executive Committee.

External audits

The Company is subject to various types of external audits as described below. The Statutory Auditors, Ernst & Young et Autres and Grant Thornton and its network, audit the consolidated financial statements and the parent company financial statements of bioMérieux SA, as well as the individual financial statements of the vast majority of Group companies. For the other subsidiaries, the Statutory Auditors rely on the work carried out by these companies' external auditors.

In addition to the reports required by law, the audits by the Statutory Auditors are summarised in a report that covers material audit findings and the manner in which they have been resolved, as well as recommendations regarding the Group's internal control procedures. These recommendations are reviewed with the management of the subsidiaries concerned and their implementation is monitored.

The analysis and evaluation work of the internal control within the Company are carried out in close consultation with the Statutory Auditors. They are informed of the results of the work of the Internal Audit, and Risk Departments.

5

COMMENTS ON THE FINANCIAL YEAR

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5.1 Operating and financial review

5.1.1 Revenue

At December 31, 2019, bioMérieux's revenue reached €2,675 million against €2,421 million on December 31, 2018, representing growth at constant exchange rates and consolidation scope of 7.2%, in line with annual objectives set by the Company. Published growth in euros stood at 10.5%, buoyed by a positive currency impact for about €53 million, essentially related to the strengthening of the US dollar compared to the previous fiscal year. The acquisitions of Invisible Sentinel and Hybiome contributed to growth at about 110 basis points.

Analysis of sales *(in millions of euros)*

SALES - TWELVE MONTHS ENDED DECEMBER 31, 2018	**2,421**	
Currency effect	+53	+2.2%
Changes in scope of consolidation [(a)]	+27	+1.1%
Organic growth (at constant exchange rates and scope of consolidation)	+174	+7.2%
SALES - TWELVE MONTHS ENDED DECEMBER 31, 2019	**2,675**	**+10.5%**

(a) Acquisitions of Astute Medical (April 4, 2018), Hybiome (November 9, 2018), and Invisible Sentinel (February 7, 2019)

Year-on-year sales trends may be summarised **by geographic area** as follows:

Sales by region *(in millions of euros)*	**12 months 2019**	12 months 2018	% Change as reported	**% Change Like-for-like**
Americas	1,199.9	1,070.2	+12.1%	+7.7%
North America	1,043.3	929.6	+12.2%	+6.2%
Latin America	156.5	140.6	+11.3%	+17.7%
Europe [(a)]	961.3	921.6	+4.3%	+4.4%
Asia Pacific	513.7	429.5	+19.6%	+12.1%
TOTAL SALES	**2,674.8**	**2,421.3**	**+10.5%**	**+7.2%**

(a) Including the Middle East and Africa

- Revenue in the Americas (45% of the Group's consolidated total) reached €1,200 million, an increase of 7.7% year-on-year.
  - In North America (39% of the Group's total revenue), growth was essentially driven by the momentum of the BIOFIRE® FILMARRAY® molecular biology product line. In immunoassays, pressure on procalcitonine dosing tests prices continued to hamper sales growth in the zone, but in a decreasing manner over the fiscal year.
  - In Latin America, sales growth was marked by a firm increase in sales of reagents of the VITEK® and BIOFIRE® FILMARRAY® product lines. Growth was particularly vigorous in Brazil, due to a favourable base effect, and in Argentina, thanks to an increase in prices in compensation for the devaluation of the local currency.
- In the Europe – Middle East – Africa region (36% of the consolidated total) sales stood at €961 million, up by 4.4% compared to the previous year.
  - In Europe (30% of the total revenue of the Group), activity was particularly dynamic in Spain, Germany and Benelux. Progress in the region was also supported by industrial microbiology and clinical molecular biology.
  - In the Russia – Middle East – Africa region, sales growth was particularly vigorous in Russia, Turkey and the Middle East.
- In the Asia-Pacific region (19% of the Group's total revenue), sales reached €514 million, an annual increase of more than 12%, thanks to the good performance of China, India and the countries of Southeast Asia. This favourable momentum was driven by growth in the microbiology and clinical molecular biology product lines.

Year-on-year sales trends may be summarised **by application**, as follows:

Sales by application *(in millions of euros)*	12 months 2019	12 months 2018	% Change as reported	% Change Like-for-like
Clinical Applications	**2,208.3**	**1,987.8**	**+11.1%**	**+7.7%**
Microbiology	1,026.3	964.9	+6.4%	+5.3%
Immunoassays	474.5	441.8	+7.4%	+0.4%
Molecular biology	671.5	549.0	+22.3%	+17.9%
Other lines [(a)]	35.9	32.1	+12.0%	+8.3%
Industrial Applications [(b)]	**466.7**	**433.5**	**+7.7%**	**+4.8%**
TOTAL SALES	**2,674.8**	**2,421.3**	**+10.5%**	**+7.2%**

(a) including Applied Maths, BioFire Defense and R&D-related revenue on clinical applications
(b) including R&D-related revenue on industrial applications

- In clinical applications, which represent about 83% of the Group's total cumulative sales, revenue stood at €2,208 million, up by nearly 8% year-on-year.
  - In microbiology, growth was driven by the good performance of the VITEK® automated identification and antibiotic susceptibility testing product line, and the BACT/ALERT® VIRTUO® blood culture systems, in reagents as well as in equipment sales.
  - Published revenue growth in immunoassays reached more than 7% between 2018 and 2019, benefiting from the consolidation of sales of Hybiome in China. On the VIDAS® product line, an improvement of the trend was gradually confirmed over the year, thanks to the slowdown in price decreases in the United States and more favourable sales momentum in the Middle East and Africa in the second half-year. These elements more than compensated for the drop in volumes seen in Europe.
  - In molecular biology, sales of BIOFIRE® FILMARRAY® grew by about 20%, driven by all of the panels, but affected by a drop in sales of instruments in favour of placements, while the development of the installed base remained sound, with about 2,200 additional instruments, bringing the total to 10,400 units. International deployment was particularly robust during the previous year, and sales outside the United States amounted to about 19% of total sales of the product line. At the end of the year, annual sales of the BIOFIRE® FILMARRAY® product line exceeded €600 million.
- Revenues from industrial applications, which represents 17% of the Group's sales, stood at €467 million, up by nearly 5% compared to the previous year, driven by the good performance of the microbiology product lines, notably for customers in the pharmaceutical sector, and by the GENE-UP® molecular biology line with customers in the food industry.

5.1.2 Financial position

5.1.2.1 Consolidated profit & loss statement

Contributive operating income before non-recurring items

At the end of 2019, the contributive operating income before non-recurring items stood at €389 million, up by 6.9% from one year to the next, representing contributive operating income of 14.5%. This result includes approximately €3 million in positive exchange-rate impact and a €12 million negative scope effect related to the acquisitions of Hybiome, Invisible Sentinel and Astute Medical. Thus, growth in the contributive operating income before non-recurring items on a like-for-like basis at constant exchange rates reached 9%, in spite of the unfavourable effect of the expense recognised for variable compensation plans in the United States indexed on the price of the bioMérieux share (*phantom share plans*), which stood at €36 million, against income of €7 million in 2018.

- At the end of December 2019, gross profit reached €1,467 million, representing 54.8% of revenues, up compared to the 53.8% seen at the end of December 2018. The increase in gross profit rates is mainly due to the improvement in the product mix, operational optimisation actions and the more frequent use of sea rather than air transport.
- Selling and marketing expenses and general and administrative expenses stood at €750 million, representing 28.0% of revenues, against 26.6% the previous year. The increase seen in 2019 is mainly related to the enhancement of commercial efforts on the BIOFIRE® FILMARRAY® product line and provisions for management of the network of distributors.
- R&D expenses stood at €374 million, 14.0% of revenues, compared with €327 million, 13.5% of revenue in 2018. This increase by about 9% on a like-for-like basis at constant exchange rates reflects the acceleration of developments in microbiology and continued intensification in activities related to the BIOFIRE® FILMARRAY® product line.
- Other operating income reached about €46 million over the year, compared with €31 million in 2018, firstly due to the increase in R&D activity and therefore the related tax credit, and secondly to the increase in rent received from third parties.

Operating income

The depreciation/amortisation charged against assets valued at the date of acquisition of BioFire amounted to €18 million in 2019, stable year-on-year. As a result, in 2019, the Group's operating income was €371 million, up 7.1% on the €346 million reported in 2018.

Net income of consolidated companies

Net financial expense stood at €23 million in 2019, down compared to 2018, when it stood at €26 million. The cost of net financial debt was €21 million in 2019, stable from one year to the next, and other financial income and expenses stood at €2.5 million, compared to €4.5 million in 2018.

On December 31, 2019, the Group's effective tax rate reached 22.4%, compared to 20.3% in 2018, which benefited from a tax deduction related to an exceptional contribution to the US payment fund and the favourable resolution of a tax dispute. In 2019, bioMérieux benefited from the positive impact of new tax provisions on intellectual property in the United States (FDII: *Foreign-Derived Intangible Income*).

In total, net income attributable to the parent company stood at €273 million in 2019, up by 6.2% compared to €257 million in 2018.

5.1.2.2 Cash flows

Free cash flow

The EBITDA reached €578 million in 2019, representing 21.6% of revenues, up by 6.8% compared to €541 million for 2018. The increase reflected growth in contributive operating income before non-recurring items and net additions to depreciation and amortisation of operating items and operating provisions.

Income tax paid amounted to €82 million, up on the €66 million paid in first-half 2018 which had benefited from the reimbursement of the dividend tax claim and the deduction of the one-off payment to the US pension fund.

During 2019, the working capital requirement increased by €69 million. The change was primarily a result of the following factors:

- inventories rose €71 million in the period, outpacing the growth in sales, following the replenishment of inventories of certain product lines and raw materials;
- trade receivables increased slightly, reflecting a slight increase in collection periods by two days compared to December 31, 2018;
- trade payables increased by €33 million in line with business growth;
- other working capital requirement items improved by €26 million as a result of an increase in accrued taxes and payroll liabilities, particularly the provision in relation to bonus plans in the United States that are indexed to the share price (*phantom share plans*) and payments associated with a development partnership.

As expected, disbursements related to capital expenditure amounted to about 10% of revenues, namely €273 million at the end of 2019, against €226 million during the previous financial year. The increase is mainly due to work aiming to improve the production capacity of BioFire in Salt Lake City.

In this context, free cash flow reached €150 million in 2019, against about €179 million in 2018.

Change in net debt

Purchases of non-current financial assets, net of disposals, amounted to €48 million in first-half 2019 and primarily reflected the acquisition of Invisible Sentinel Inc. and the increase in the Hybiome shareholding, partly offset by the sale of a non-controlling interest.

A total of €41 million was paid out in dividends, up slightly year-on-year.

As a result, consolidated net debt came to €317 million at December 31, 2019, versus €366 million at December 31, 2018, restated for the effect of the application of IFRS 16.

5.1.2.3 Human resources

At December 31, 2019, the Group's total headcount stood at about 12,000 (employees and full-time equivalent temporary employees), against 11,200 at the end of December 2018.

5.1.2.4 Operating highlights

Non-controlling interest taken in the capital of Specific Diagnostics

During the fourth quarter of 2019, bioMérieux signed a partnership with Specific Diagnostics (Mountain View, California, United States). Specific Diagnostics is an American microbiology company which concentrates on reducing the time necessary to diagnose infectious diseases. It has developed new technology enabling quick analysis of the sensitivity of bacteria to antibiotics through the detection of the volatile organic compounds that they emit during their growth. bioMérieux came together with other investors in a Specific Diagnostics series A round table. Following this transaction, bioMérieux holds about 8% of the shares of Specific Diagnostics.

Launch of *MyShare*, the world-wide employee share ownership plan

In November 2019, employees of bioMérieux were given the option to acquire existing shares in bioMérieux. The launch of this employee share ownership plan will more effectively involve employees in the successes of the Company. The share offer, authorised by the meeting of the Board of Directors of September 3, 2019, was made to all eligible employees residing in a country authorising this operation.

Accreditation, by the Chinese authorities, of the resin-based blood culture bottles and the BACT/ALERT® VIRTUO® system

bioMérieux announced in September 2019 that BACT/ALERT® VIRTUO®, its automated blood culture system, and FAN® Plus bottles had received the accreditation of the NMPA (*National Medical Products Administration*) to be marketed in China. The BACT/ALERT® VIRTUO® solution includes a fully automated blood culture system and FAN® Plus blood culture bottles using adsorbent polymeric bead technology. This solution enables clinical microbiology laboratories to detect pathogens faster and thus contribute to improved patient management.

Increase in bioMérieux's equity investment in Hybiome from 54% to 67%

On June 6, 2019, bioMérieux announced that it had increased its holding in Suzhou Hybiome Biomedical Engineering Co. Ltd. This announcement followed the earlier announcement of the acquisition of a majority stake in this company in November 2018. An additional 13% was acquired, increasing bioMérieux's shareholding in Hybiome to 67%.

NEPHROCHECK® biomarkers TIMP-2 and IGFBP7 included in guidelines for perioperative care in cardiac surgery

On 13 May 2019, bioMérieux announced that NEPHROCHECK® biomarkers (TIMP-2 and IGFBP7), which indicate kidney stress in advance of acute kidney injury (AKI), had been included in the "Guidelines for Perioperative Care in Cardiac Surgery". These guidelines were published by the ERAS® (*Enhanced Recovery After Surgery*) *Cardiac Society*, an international group of leading heart surgeons, anesthesiologists and critical care specialists.

Acquisition of Invisible Sentinel

On February 7th, 2019, bioMérieux announced that it had acquired Invisible Sentinel Inc. Based in Philadelphia (PA), the company develops, manufactures and markets innovative and user-friendly molecular diagnostic tools for the rapid, accurate and reliable detection of pathogens and spoilage organisms in food and beverages.

Four new ETEST® tests to strengthen the fight against antimicrobial resistance

In 2019, bioMérieux launched 4 new ETEST® in the United States which received 510(k) accreditation from the American *Food and Drug Administration* (FDA): ETEST® Meropenem Vaborbactam, ETEST® Imipenem Relebactam, ETEST® Eravacycline and ETEST® Telavancin. Introduced on the market at the same time as these new antibiotics, they provide efficient support for their use by guiding practitioners in choosing a customised treatment properly adapted to patients whose state of health is of concern and for whom the arrival of a new substance on the market could get them out of a therapeutic dead-end. In 2019, bioMérieux also put a new version of the ETEST® Piperacilline Tazobactam on all of its markets.

5.2 Capital resources

5.2.1 Capital

See the consolidated statement of changes in equity in section 6.1.1 and Note 14 in section 6.1.2

5.2.2 Sources and amounts of cash flow

Net debt amounted to €317 million at December 31, 2019, versus €267 million at December 31, 2018. The application of IFRS 16 during the financial year resulted in the increase of this debt by €97 million.

Further information relating to cash flow is presented in section 5.1.2.2.

The consolidated cash flow statement is presented in section 6.1.1.

5.2.3 Borrowing conditions and financing structure

The Company issued €300 million in seven-year bonds, which were placed with institutional investors in October 2013. It also has an undrawn €500 million syndicated line of credit expiring on January 26, 2024, which includes an option to extend the term for a further year. Lastly, in 2015, it signed a 12-year leasing agreement in the original amount of €45 million to finance the extension of its site at Marcy l'Etoile. In order to meet the general financing needs of bioMérieux SA and its subsidiaries, the Company can use a €500 million program for the issuance of short-term marketable securities (NEU CP).

The details and terms and conditions of these financing facilities are provided in Note 16 of section 6.1.2.

5.2.4 Restrictions on the use of capital

See Note 16.6 of section 6.1.2.

5.2.5 Expected financing sources

Current industrial capital expenditure is generally financed by the Company's equity (see the consolidated statement of cash flows in section 6.1.1).

5.3 Significant change in financial or trading position

To the best of the Company's knowledge, no significant change in its financial or trading position has occurred since the end of 2019, with the exception of the information described in section 5.5 of this URD.

5.4 Investments

5.4.1 Main capital expenditure - past

The year 2019 was shaped by the completion of several major projects:

- Salt Lake City (Utah, United States) site: launch of a construction project at a new site to increase production capacity of BIOFIRE® FILMARRAY® reagents;
- Craponne (France): the Industrial Unit's teams and the France subsidiary moved to new premises following the site restructuring project;
- Shanghai (China): move to a new campus;
- Suzhou (China): a plot of land was acquired to construct a new production building.

As a result, investment amounted to €273 million. In all, they represented 10% of revenue. As of December 31, 2018, capital expenditure totalled €222 million (including changes in debt on acquisition of fixed assets).

5.4.2 Main capital expenditure - current

In 2020, the Company anticipates an overall investment effort of around 10% of sales for the financial year.

The main projects include the ongoing roll-out of the Global ERP project, including its latest acquisitions, along with the launch of the Global CRM project.

- Salt Lake City (Utah, United States) site: continuation of projects to automate production of BIOFIRE® FILMARRAY® reagents in order to increase capacity;
- Salt Lake City (Utah, United States): a new site is being brought into service to increase the production capacity of BIOFIRE® FILMARRAY® reagents;
- St. Louis (Missouri, United States) site: continuation of plan to automate and increase capacity of production lines for VITEK® 2 cards.
- Craponne (France) site: restructuring of the site to improve and increase its hosting capacity.

Current capital expenditure is generally financed by the Company's equity (see the consolidated statement of cash flows in section 6.1.1).

5.4.3 Main capital expenditure - future

In addition to current projects, bioMérieux will continue to adapt and upgrade its production resources.

5.5 Overview and current trends and objectives

5.5.1 Event subsequent to closure

Request for FDA accreditation of the enhanced BIOFIRE® BCID2 panel for the identification of blood cultures

bioMérieux announced that it had asked the US *Food and Drug Administration* (FDA) for 510(k) accreditation of the BIOFIRE® BCID2 (*Blood Culture IDentification 2*) panel. This new-generation BIOFIRE® BCID panel includes 26 bacteria, seven yeasts, and 10 antimicrobial resistance genes, including emerging pathogens such as *Candida auris*, as well as new targets to enable even more precise identification of Methicillin-resistant Staphylococcus aureus (MRSA) and other resistant microorganisms. The improved performance and the extent of the pathogens targeted strengthens the leadership of the BIOFIRE® range in the diagnosis of blood infections.

5.5.2 Outlook for financial year 2020

In 2020, bioMérieux aims to maintain a growth momentum that is greater than that of the *in vitro* diagnostic market and has therefore set itself the objective of achieving organic growth in sales of 5-7%, on a like-for-like basis at constant exchange rates. These objectives take into account a more intense flu epidemic in 2020 than in 2019, and uncertainties, as assessed on the date of publication, related to the epidemic of coronavirus Covid-19 (see section 3.3.1.3) and its possible consequences for the Chinese economy in the first half-year. China represents about 10% of the total consolidated sales of bioMérieux and is not a production zone for export. On the date of publication of this document, the provision of diagnostic tests for SARS-Cov2 in ARGENE® format is planned for the end of March 2020. Furthermore, bioMérieux is developing other tests in the FILMARRAY® format that will be submitted to the competent regulatory authorities in the second and third quarters of 2020.

Given the organic growth targeted, bioMérieux should be able to improve its contributive operating income before non-recurring items by 5-10%, on a like-for-like basis at constant exchange rates. This improvement will result, at current exchange rates, in a contributive operating income before non-recurring items of €395-415 million euros. Indeed, this range includes an expected negative currency impact of approximately €5-10 million, the accounting impact of outsourcing the American pension plan that should lead to recognition of an exceptional expense of about €10 million during the 2020 fiscal year, and lastly, the continued impact of the American variable compensation plans indexed to the share price (phantom share plans).

6

FINANCIAL STATEMENTS

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6.1 Consolidated financial statements

6.1.1 Consolidated financial statements for the financial years ending December 31, 2018 and 2019

Consolidated profit & loss statement

In millions of euros	Notes	12/31/2019	12/31/2018 restated[b]
REVENUES		**2,674.8**	**2,421.3**
Cost of sales		(1,208.2)	(1,119.0)
GROSS PROFIT		**1,466.6**	**1,302.3**
OTHER OPERATING INCOME AND EXPENSES	**19**	**45.9**	**31.2**
Selling and marketing expenses		(567.6)	(479.9)
General and administrative expenses		(182.2)	(163.2)
Research and development expenses		(374.3)	(326.9)
TOTAL OPERATING EXPENSES		**(1,124.1)**	**(970.0)**
CONTRIBUTIVE OPERATING INCOME BEFORE NON-RECURRING ITEMS		**388.5**	**363.5**
BioFire acquisition's fees and depreciation costs [a]	23	(17.9)	(17.5)
OPERATING INCOME BEFORE NON-RECURRING ITEMS		**370.7**	**346.0**
Other non-recurring income (expenses)	24	0.0	0.2
OPERATING INCOME		**370.7**	**346.1**
Cost of net financial debt	22.2	(20.6)	(21.3)
Other financial income and expenses, net	22.3	(2.5)	(4.5)
Income tax	25	(77.8)	(65.1)
Share in earnings (losses) of equity-accounted companies		0.0	0.2
NET INCOME OF CONSOLIDATED COMPANIES		**269.7**	**255.4**
Non-controlling interests		(3.1)	(1.1)
ATTRIBUTABLE TO OWNERS OF THE PARENT		**272.8**	**256.5**
Basic earnings per share		€2.31	€2.18
Diluted earnings per share		€2.30	€2.17

(a) In order to improve the understanding of operating income and in view of BioFire's size, the amortisation of the assets acquired and valued during the purchase price allocation, are presented on a separate line of operating income before non-recurring items.

(b) The comparative data pertaining to 2018 were restated to take into account the complete retrospective application of IFRS 16 (see Notes 2 and 32). As specified in Note 1.1.3, the finalisation of the work of assigning the acquisition price of Hybiome had no impact on the consolidated 2018 profit/loss.

Comprehensive income

In millions of euros	Notes	12/31/2019	12/31/2018 restated[e]
Net income of consolidated companies		**269.7**	**255.4**
Items to be reclassified to income		**19.5**	**24.2**
Fair value gains (losses) on financial hedging instruments	(a)	(1.2)	(3.1)
Tax effect		0.3	0.7
Movements in cumulative translation adjustments	(b)	20.3	26.6
Items not to be reclassified to income		**(2.5)**	**9.3**
Fair value gains (losses) on financial assets	(c)	16.4	2.4
Tax effect		(0.6)	(0.5)
Remeasurement of employee benefits	(d)	(24.0)	10.1
Tax effect		5.8	(2.7)
TOTAL OTHER COMPREHENSIVE INCOME		**17.0**	**33.7**
TOTAL COMPREHENSIVE INCOME		**286.7**	**289.1**
Non-controlling interests		(2.6)	(1.3)
ATTRIBUTABLE TO OWNERS OF THE PARENT		**289.3**	**290.4**

(a) Change in the effective share of financial hedging instruments.
(b) The change in translation differences in 2019 is mainly related to the increase in the euro rate against other currencies and in particular the dollar.
(c) Changes in the fair value of financial instruments concern shares in non-consolidated companies for which the Group has opted for a change in the fair value in other comprehensive income not recyclable in profit and loss (see Note 7).
(d) See Note 15.3.
(e) The comparative data pertaining to 2018 were restated to take into account the complete retrospective application of IFRS 16 (see Notes 2 and 32). In practice, the application of IFRS 16 had no impact on the overall net income.

Consolidated balance sheet

Assets

In millions of euros	Notes	12/31/2019	12/31/2018 restated[(a)]
Intangible assets	4	508.4	526.0
Goodwill	5	652.5	603.0
Property, plant and equipment	6.1	894.7	761.4
Right-of-use assets	6.2	130.5	137.7
Non-current financial assets	7	41.9	66.9
Net income for the period - Investments in associates		0.2	0.3
Other non-current assets		16.1	16.2
Deferred tax assets	25.3	99.0	78.5
NON-CURRENT ASSETS		**2,343.5**	**2,189.9**
Inventories and work-in progress	8	494.7	418.8
Trade receivables and assets related to contracts with customers	9	552.1	491.8
Other operating receivables	11	61.1	63.4
Current tax receivables	11	42.3	39.2
Non-operating receivables	11	13.3	12.9
Cash and cash equivalents	12	275.0	288.3
CURRENT ASSETS		**1,438.5**	**1,314.4**
ASSETS HELD FOR SALE	**13**	**0.0**	**0.1**
TOTAL ASSETS		**3,781.9**	**3,504.4**

Shareholders' equity and liabilities

In millions of euros	Notes	12/31/2019	12/31/2018 restated[(a)]
• Share capital	14	12.0	12.0
• Additional paid-in capital and reserves	14	1,919.1	1,659.5
• Attributable net income for the period		272.8	256.5
EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT		**2,203.9**	**1,928.0**
NON-CONTROLLING INTERESTS		**50.7**	**74.0**
TOTAL EQUITY		**2,254.6**	**2,002.1**
• Long-term borrowings and debt	16	153.7	524.9
• Deferred tax shareholders' equity and liabilities	25.3	141.2	134.2
• Impairment	15	62.3	47.1
NON-CURRENT LIABILITIES		**357.2**	**706.1**
• Short-term borrowings and debt	16	438.6	129.1
• Impairment	15	47.0	45.0
• Trade payables	17	211.9	179.7
• Other operating payables	17	381.1	352.2
• Current tax payables	17	32.3	33.5
• Non-operating payables	17	59.3	56.9
CURRENT LIABILITIES		**1,170.1**	**796.3**
LIABILITIES RELATED TO ASSETS HELD FOR SALE	**13**	**0.0**	**0.0**
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES		**3,781.9**	**3,504.4**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 (see Notes 2 and 32) and modifications regarding the determination of the acquired assets and liabilities of Hybiome and Astute Medical Inc. The reconciliation between the published and the restated financial statements is provided in Note 32.

Consolidated cash flow statement

In millions of euros	Notes	12/31/2019	12/31/2018 restated[a]
Net income of consolidated companies		**269.7**	**255.4**
• Investments in associates		0.0	(0.2)
• Cost of net financial debt		20.6	21.3
• Other financial income and expenses, net		2.5	4.5
• Income tax expense		77.8	65.1
• Net additions to operational depreciation - non-current provisions		189.5	177.0
• Non-recurring income and expenditure and acquisition fees and depreciation costs for the acquisition of BioFire		17.8	17.4
EBITDA (before non-recurring items)	**16.1**	**577.9**	**540.5**
Other non-recurring income (expenses) *(excluding non-recurring provisions for impairment and capital gains and losses on disposals of fixed assets)*		(0.1)	0.1
Other financial income and expenses, net *(excluding provisions and disposals of non-current financial assets)*		(2.0)	(4.6)
Net additions to operating provisions for contingencies and losses		(6.8)	(47.8)
Fair value gains (losses) on financial instruments		(1.4)	0.3
Share-based payment		9.4	6.7
Elimination of other non-cash/non-operating income and expenses		**(0.9)**	**(45.3)**
Change in inventories		(71.0)	(26.9)
Change in trade receivables		(57.3)	(30.6)
Change in trade payables		32.9	13.1
Change in other operating working capital		26.0	36.0
Change in operating working capital requirement[b]		**(69.4)**	**(8.4)**
Other non-operating working capital		2.1	1.8
Change in non-current non-financial assets and liabilities		0.4	(1.5)
Change in working capital requirement		**(66.9)**	**(8.1)**
Income tax paid		**(81.6)**	**(65.8)**
Cost of net financial debt	**22.2**	**(20.6)**	**(21.4)**
NET CASH FROM OPERATING ACTIVITIES		**407.9**	**399.8**
Purchases of property, plant and equipment and intangible assets		(272.5)	(226.4)
Proceeds from disposals of property, plant and equipment and intangible assets		17.1	5.4
Proceeds from other non-current financial assets		(2.4)	0.0
FREE CASH FLOW[c]		**150.1**	**178.8**
Disbursement/collection related to taking non-controlling interests		48.4	(5.4)
Impact of changes in Group structure		(72.8)	(186.7)
NET CASH USED IN INVESTING ACTIVITIES		**(282.2)**	**(413.1)**
Purchases and sales of treasury shares		0.0	(22.3)
Dividends paid to owners		(41.3)	(40.2)
Change in committed debt		(69.2)	105.5
Change in interests without gain or loss of controlling interest		(23.5)	0.0
NET CASH USED IN FINANCING ACTIVITIES		**(133.9)**	**43.0**
NET CHANGE IN CASH AND CASH EQUIVALENTS		**(8.2)**	**29.7**
Net cash and cash equivalents at beginning of year		**278.2**	**260.4**
Impact of currency changes on net cash and cash equivalents		(6.1)	(11.8)
Net cash and cash equivalents at end of year		**264.0**	**278.2**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 (see Notes 2 and 32) and modifications regarding the determination of the acquired assets and liabilities of Hybiome and Astute Medical Inc. The reconciliation between the published and the restated financial statements is provided in Note 32. These restatements had an impact on the allocation of flows by category. The impact on net cash compared to the published financial statements is only related to the finalisation of the assignment of the acquisition price of Hybiome.

(b) Including additions to and reversals of current provisions.

(c) Corresponds to the sum of cash flows related to the activity and those related to investments excluding the impact of changes in the scope of consolidation. It also includes cash flows on treasury shares and those relative to the cost of debt.

First application of IFRS 16

The first application of IFRS 16 to lease contracts had no impact on investment flows.

In accordance with the provisions of the standard, financing flows include only reimbursements of the debt related to lease liabilities, which stood at €26.6 million on December 31, 2019, against €20.1 million on December 31, 2018.

The interest paid on borrowings for lease liabilities is presented as operating cash flows, in the same manner as other interest paid on borrowings.

Statement of change in consolidated equity

	Attributable to owners of the parent										Non-controlling interests
In millions of euros	Share capital	Additional paid-in capital and consolidated reserves[a]	Cumulative translation adjustments	Changes in fair value[b]	Actuarial gains and losses[c]	Treasury shares	Share-based payment	Total additional paid-in capital and reserves	Net income	Total	Total
REPORTED EQUITY AT DECEMBER 31, 2017	**12.0**	**1,558.4**	**(32.5)**	**16.1**	**(54.0)**	**(10.9)**	**10.5**	**1,487.5**	**238.1**	**1,737.6**	**(0.9)**
IFRS 16 restatement (Note 2)		(1.9)	0.1					(1.8)		(1.8)	
RESTATED EQUITY AT DECEMBER 31, 2017	**12.0**	**1,556.5**	**(32.4)**	**16.1**	**(54.0)**	**(10.9)**	**10.5**	**1,485.7**	**238.1**	**1,735.8**	**(0.9)**
Total comprehensive income for the period			26.7	(0.4)	7.4			33.7	256.6	290.4	(1.3)
Appropriation of prior-period net income		238.1						238.1	(238.1)	0.0	
Dividends paid[d]		(40.2)						(40.2)		(40.2)	
Treasury shares		(2.7)				(21.9)		(24.6)		(24.6)	
Share-based payment[e]							6.7	6.7		6.7	
Changes in ownership interests[f]		(0.9)						(0.9)		(0.9)	76.1
Other changes[g]		(39.6)					(0.2)	(39.8)		(39.8)	
IFRS 16 restatement (Note 2)		(0.3)	0.4					0.1	(0.1)	0.0	
Hybiome acquisition adjustment		0.5	0.0					0.5		0.5	0.1
RESTATED EQUITY AT DECEMBER 31, 2018	**12.0**	**1,711.5**	**(5.4)**	**15.7**	**(46.6)**	**(32.8)**	**17.0**	**1,659.5**	**256.5**	**1,928.0**	**74.0**
Total comprehensive income for the period			19.9	14.9	(18.3)			16.5	272.8	289.3	(2.6)
Appropriation of prior-period net income		256.5						256.5	(256.5)	0.0	
Dividends paid[d]		(41.3)						(41.3)		(41.3)	
Treasury shares		(21.7)				29.0		7.2		7.2	
Share-based payment[e]							9.4	9.4		9.4	
Share subscription plans[i]		(5.3)						(5.3)		(5.3)	

In millions of euros	Attributable to owners of the parent										Non-controlling interests
	Share capital	Additional paid-in capital and consolidated reserves[a]	Cumulative translation adjustments	Changes in fair value[b]	Actuarial gains and losses[c]	Treasury shares	Share-based payment	Total additional paid-in capital and reserves	Net income	Total	Total
Changes in ownership interests[f]		12.8						12.8		12.8	(20.8)
Other changes[g]		20.9					(17.0)	3.9		3.9	
EQUITY AT DECEMBER 31, 2019	**12.0**	**1,933.3[h]**	**14.5[i]**	**30.6**	**(64.9)**	**(3.9)**	**9.4**	**1,919.1**	**272.8**	**2,203.9[h]**	**50.7[k]**

(a) Of which additional paid-in capital: €63.7 million.
(b) Including changes in the fair value of Quanterix, Labtech, Bio Theranostics, Innovaprep and GNEH shares and hedging instruments.
(c) Actuarial gains and losses on employee benefit obligations arising since the effective date of IAS 19R.
(d) Dividends per share: €0.35 in 2019 and €0.34 in 2018 (before stock split). Shares not qualifying for dividends amounted to 59,116 at December 31, 2019 compared with 569,443 at December 31, 2018.
(e) The fair value of benefits related to share grants is being recognised over the vesting period.
(f) The changes in ownership percentages in 2019 correspond to the exercise of puts on Hybiome and Hyglos minority interests. In 2018, they resulted from the acquisition of Hybiome and the repurchase of the minority interests of RAS Lifesciences.
(g) In 2019, this change corresponds to the reclassification following the awarding of free shares.
(h) Of which bioMérieux SA distributable reserves, including the net income for the financial year: €1,051.5 million.
(i) Reduction in the fair value of shares relating to the inaccessibility condition following the employee share ownership plan.
(j) See Note 14.2 Cumulative translation adjustments.
(k) In 2019, the change in non-controlling interests is the result of the additional repurchase of 12.52% of Hybiome from minority interests.

6.1.2 Notes

bioMérieux is a leading international diagnostics group that specialises in the field of *in vitro* diagnostics for clinical and industrial applications. The Group designs, develops, manufactures and markets diagnostic systems, *i.e.* reagents, instruments and software. bioMérieux is present in more than 160 countries through its locations in 44 countries and a large network of distributors.

These consolidated financial statements were approved by the Board of Directors on February 25, 2020.

The financial statements will only be considered definitive after approval by the Annual General Meeting on May 19, 2020.

The consolidated financial statements are presented in millions of euros.

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Note 1 Changes in the scope of consolidation during the fiscal year and significant events

1.1 Changes in the scope of consolidation

1.1.1 Acquisition of Invisible Sentinel Inc.

On February 7, 2019, bioMérieux acquired 100% of the shares in Invisible Sentinel Inc., based in Philadelphia (United States). This company develops, manufactures and markets solutions for molecular diagnostics to identify disease-causing organisms and other contaminants in foodstuffs and beverages.

This acquisition enables bioMérieux to strengthen its position in the screening of food pathogens and the detection of disease-causing organisms within new customer segments, such as breweries and wine producers.

The acquisition was carried out for an amount of €66.4 million in cash. The subsidiary was consolidated using the full consolidation method from the takeover date, giving mainly rise to the recognition of technologies net of deferred tax liabilities for €5.6 million, a customer relationship net of deferred tax liabilities for €8.6 million, deferred tax assets of €6.2 million, and goodwill of €45.3 million. The amount of this goodwill reflects bioMérieux's determination to develop its presence in the food and beverages market.

Since the acquisition date, Invisible Sentinel has generated revenue of €6.7 million and an operating loss of €2.9 million, including the depreciation of the technologies and the customer relationship recognised during the purchase price allocation work.

1.1.2 Increase of the equity investment in Suzhou Hybiome Biomedical Engineering Co. Ltd.

An additional equity investment of 12.52% was made in June 2019, for €23.7 million. Following this transaction, bioMérieux now holds 67% of the shares in Hybiome.

The minority interests acquired in June 2019 were included in the calculation of the debt relating to the put at December 31, 2018. Consequently, the debt relating to the put was reduced by €15.2 million recognised through shareholders' equity - attributable to the parent company.

The Company was already accounted for using the full consolidation method at December 31, 2018.

Over the 2019 fiscal year, the Company generated revenue of €25.8 million and an operating loss of €6.6 million, including the depreciation of the technologies and the customer relationship recognised during the purchase price allocation work. Finalisation of the analysis of the purchase price allocation gave rise to adjustments on the opening balance sheet. See Note 1.1.3 below.

1.1.3 Adjustments pertaining to the determination of the assets acquired in 2018

Astute Medical Inc. (acquisition in April 2018)

In the context of the work performed to finalise the determination of the fair value of the acquired assets and liabilities, the valuation assumptions for inventories resulted in a €2 million reduction of the value of the acquired inventories, net of deferred taxes, as an offset to goodwill. The work to determine the opening balance sheet is now finalised. The financial statements at December 31, 2018 have been adjusted. The reconciliation of the published data with the restated data is presented in Note 32.

Hybiome (acquisition in November 2018)

The assets and liabilities identified at the takeover date are presented in Note 32. Changes in relation to the information presented in the consolidated financial statements at December 31, 2018 involve the detailed determination of the Company's balance sheet on the acquisition date and the work on the purchase price allocation. Finalisation of the evaluation of intangible assets in 2019 led to an adjustment in the value of the technologies, net of deferred tax liabilities, of -€5.1 million (final amount €52.6 million) and the recognition of brands and customer relationships, net of deferred tax liabilities, for €11 million. Definitive goodwill stood at €123.7 million against provisional goodwill of €139.3 million on December 31, 2018 (see Note 5.3 below). The taking into account of these items had no material impact on the Group's net income for the 2018 fiscal year. Accordingly, the consolidated income statement at December 31, 2018 was not restated in relation to the integration of the opening balance sheet, only the balance sheet and the consolidated cash flow statement were adjusted.

The reconciliation of the published data with the restated data is presented in Note 32.

1.2 Significant events of the fiscal year

1.2.1 Freezing of bioMérieux Inc. retirement benefits

During the first half of 2019, the Group decided to freeze the retirement benefits for the defined benefit pension plan for bioMérieux Inc. employees (USA). This decision resulted in the recognition of $12.6 million in income, *i.e.* €11.2 million entirely recognised as contributive operating income before non-recurring items.

1.2.2 MyShare world-wide employee share ownership plan

In November 2019, employees of bioMérieux had the option to acquire existing bioMérieux shares at preferential conditions (discount and employer top-up). The launch of this employee share-ownership plan, called MyShare, expresses the desire to increase the association of employees with the performance of the Group.

The share offer, authorised by the Board of Directors' meeting of September 3, 2019, was made to all eligible employees residing in a country that authorises this transaction. See Note 18.4 for the details of the plan.

The impact of MyShare is a personnel cost of around €9.0 million.

1.3 Summary of significant events in 2018

The significant events for the 2018 fiscal year were the following:

- acquisition of Astute Medical Inc. for €75.2 million;
- acquisition of Suzhou Hybiome Biomedical Engineering Co. Ltd. for €115.6 million;
- exceptional contribution to the US retirement plan for €56.0 million.

These events had no significant impact on the annual financial statements for the 2019 fiscal year other than the adjustments related to the determination of the assets acquired in 2018 (see Note 1.1.3 above).

1.4 Information, on a comparable basis, on changes in the scope of consolidation

No information on a comparable basis is given on the profit & loss statement, as the external growth transaction occurring in 2019 did not have any significant impact.

The impact of changes in the scope of consolidation is shown on a separate line of the statement of cash flows and tables showing year-on-year changes in the notes.

Note 2 General accounting principles

Standards, amendments and interpretations

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS), including all standards, amendments and interpretations adopted by the European Commission at December 31, 2019. These can be consulted on the European Commission's website at http://ec.europa.eu/internal_market/accounting/ias/index_fr.htm.

The new standards, amendments and interpretations adopted by the European Commission and applicable from January 1, 2019 are presented below.

- IFRS 16 "Leases"

  The Group opted for first application of IFRS 16 using the full retrospective approach. In accordance with the provisions of this option, the comparative financial statements for the 2018 fiscal year were restated, as if the standard had been applied from January 1, 2018. The principles adopted for recognising leases are presented in Note 6.2. The reconciliation between the published and the restated comparative financial statements is provided in Note 32.

- IFRIC 23 "Uncertainty over income tax treatments" in matters of corporation tax.

  The analysis conducted did not result in the recognition of additional liabilities pertaining to tax uncertainties. Tax liabilities are presented as current tax payables, in accordance with the recommendations of the IFRS IC dated September 2019, as in previous years.

- 2015-2017 annual improvements (amendments to IFRS 3, IFRS 11, IAS 12, and IAS 23), with no impact on the Group's financial statements.

- Amendments to IAS 19 "Modification, reduction or liquidation of a plan", with no impact on the financial statements of the Group. This amendment was applied for the accounts treatment of the freezing of bioMérieux Inc. retirement benefits (see Note 1.2.1).

- Amendment to IFRS 9 "Prepayment features with negative compensation", with no impact on the Group's financial statements. This amendment had no impact on the restructuring of borrowings.

- Amendments to IAS 28 "Long-term interests in associations and joint ventures", with no impact on the Group's financial statements.

bioMérieux did not opt for the early application of the standards, amendments and interpretations adopted or awaiting adoption by the European Union, which will become effective after December 31, 2019 but which could have been applied early. They mainly concern:

- amendments to the references of the conceptual framework in the IFRS standards published on December 6, 2019;

- "Definition of Material (Amendments to IAS 1 and IAS 8)", regarding the materiality threshold, published on December 10, 2019;

- "Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39 and IFRS 7", published on January 16, 2020;

- "Definition of a Business (Amendments to IFRS 3)", of which publication is planned for the second quarter of 2020.

The Group does not expect these amendments to have a material impact on its consolidated financial statements.

There are no standards, amendments and interpretations published by the IASB, with mandatory application for the fiscal years opened on January 1, 2020, but not yet approved at the European level (and for which early application is not possible on a European level), which would have had a significant impact on the consolidated financial statements.

The financial statements of consolidated Group companies that are prepared in accordance with local accounting principles are restated to comply with the principles used for the consolidated financial statements.

General presentation methods used for the financial statements

The balance sheet is presented based on the distinction between "current" and "non-current" assets and liabilities as defined in the revised version of IAS 1. Consequently, the short-term portion of provisions, borrowings and financial assets (due within one year) is classified as "current" and the long-term portion (due beyond one year) is classified as "non-current".

The consolidated profit & loss statement is presented by function, with the exception of the presentation on a specific line, in the operating income before non-recurring items, of the net impact of the depreciation of assets related to the acquisition of BioFire.

The Group applies the indirect method of presenting cash flows.

Judgments and estimates

When preparing the consolidated financial statements, estimates and assumptions are made that affect the book value of certain assets, liabilities, and profit & loss statement items. They particularly concern the measurement and impairment of intangible assets acquired as part of business combinations and the impairment of intangible assets (including goodwill); the measurement of post-employment benefit obligations; the measurement and impairment of non-current financial assets; determination of lease periods; provisions; deferred taxes; share-based payments; as well as disclosures provided in certain notes to the financial statements. These estimates and assumptions are reviewed on a regular basis, taking into consideration past experience and other factors deemed relevant in light of prevailing economic conditions. Changes in those conditions could therefore lead to different estimates being used for the Group's future financial statements.

During the fiscal year, bioMérieux observed no significant change in the level of uncertainty related to these estimates and assumptions, except for the volatile discount rate used to measure employee benefit obligations (see Note 15.3) and assumptions related to translation differences.

2.1 Presentation of the consolidated income statement

The Group's key financial performance indicator is contributive operating income before non-recurring items. It corresponds to recurring income less recurring expenses. Non-current expenses and income are not included. As specified above, the depreciation of assets recognised for the BioFire purchase price allocation are presented on a specific line, in current operating income.

2.2 Basis of consolidation

Companies over which bioMérieux has exclusive control are fully consolidated.

The Group determines whether it controls an investee based on the criteria set out in IFRS 10 (direct or indirect power over the investee to direct the financial and operating policies of the relevant activities, exposure to variability of returns and ability to use its power to affect the amount of the returns). Control is generally deemed to exist when the Group directly or indirectly owns more than one half of the voting rights of the investee. In determining whether control exists, the Group considers any currently exercisable potential voting rights, including those held by another entity.

Companies over which bioMérieux exercises significant influence are accounted for by the equity method. Significant influence is the power to participate in the financial and operating policy decisions of an entity, without exercising control. It is deemed to exist when the Group holds between 20% and 50% of the voting rights either directly or indirectly.

The analysis of partnerships made according to the criteria defined by the IFRS 11 standard did not identify any joint ventures or joint operations. Joint ventures are accounted for using the equity method.

Subsidiaries are fully consolidated from the date on which control is effectively transferred to the Group.

The list of consolidated companies is provided in Note 34.

All significant intra-group balances and transactions are eliminated in consolidation (notably dividends and internal gains on inventories and non-current assets).

2.3 Fiscal year-end

All Group companies have a December 31 year-end, except for the Indian subsidiaries, for which interim accounts are drawn up and audited at the Group's reporting date.

2.4 Foreign currency translation

The reporting currency of bioMérieux is the euro and the consolidated financial statements are presented in millions of euros.

2.4.1 Translation of the financial statements of foreign companies

The financial statements of foreign subsidiaries whose functional currency is not the euro or the currency of a hyper-inflationary economy are translated as follows:

- balance-sheet items (except for equity) are translated using the official year-end exchange rate;
- profit & loss statement items are translated using the average exchange rate for the fiscal year;
- equity items are translated using the historical rate;
- cash flow statement items are translated using the average exchange rate for the year.

Differences resulting from the translation of subsidiaries' financial statements are recognised in a separate heading in the statement of changes in equity ("cumulative translation adjustments") and movements during the year are presented on a separate line within other comprehensive income.

Argentina has been considered as a country subject to hyper-inflation since July 1, 2018 with regard to the criteria defined by the IAS 29 standard. Consequently, the Group analysed the treatment required by the standard, namely the conversion of the 2019 balance sheet and profit & loss statement at closing prices.

The impact of the restatement of the financial statements of bioMérieux Argentina was not significant at the consolidated level; the Group did not perform restatement.

When a foreign subsidiary is sold and the sale leads to a loss of control, translation differences previously recognised in other comprehensive income relating to that company are recognised in net income for the year. If shares in a subsidiary are sold without any loss of control over the subsidiary, the translation differences are reclassified between minority interests and translation differences attributable to owners of the parent.

No disposal of foreign subsidiaries occurred over the fiscal years presented.

The main conversion rates used were the following:

AVERAGE RATES

1 euro =	USD	JPY	GBP	CNY	BRL
2019	**1.12**	**122**	**0.88**	**7.74**	**4.41**
2018	1.18	130	0.88	7.81	4.33
2017	1.13	127	0.88	7.62	3.61

YEAR-END RATES

1 euro =	USD	JPY	GBP	CNY	BRL
2019	**1.12**	**122**	**0.85**	**7.82**	**4.52**
2018	1.15	126	0.89	7.88	4.44
2017	1.20	135	0.89	7.80	3.97

2.4.2 Translation of transactions in foreign currencies

As prescribed by IAS 21 "The Effect of Changes in Foreign Exchange Rates", each Group entity translates foreign currency transactions into its functional currency at the exchange rate prevailing on the transaction date. Exchange rate gains or losses resulting from differences in rates between the transaction date and the payment date are recognised under the corresponding lines in the profit & loss statement (sales and purchases for commercial transactions).

Foreign currency payables and receivables are translated at the year-end exchange rate and the resulting currency translation gain or loss is recognised in the income statement at the end of the reporting period.

Derivatives are recognised and measured in accordance with the general principles described in Note 27.1 "Recognition and measurement of financial instruments". Foreign exchange derivatives are recognised in the balance sheet at their fair value at the end of each reporting period.

Note 3 Operating income before non-recurring items and segment information

3.1 Recurring income

Revenue is recognised in application of the IFRS 15 standard "Income from contracts with customers".

3.1.1 Revenue

Revenue is composed of income from the sale of goods and services according to the meaning of IFRS 15 and income from the rental of equipment according to the meaning of IFRS 16.

The principles for revenue recognition defined by IFRS 15 are defined based on an analysis in five successive stages:

- identification of the agreement;
- identification of the different performance obligations, *i.e.* the list of separate goods and services that the seller has undertaken to provide to the buyer;
- determination of the overall price of the agreement;
- allocation of the overall price of each performance obligation;
- recognition of revenue when a performance obligation is satisfied.

In practice, the rules for recognition of revenue according to the main performance obligations identified are presented below:

- Sales of reagents:

  Revenue from the sales of reagents is recognised when the Company has transferred control of assets which, in practice, corresponds to the date of dispatch.

- Sales of equipment:

  Revenue from sales of equipment is recognised when the Company has transferred control of the assets which, in practice, corresponds to the date of delivery or installation, depending on the complexity of the equipment.

- Equipment rental:

  Revenue composed of income from equipment rental and finance lease contracts according to the meaning of IFRS 16 is recognised as revenue in a straight-line manner over the term of the agreement, for the discounted value at the date of establishment of the contract.

  The contracts have an average term of between 3 and 5 years.

- Finance leases:

  When the Group provides goods to third parties under leases with terms equivalent to a sale, the goods concerned are accounted for as if they had been sold, as prescribed by IFRS 16 "Leases" (see Note 6.3).

- Contracts for the provision of equipment:

  Contracts for the provision of equipment are related to other services (supply of reagents, maintenance services, guarantee extensions). They are considered as multiple elements contracts.

  The analysis of the criteria defined by the standard led to contracts for the provision of equipment being considered as rental agreements, not transfer contracts.

  The application of the standard led to the statement in the notes to the consolidated financial statements of a breakdown of revenue based on the various components of a multiple-element arrangement (reagent sales, implicit rent, etc.), without having to change the amount of revenue.

- Service agreements:

  The services essentially correspond to training, after-sales service and maintenance. Training and after-sales services are recognised in revenue when the services are provided. The analysis performed according to the IFRS 15 standard led to maintenance services being recognised linearly over the term of the maintenance agreement, without change in relation to the previous treatment. Deferred income is recognised when the maintenance services are invoiced in advance.

- Guarantees:

  The majority of contracts including an item of equipment always include a guarantee. The customer does not have the option to purchase the guarantee, so it is not a guarantee providing a service, but an insurance policy and not an obligation to provide a separate service. It is recognised according to IAS 37 "Provisions, contingent liabilities and contingent assets" (see Note 15.2).

  Guarantee extension contracts may be purchased by the customer, and they do provide an additional service. This service fulfils the criteria to be considered as a separate performance obligation. The performance obligation is recognised as such in accordance with the provisions of IFRS 15.

- Returns:

  There are no specific obligations in terms of returns when the products sold are not defective.

- Payment conditions:

  Operations related to sales of reagents and sales of equipment are paid for under the conditions defined in the contract, which may vary from one country to another. Payment deadlines are usually between 2 and 3 months.

  Customer contracts which have a financing component are operating leases, financial leasing and the provision of equipment. In these cases, the payments are made according to the payment schedule defined contractually.

The procedures for the recognition of revenue do not require significant judgements.

Also, the analysis carried out by the Group did not identify any assets in relation to marginal costs of obtaining the contract or contract performance costs, nor specific points pursuant to the distinction between agent and principal.

The Group acts as principal in its relationships with customers.

The table below presents the breakdown of revenue according to the different revenue categories, in accordance with IFRS 15.

In millions of euros	12/31/2019	12/31/2018
Sales of equipment	239.1	217.4
Sales of reagents	2,199.5	1,989.1
Sales of services	171.9	157.8
Equipment rentals[(a)]	40.7	34.9
Other revenue	23.6	22.2
REVENUES	**2,674.8**	**2,421.3**

(a) Equipment leasing includes rent and the share of revenue due to the sale of the reagents reclassified as rent for equipment provision contracts (see above).

Revenue is measured at the fair value of the consideration received or receivable, net of any discounts and rebates granted to customers. Sales taxes and value-added taxes are not included in revenue.

The sectoral breakdown of the revenue is given in Note 3.5. The breakdown by technology is given in Note 3.6. The analysis performed according to IFRS 15 did not lead to presenting other breakdowns of revenue.

3.1.2 Other operating income

The other income is essentially composed of licence fees and subsidies. The rules on the recognition of other income are presented below:

- other income related to customer contracts: it is composed of reassigned royalties; and the analysis of licence contracts according to IFRS 15 led to them being considered as giving a right of access to intellectual property. As the obligation for performance is fulfilled gradually, the revenue is recognised over the term of the agreement;
- other income not related to customer contracts: this mainly corresponds to research subsidies received and research tax credits, considered equivalent to subsidies according to IAS 20 (see Note 19).

3.2 Recurring expenses

Cost of sales includes the following:

- the cost of raw materials consumed, including freight, direct and indirect personnel costs for production personnel, the depreciation of assets used in production, all external expenses related to manufacturing (utilities, maintenance, tools, etc.), as well as indirect expenses (the Group's share of expenses such as Purchasing, Human Resources, and Informatics). Expenses relating to areas such as Quality Control, Production Quality Assurance, Engineering, Business Processes, and Supply Chain are included in production costs;
- royalties paid in relation to marketed products;
- distribution expenses, including shipping and warehousing, as well as the cost of shipping finished products to distribution centres or end customers;
- depreciation of instruments placed with or leased to customers;
- Technical Support expenses, including the cost of installing and maintaining instruments placed or sold, irrespective of whether such services are billed separately. Also included under this heading are personnel expenses, travel expenses and the cost of spare parts, as well as movements in provisions for warranties granted at the time instruments are sold.

Operating expenses

Selling and marketing expenses include expenses incurred by the Strategy, Marketing, Sales and Sales Administration Departments. They also include sales bonuses and commissions paid to employees in the Group's Sales Departments and to independent sales agents. Advertising and promotional costs are also classified as selling and marketing expenses.

General and administrative expenses comprise the cost of General Management and Support services (Human Resources, Legal, Finance), excluding the portion of costs incurred by these departments that is allocated to the other departments that directly use their services.

Research & development expenses include all costs concerning in-house and outsourced research & development work on new products other than software (design costs) as well as expenses related to Regulatory Affairs, Intellectual Property, Technological Monitoring, and research & development Quality Assurance. Subsidies received in connection with research programs are shown in other operating income (see Note 3.1.2).

Royalty payments (fixed or proportional) are included in the cost of sales of the corresponding products. If no product is marketed or marketable in the short term, these payments are classified as research & development expenses.

Other information relating to recurring expenses

Variable compensation (performance-related bonuses, commissions, discretionary and non-discretionary profit-sharing) as well as share-based payments are included in the personnel expenses of the departments concerned.

In the context of long-term employee benefits, current service costs and the interest cost net of the return on plan assets are recognised within operating income before non-recurring items.

The tax credit for competitiveness and employment was recognised as a deduction from personnel costs until 2018; the arrangement was stopped in 2019.

The CVAE Corporate value-added tax (*cotisation sur la valeur ajoutée des entreprises*) and the CFE Corporate real estate tax (*cotisation foncière des entreprises*) are classified under operating expenses given that the added value generated by the Group's French operations significantly exceeds their taxable income.

Foreign exchange gains and losses related to transactions are included in the profit & loss statement lines corresponding to the category of the transaction concerned (primarily revenue, cost of sales, and financial expenses). The presentation of foreign exchange gains and losses related to derivative instruments is given in Note 28).

3.3 Contributive operating income before non-recurring items and operating income before non-recurring items

The Group uses contributive operating income before non-recurring items as one of its key financial performance indicators. It corresponds to recurring income less recurring expenses as defined in Notes 3.1 and 3.2. It excludes non-recurring income and expense from operations (as defined in Note 24.1) as well as amortisation of the assets acquired and valued as part of the BioFire purchase price allocation.

Amortisation of goodwill recognised during the acquisition of BioFire are presented on a separate line of the operating income before non-recurring items. Depreciation and amortisation charges relating to other prior acquisitions have not been restated as they are not deemed to be material.

In 2019, operating income before non-recurring items was the sum of the contributive operating income before non-recurring items and costs related to the amortisation of assets related to the acquisition of BioFire (see Note 23).

3.4 Segment information

Pursuant to IFRS 8 "Operating Segments", the Group has identified only one operating segment: the *in vitro* diagnostics segment and no geographic segments.

In accordance with IFRS 8, in Note 3.5 the Group discloses information on revenue and assets broken down by geographic area, which has been prepared using the same accounting principles as those applied to prepare the consolidated financial statements.

3.5 Information by geographic area

Geographical areas have been determined by combining countries with similar economic characteristics and similar risk, profitability, strategy, and regulatory profiles. Group sales in the Middle East – Africa region are generated in a heterogeneous set of countries, mainly through distributors or agents, and in certain countries *via* local distribution subsidiaries. The distributors and agents are for the most part in direct contact with the French Company bioMérieux SA, which explains their being grouped with the Europe region.

The information by geographic area shown in the tables below has been prepared in accordance with the accounting principles used to prepare the consolidated financial statements.

DECEMBER 31, 2019 *In millions of euros*	Americas	EMEA[(a)]	Aspac	Corporate	Group
Revenues	**1,199.2**	**957.3**	**513.7**	**4.6**	**2,674.8**
Cost of sales	(429.7)	(434.5)	(247.9)	(96.1)	(1,208.2)
Gross profit	**769.5**	**522.8**	**265.8**	**(91.5)**	**1,466.6**
as% of revenues	*64%*	*55%*	*52%*		
Other operating income and expenses	(292.0)	(177.9)	(112.4)	(495.8)	(1,078.1)
CONTRIBUTIVE OPERATING INCOME BEFORE NON-RECURRING ITEMS	**477.5**	**344.9**	**153.4**	**(587.3)**	**388.5**
as% of revenues	*40%*	*36%*	*30%*		

(a) Of which France revenues: €197.8 million.

DECEMBER 31, 2018 RESTATED *In millions of euros*	Americas	EMEA[a]	Aspac	Corporate	Group
Revenues	**1,069.4**	**916.6**	**429.5**	**5.8**	**2,421.3**
Cost of sales	(396.0)	(420.1)	(208.8)	(94.2)	(1,119.0)
Gross profit	**673.4**	**496.5**	**220.7**	**(88.4)**	**1,302.3**
as% of revenues	*63%*	*54%*	*51%*		
Other operating income and expenses[b]	(237.7)	(163.9)	(83.7)	(453.5)	(938.7)
CONTRIBUTIVE OPERATING INCOME BEFORE NON-RECURRING ITEMS	**435.8**	**332.6**	**137.0**	**(541.9)**	**363.5**
as% of revenues	*41%*	*36%*	*32%*		

(a) Of which France revenues: €200.9 million.
(b) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 (see Notes 2 and 32).

DECEMBER 31, 2019 *In millions of euros*	Americas	EMEA[a]	Aspac	Corporate	Group
Non-current assets					
Intangible assets	20.7	29.6	4.0	454.1	508.4
Goodwill				652.5	652.5
Property, plant and equipment	436.0	209.3	37.3	212.2	894.7
Right-of-use assets	57.9	64.7	7.9		130.5
Working capital requirement					
Inventories and work-in progress	257.5	160.8	76.4		494.7
Trade receivables and assets related to contracts with customers	209.0	278.2	64.9		552.1
Trade payables	(97.0)	(44.8)	(70.0)		(211.9)

(a) Of which non-current assets in France: €383.4 million.

DECEMBER 31, 2018 RESTATED *In millions of euros*	Americas	EMEA[a]	Aspac	Corporate	Group
Non-current assets					
Intangible assets	20.7	34.5	4.6	466.2	526.0
Goodwill				603.0	603.0
Property, plant and equipment	338.2	185.6	37.8	199.9	761.4
Right-of-use assets[b]	55.7	72.2	9.8		137.7
Working capital requirement					
Inventories and work-in progress	172.7	176.2	69.9		418.8
Trade receivables and assets related to contracts with customers	183.0	248.7	60.0		491.8
Trade payables	(42.3)	(39.1)	(98.3)		(179.7)
Assets held for sale			**0.1**		**0.1**

(a) Of which non-current assets in France: €372.6 million.
(b) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 (see Notes 2 and 32).

Regional data include commercial activities, corresponding mainly to revenue in each of the above geographic areas, the related cost of sales, and the operating expenses necessary for these commercial activities. The regional data also include the non-allocated costs of the production sites in these geographical areas. The revenue is a net consolidated contribution, not including inter-company revenue with the other zones.

Corporate data mainly include the research costs incurred by the Clinical and Industrial units, as well as the costs incurred by the Group's Corporate functions and revenue from companion test research & development partnership agreements.

Intangible assets recorded in the Corporate column mainly correspond to goodwill and to technologies acquired by the Group.

3.6 Information by technology and application

The table below provides a breakdown of revenue by technology and application:

In millions of euros	12/31/2019	12/31/2018
Clinical Applications	**2,208.2**	**1,987.8**
Microbiology	1,026.3	964.9
Immunoassays	474.5	441.8
Molecular biology	671.5	549.0
Other lines	35.9	32.1
Industrial applications	**466.7**	**433.5**
TOTAL	**2,674.8**	**2,421.3**

The other ranges mainly include the activity of the subsidiary BioFire Defense, for which the revenue stood at €24.7 million in 2019 and €21.1 million in 2018.

Note 4 Intangible assets

4.1 Accounting principles

4.1.1 Research & development expenses (excluding software development costs)

In accordance with IAS 38 "Intangible Assets", research expenses are not capitalised.

Under IAS 38, development expenses must be recognised as intangible assets whenever specific conditions are met, related to technical feasibility and marketing and profitability prospects. Given the high level of uncertainty attached to development projects carried out by the Group, these recognition criteria are not met until the regulatory procedures required for the sale of the products concerned have been finalised. As most costs are incurred before that stage, development expenses are recognised in the consolidated income statement in the period during which they are incurred.

Development costs are recognised as part of a business combination at the fair value of the projects identified in the balance sheet at acquisition, in accordance with the provisions of IFRS 3 (revised). These costs are amortised from the date of marketing of the lines affected by the projects in a linear fashion over their expected useful life.

Development expenses related to projects on going at the acquisition date continue to be capitalised until the date the corresponding product lines are marketed.

Development expenses incurred after the business combination date and related to new projects are recognised in accordance with IAS 38 as described previously. In practice, all subsequent costs are expensed.

4.1.2 Other intangible assets

Other intangible assets mainly include patents, licenses, elements of intellectual property, software, and customer relationships. They all have finite useful lives and are initially recognised as follows:

- if purchased: at their purchase price;
- in the case of business combinations: at fair value, generally based on the price paid (where the price of the intangible asset is identified), or based on the discounted value of estimated future cash flows;
- in the case of internal production: at their cost price for the Group.

Significant costs directly attributable to the creation or improvement of software developed in-house are capitalised if it is considered probable that they will generate future economic benefits. Other development costs are expensed as incurred. In the case of software, only in-house and outsourced development costs related to organic analyses, programming, tests, trials, and user documentation are capitalised.

Intangible assets are amortised in accordance with the expected pattern of consumption of future economic benefits embodied in the asset concerned, generally on a straight line basis over periods of:

- 5 to 20 years for patents, licences, technologies;
- 10 years for major integrated management software (such as ERP systems);
- 3 to 6 years for other computer software;
- and 10 to 15 years for customer relationships.

Software is amortised when it comes into operational effect in each subsidiary, on a phased basis where applicable.

Intangible assets are carried at their initial cost less accumulated amortisation and any accumulated impairment losses. Amortisation is recognised in the consolidated income statement based on the assets' function. Impairment losses are recognised under "Other non-recurring income and expenses from operations, net" if they meet the applicable definition (see Note 24.1). For ERP-type management software, any termination of a project or batch constitutes an indication that the asset is impaired.

4.2 Change

Gross value *In millions of euros*	Patents Technology	Software	Other	Total
DECEMBER 31, 2017	**538.8**	**179.4**	**33.1**	**751.3**
Translation adjustments	18.5	1.7	1.0	21.2
Acquisitions/Increases	0.6	7.7	23.0	31.3
Changes in scope of consolidation	90.3	0.0	0.0	90.3
Disposals/Decreases	(6.4)	(0.7)	(0.8)	(7.9)
Reclassifications	0.0	17.0	(15.1)	1.9
DECEMBER 31, 2018 PUBLISHED	**641.9**	**205.2**	**41.2**	**888.2**
DECEMBER 31, 2018 RESTATED[(a)]	**660.6**	**205.2**	**41.2**	**907.0**
Translation adjustments	8.7	1.3	0.6	10.6
Acquisitions/Increases	0.2	6.3	13.0	19.5
Changes in scope of consolidation	7.3	0.0	11.3	18.6
Disposals/Decreases	(4.9)	(0.9)	(0.1)	(5.8)
Reclassifications	(0.1)	8.3	(7.3)	0.9
DECEMBER 31, 2019	**671.7**	**220.2**	**58.8**	**950.8**

Accumulated depreciation and impairments In millions of euros	Patents Technology	Software	Other	Total
DECEMBER 31, 2017	**191.7**	**125.0**	**3.9**	**320.7**
Translation adjustments	5.4	1.4	0.1	6.9
Additions	40.8	19.7	0.8	61.3
Changes in scope of consolidation	0.0	0.0	0.0	0.0
Reversals/Disposals	(6.3)	(0.8)	(0.8)	(8.0)
Reclassifications	0.0	0.0	0.0	0.0
DECEMBER 31, 2018 PUBLISHED	**231.5**	**145.3**	**4.0**	**380.9**
DECEMBER 31, 2018 RESTATED[(a)]	**231.7**	**145.3**	**4.0**	**381.0**
Translation adjustments	2.6	1.0	0.0	3.6
Additions	40.7	20.6	2.3	63.6
Changes in scope of consolidation	0.0	0.0	0.0	0.0
Reversals/Disposals	(4.7)	(1.0)	(0.1)	(5.7)
Reclassifications	0.0	0.0	0.0	0.0
DECEMBER 31, 2019	**270.3**	**165.9**	**6.2**	**442.3**

Carrying amount *In millions of euros*	Patents Technology	Software	Other	Total
DECEMBER 31, 2017	**347.2**	**54.4**	**29.2**	**430.7**
DECEMBER 31, 2018 PUBLISHED	**410.2**	**59.9**	**37.2**	**507.3**
DECEMBER 31, 2018 RESTATED[(a)]	**428.9**	**59.9**	**37.2**	**526.0**
DECEMBER 31, 2019	**401.4**	**54.4**	**52.6**	**508.4**

(a) The comparative data pertaining to 2018 were restated to take into account the modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

The line "reclassifications" mainly corresponds to assets under construction put into service during the fiscal year.

The gross value of intangible assets increased by €43.8 million, notably due to the recognition of intangible assets when acquiring Invisible Sentinel Inc. for €18.6 million, including €11.3 million of other intangible assets related to customer relationships.

As a reminder, the intangible assets associated with the acquisition of Hybiome in November 2018 correspond to technology for €61.3 million, customer relationships for €4.3 million, and a brand for €8.5 million.

The gross value of intangible assets under construction represents €38.8 million at December 31, 2019 against €33.9 million in 2018 (restated data).

The review of impairment indices on assets with defined useful lives as defined in Note 5.2 led the Group to recognise depreciation on a technology asset of €6.0 million in 2019, to bring the net value of this asset down to 0, given the prospects of development for the Group.

Note 5 Goodwill

5.1 Accounting principles

In application of the revised version of IFRS 3, goodwill represents the excess of the cost of a business combination (excluding acquisition-related costs) and the fair value of the Group's share of the acquiree's identifiable assets, liabilities and contingent liabilities on the acquisition date. Goodwill is measured in the acquiree's functional currency. Provisional values may be assigned to fair values and goodwill during a "measurement period" which may not exceed one year from the acquisition date. Any changes made to provisional values after the end of the measurement period are recognised in income, including those concerning deferred tax assets.

The purchase price of a business combination includes the estimated impact of any contingent consideration. This consideration is measured by applying the criteria included in the acquisition agreement, such as revenue or earnings targets, to forecasts that are deemed to be the most probable. It is then remeasured at the end of each reporting period, and any changes are recorded in income after the acquisition date (including during the measurement period). They are discounted if the impact is material. Any discounting adjustments to the carrying amount of the liability are recognised in "Cost of net debt".

Non-controlling interests are measured at the time of the acquisition either at fair value (full goodwill method) or at the non-controlling interest's proportionate share of the acquired Company's net assets (partial goodwill method). The option is taken for each acquisition.

When the Group purchases an additional interest in an acquired entity after the acquisition date, the difference between the consideration paid and the Group's share in the acquiree's net assets is recognised directly in consolidated reserves. Similarly, if the Group sells an interest in an acquired entity without losing control, the resulting impact is also recognised directly in consolidated reserves.

In case of a put option on minority interests, borrowing is recognised for its present value against reserves. At each closure, changes in the fair value of debt, determined according to contractual provisions, are recognised against shareholders' equity attributable to the parent company. The impact of accretion is recorded in the section "Cost of net financial debt". The minority interests currently subject to puts retain all of the rights and benefits associated with the shares until the possible exercise of the option. Recognition of the debt related to the put was done without changing the value of goodwill.

Goodwill is recognised on a separate line of the balance sheet at cost less any accumulated impairment losses. Any negative goodwill is recognised directly in income during the year in which the controlling interest was acquired.

In compliance with IFRS 3 "Business Combinations", goodwill is not amortised. On the acquisition date, they are attached to a cash-generating unit depending on the synergies expected for the Group (see Note 5.2). They are tested at least once a year for impairment losses and whenever there is an indication that they may be impaired. The methods used for performing the tests and recognising any identified impairment losses are described in Note 5.2 "Impairment of non-current assets".

Impacts of the first application of IFRS 16

The analysis did not lead to the identification of assets associated with leases to be tested independently from a cash-generating unit (CGU).

While awaiting the expected clarifications regarding the practical methods for performing impairment tests incorporating IFRS 16 restatement, and in view of the numerous practical issues identified, the impairment tests were carried out both prior to IFRS 16 and in an approximate manner by incorporating the right-of-use asset and the debt linked to the lease liability into the book value of the CGU, without any modification being made to the calculation of the discount rate and provisional cash flows.

It should be noted that there were no CGUs with a recoverable value close to the net book value at December 31, 2018, and including leases. In addition, the first application of IFRS 16 should not, in principle, have any material impact in the event that the recoverable value is determined in relation to provisional cash flows.

5.2 Impairment of non-current assets

The Group systematically carries out annual impairment tests on goodwill and other intangible assets with an indefinite useful life (the Group did not have any such assets in the years presented in these consolidated financial statements).

Property, plant and equipment and intangible assets with a finite useful life are tested for impairment whenever there is an indication that they may be impaired.

A CGU corresponds either to a legal entity or to a product line (a group of property, plant and equipment, mainly production plants, and intangible assets, essentially technologies, which generate cash flows as a result of products based on the same technology).

Impairment testing is used to determine the recoverable amount of a CGU or group of CGUs, representing the higher of their value in use and fair value less costs to sell.

In practice, the value in use of a CGU or group of CGUs is determined primarily on the basis of discounted operating cash flow projections covering a period of five years and based on the most recent business plan, and a terminal value.

The growth assumptions used to calculate the value in use for the business plan projection time horizon are consistent with available market information and conservative assumptions have been used for determining the terminal value, including a perpetuity growth rate typically corresponding to 1.5%, except for the molecular business and the Hybiome entity, for which a 2.0% growth rate was used.

Cash flow projections do not include any expansion investments or restructurings that have not already commenced.

The discount rate applied to cash flows corresponds to the Weighted Average Cost of Capital (WACC), calculated using a risk-free rate (French government OAT bond rate), the equity market risk premium and the beta ratio (which adjusts the overall equity market risk in relation to the specific industry risk). In certain cases, a specific risk premium is included, chiefly to reflect technology risk and the individual market risk, like a country risk premium to take account of the exposure of each CGU to macroeconomic risks. The WACC determined by the Group is compared with the figure calculated by analysts who track the Company's stock. The discount rates calculated for the main CGUs (technological product lines) were between 7.7% and 14.0% in 2019, and between 7.5% and 9.4% in 2018. The upper range used in 2019 covers the Hybiome CGU. Given the acquisition, at the end of 2018, of this company, the Hybiome CGU was not tested in 2018. These rates are understood after tax. The application of a pre-tax WACC to pre-tax cash flows would give an identical result.

Tests were performed to assess the sensitivity of the recoverable amounts to changes in certain actuarial and operating assumptions (see Note 5.3).

The Group recognises an impairment loss where the value in use of these CGUs falls below the carrying amount. The impairment loss is allocated first to reduce the carrying amount of any goodwill, with the residual amount allocated to the other assets of the unit, except if this reduces the carrying amount of those assets below their fair value.

Impairment losses are recognised under "Other non-recurring income and expenses from operations, net" if they meet the applicable definition (see Note 24.1). Impairment losses against goodwill in respect of fully consolidated entities may not be reversed unless the asset is sold.

5.3 Change

Movements in this caption can be analysed as follows:

CGU	*In millions of euros*	12/31/2019	12/31/2018 restated[a]	12/31/2018 published
Industrial applications		**188.9**	**143.6**	**143.6**
	AES	117.1	117.1	117.1
	Invisible Sentinel	45.7		
	PML (US)	11.8	11.8	11.8
	Hyglos	5.7	5.7	5.7
	BTF (Australia)	5.0	5.5	5.5
	Advencis	2.9	2.9	2.9
	CEERAM	0.5	0.5	0.5
Molecular biology		**159.4**	**156.8**	**156.8**
	BioFire	139.7	137.1	137.1
	Argène	19.3	19.3	19.3
	RAS Lifesciences	0.4	0.5	0.5
Bacteriology		**142.9**	**142.9**	**142.9**
	AB bioMérieux (Sweden)	59.1	60.2	60.2
	Organon Teknika	52.5	51.9	51.9
	Applied Maths	11.4	11.4	11.4
	Bacterial Barcodes (US)	8.7	8.5	8.5
	bioMérieux Inc. (Vitek)	6.2	5.8	5.8
	MDI (US)	1.9	1.9	1.9
	bioMérieux Spain	1.8	1.8	1.8
	bioMérieux Biological products	1.4	1.4	1.4
Hybiome	Hybiome	**123.4**	**122.5**	**138.2**
Immunoassays	Astute Medical Inc.	**33.3**	**32.5**	**30.5**
Entities		**4.6**	**4.6**	**4.6**
	bioMérieux Poland	1.7	1.7	1.7
	bioMérieux Greece	1.7	1.7	1.7
	bioMérieux South Africa	1.3	1.2	1.2
CARRYING AMOUNT		**652.5**	**603.0**	**616.5**

(a) The comparative data pertaining to 2018 were restated to take into account the modifications involving the determination of the acquired assets and liabilities of Hybiome and Astute Medical Inc. The reconciliation between the published and the restated financial statements is provided in Note 32.

The differences between the restated 2018 column and the published 2018 column relate to the goodwill for Hybiome and Astute Medical Inc. recognised as provisional goodwill in 2018 (see Note 1.1.3).

Movements in this caption can be analysed as follows:

In millions of euros	Carrying amount
DECEMBER 31, 2017	**442.7**
Translation adjustments	6.0
Changes in scope of consolidation	167.7
DECEMBER 31, 2018 PUBLISHED	**616.5**
Opening restatement[a]	(13.5)
DECEMBER 31, 2018 RESTATED	**603.0**
Translation adjustments	4.8
Changes in scope of consolidation[b]	44.8
DECEMBER 31, 2019	**652.5**

(a) The comparative data pertaining to 2018 were restated to take into account the modifications involving the determination of the acquired assets and liabilities of Hybiome and Astute Medical Inc. (See Note 1.1.3). The reconciliation between the published and the restated financial statements is provided in Note 32.

(b) Linked to the acquisition of 100% of Invisible Sentinel Inc.

The goodwill of Astute Medical Inc. and Hybiome was provisional at December 31, 2018. It is now definitive. There was no provisional goodwill at December 31, 2019.

No impairment losses were recognised in 2019 or 2018 as a result of the impairment tests carried out as described in Note 5.1.

The inputs used in the impairment tests carried out on the Group's main CGUs are set out below:

	2019			2018		
CGU	Value Carrying[(a)]	Rate Discount	Growth rate Perpetuity	Value Carrying[(a)]	Rate Discount	Growth rate Perpetuity
Industrial applications	188.9	7.8%	1.5%	143.5	7.5%	1.5%
Molecular biology	159.4	9.2%	2.0%	156.8	9.4%	2.0%
Bacteriology	142.9	7.7%	1.5%	142.9	7.5%	1.5%
Hybiome	123.4	14.0%	2.0%	N/A	N/A	N/A
Immunoassays	33.3	8.2%	1.5%	30.5	7.8%	1.5%

(a) Net value of goodwill assigned to the CGU.

Revenue and operating margin growth assumptions are set for each CGU in accordance with the best estimates at the test date. They take into account the level of maturity of our products and target markets, and also forecast development and innovation for our ranges.

An analysis was carried out to assess the sensitivity of the impairment tests to changes in discount rates (adverse change of 100 basis points), perpetuity growth rates (adverse change of 50 basis points) and the operating margin (fall of 500 basis points in the ratio of operating income before non-recurring items to terminal value). This analysis will not lead to recognising additional impairment for any of the cash-generating units.

Note 6 Property, plant and equipment, assets related to right-of-use and other finance lease receivables

6.1 Property, plant and equipment

6.1.1 Accounting principles

As prescribed by IAS 16 "Property, Plant and Equipment", items of property, plant and equipment are initially recognised at their purchase or production cost or at their acquisition-date fair value if acquired as part of a business combination. They are not revalued. Any revaluations carried out by Group companies in their individual accounts are eliminated when preparing the consolidated financial statements.

Property, plant and equipment are recorded using the component approach. Under this approach, each component of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the asset and which has a different useful life to that of the asset as a whole is recognised and depreciated separately. The only Group assets to which this method is applied are buildings.

The Group's application of IAS 23 "Borrowing Costs" did not lead to the capitalisation of material borrowing costs as the Group does not have a material level of debt resulting from purchases of property, plant and equipment.

Routine maintenance and repair costs of property, plant and equipment is expensed as incurred. Other subsequent expenses are capitalised only if they satisfy the applicable recognition criteria, such as the replacement of an identified component.

Property, plant and equipment are carried at cost less accumulated depreciation and any accumulated impairment losses.

The depreciable value of property, plant and equipment corresponds to their acquisition cost as they are not considered to have any material residual value. The straight-line method of depreciation is used for these assets.

The assets are depreciated over their estimated useful lives as follows:

- machinery and equipment: 3-10 years;
- instruments: 5-10 years;
- shell: 30-40 years;
- finishing work, fixtures and fittings: 10-20 years.

Depreciation periods in respect of buildings are calculated separately for each component.

The useful lives of items of property, plant and equipment are reviewed periodically. The impact of any adjustments is accounted for prospectively as a change in accounting estimates.

Impairment tests are carried out for property, plant and equipment whenever events or market developments indicate that an asset may have declined in value. If an asset's recoverable amount (see Note 5.2) is less than its carrying amount, either its useful life is adjusted or an impairment loss is recorded in "Other non-recurring income and expenses from operations, net", if the applicable definition is met (see Note 24.1).

Rental agreements:

As lessor: when the Group leases assets to third parties on terms equivalent to a sale, the assets are recorded as though they had been sold, as prescribed by IFRS 16 "Leases". The long-term portion of the lease payments due is recorded under "Other non-current assets" and the short-term portion are recognised under "Trade receivables". The corresponding financial income is recognised in the income statement during the period in which it is received, under "Other financial income and expenses".

6.1.2 Analysis of movements in property, plant and equipment

Gross value *In millions of euros*	Land	Constructions	Materials and tools	Capitalised instruments	Other fixed assets	Assets under construction	Total
DECEMBER 31, 2017 PUBLISHED	**40.6**	**549.2**	**426.1**	**354.8**	**157.9**	**65.9**	**1,594.5**
Restatement lease financing agreements in right of use (IFRS 16)	*(2.9)*	*(61.1)*	*(0.6)*		*(5.7)*		*(70.3)*
DECEMBER 31, 2017 RESTATED	**37.7**	**488.1**	**425.5**	**354.8**	**152.2**	**65.9**	**1,524.1**
Translation adjustments	0.4	8.6	9.5	(0.5)	2.7	2.8	23.4
Changes in scope of consolidation					2.5		2.5
Acquisitions/Increases		10.1	24.9	56.8	8.4	101.6	201.8
Disposals/Decreases	(0.1)	(5.9)	(7.1)	(31.5)	(9.9)		(54.4)
Reclassifications	0.4	12.8	13.7	0.1	5.3	(34.2)	(1.8)
Hybiome restatement			*2.2*	*8.1*	*0.5*	*(9.6)*	*1.2*
DECEMBER 31, 2018 RESTATED[a]	**38.4**	**520.9**	**468.7**	**387.7**	**161.7**	**119.4**	**1,696.8**
Translation adjustments	0.2	4.4	4.3	2.8	1.4	1.1	14.3
Changes in scope of consolidation		0.3	0.8				1.1
Acquisitions/Increases	1.3	12.2	30.3	71.6	10.4	134.8	260.5
Disposals/Decreases	(1.0)	(9.5)	(13.7)	(57.9)	(3.1)		(85.2)
Reclassifications	0.1	25.5	33.9	0.7	8.5	(70.0)	(1.4)
DECEMBER 31, 2019	**39.0**	**553.8**	**524.2**	**404.9**	**178.9**	**185.3**	**1,886.2**

Accumulated depreciation and impairment losses *In millions of euros*	Land	Constructions	Materials and tools	Capitalised instruments	Other fixed assets	Assets under construction	Total
DECEMBER 31, 2017 PUBLISHED	**1.8**	**247.9**	**264.3**	**258.6**	**110.4**		**883.1**
Restatement lease financing agreements in right of use (IFRS 16)		*(15.6)*	*(0.5)*		*(5.7)*		*(21.8)*
DECEMBER 31, 2017 RESTATED	**1.8**	**232.3**	**263.8**	**258.6**	**104.7**		**861.3**
Translation adjustments	0.0	3.1	5.1	(0.7)	1.8		9.3
Changes in scope of consolidation					2.2		2.2
Additions	0.2	29.9	38.2	24.1	17.6	2.5	112.6
Disposals/Decreases	0.0	(5.1)	(7.0)	(26.8)	(9.6)		(48.4)
Reclassifications			0.3	(0.1)	(0.4)		(0.1)
Hybiome restatement			*0.9*	*2.9*	*0.4*	*(2.5)*	*1.7*
Restatement lease financing agreements in right of use (IFRS 16)		*(2.9)*					*(2.9)*
DECEMBER 31, 2018 RESTATED[a]	**2.1**	**257.2**	**301.4**	**258.1**	**116.7**		**935.5**
Translation adjustments	0.0	1.6	2.4	1.8	0.9		6.8
Changes in scope of consolidation		0.3	0.4				0.7
Additions	0.2	32.2	37.6	33.1	12.9		115.9
Disposals/Decreases		(9.3)	(12.5)	(43.1)	(2.5)		(67.4)
DECEMBER 31, 2019	**2.3**	**282.0**	**329.3**	**249.9**	**127.9**		**991.5**

Carrying amount *In millions of euros*	Land	Constructions	Materials and tools	Capitalised instruments	Other fixed assets	Assets under construction	Total
DECEMBER 31, 2017 PUBLISHED	**38.7**	**301.2**	**161.8**	**96.2**	**47.5**	**65.9**	**711.4**
Restatement lease financing agreements in right of use (IFRS 16)	*(2.9)*	*(45.4)*	*(0.1)*				*(48.4)*
DECEMBER 31, 2017 RESTATED	**35.8**	**255.9**	**161.7**	**96.2**	**47.5**	**65.9**	**663.0**
DECEMBER 31, 2018 RESTATED[(a)]	**36.3**	**263.7**	**167.3**	**129.6**	**44.9**	**119.4**	**761.4**
DECEMBER 31, 2019	**36.6**	**271.9**	**194.9**	**155.0**	**51.0**	**185.3**	**894.7**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 (see Notes 2 and 32) and modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

Assets under construction mainly concern the building of a new plant, capital expenditure on the production and automation tools in Salt Lake City, and the extension of the Craponne site in France.

The impairment tests did not lead to the recognition of significant impairment over the fiscal years presented.

6.2 Right-of-use assets (lessee side)

As indicated in Note 2, the Group applied IFRS 16 "Leases" beginning on January 1, 2019 using the full retrospective approach. By applying this option, the comparative financial statements for 2018 were restated as if the IFRS 16 standard had been applied from January 1, 2018. The reconciliation between the published and the restated financial statements is provided in Note 32.

6.2.1 Accounting principles

Restatement on the lessee side:

IFRS 16 no longer makes a distinction, from the lessee perspective, between finance leases and operating leases, as previously defined by IAS 17. Only finance leases were restated in previous years (see Note 6.1 of the notes to the 2018 consolidated financial statements).

Leases are rental agreements (or agreements that contain a rental component) that convey the right to receive the near totality of the economic benefits associated with the use of the asset resulting from the right to manage the use of the identified asset during the period of use.

Leases which meet this definition are recognised according to the procedures defined below. As specified by the standard, the Group has adopted certain simplification measures, notably those enabling exclusion of leases with a residual term of less than twelve months and leases covering assets of low value, and the identical application of finance leases according to IAS 17.

In practice, the analysis predominantly resulted in the restatement of real estate and vehicle leases.

For agreements not restated as leases, the lease payments are recognised as expenses on a straight line basis over the term of the agreement.

The accounting rules for agreements that fall within the scope of IFRS 16 are presented below.

As of the commencement date of the agreement, the Group recognises a right-of-use asset and a financial liability for the lease liability. The asset is recorded as a separate line item on the balance sheet; the liability is presented under borrowings.

The lease liability is measured at the discounted value of the lease payments not yet paid over the term of the lease.

The discounted value is determined by using the implicit borrowing rate for leases formerly qualified as finance leases and the marginal borrowing rate for other leases. The marginal borrowing rate is calculated for each country according to the term of the lease. The marginal borrowing rate corresponds to a duration rate taking into account the rent payment profile, and not a maturity rate, in accordance with the recommendations of the IFRS IC of September 2019.

The term of a lease is the enforceable period, which corresponds to the non-cancelable period, plus:

- any option to extend the lease if the Group is reasonably certain it will exercise the option;
- any lease termination option if the Group is reasonably certain it will not exercise the option.

In practice, the terms used for the main leases are:

- in France: an enforceable period of nine years (3/6/9 commercial leases): a non-cancelable period of three years and certainty of using the extension options after three and six years;
- in other countries, the term is that indicated in the lease unless the renewal decision is solely at the discretion of the lessee. In this case, the term used is 20 years from the date of the first lease.

The various leases do not contain an early termination clause and there is no clause likely to result in the lessor paying compensation to the Group that would be more than insignificant in the event of the non-renewal of the lease at the end of the non-cancelable period.

Lease payments represent fixed payments, variable payments based on an index or a rate, and the exercise price of the purchasing options that the lessee has the reasonable certainty of exercising. In practice, most of the lease payments are fixed. There are purchasing options for lease financing agreements, and there are no penalties that would be more than insignificant in the event of the termination of the lease at the lessor's initiative.

Right-of-use assets are measured as follows: the cost is reduced by the accumulated depreciation and impairment losses, and adjusted to take into account, where applicable, re-measurements of the lease liability. No impairment losses or re-measurements of the lease liability were recorded during 2019.

Right-of-use assets are depreciated over the expected duration of use of the property (including the portion linked to the use of land), in the case of a purchase option at a favourable price. In other cases, these assets are depreciated over the term of the lease as defined above.

The Group is in the process of analysing the impact of the decision of IFRIC published in December 2019 concerning the determination of the enforceable term of a rental agreement and the depreciation period of the permanent fixtures. In the meantime, improvements associated with leases are depreciated over the term of the agreement, unless there is reasonable certainty that the underlying asset will be used for a longer period of time than the term of the agreement. For information, the net book value is not material.

While awaiting the IFRS IC's confirmation, the Group has opted to recognise a deferred tax on the restatements of leases.

6.2.2 Change

Gross value *In millions of euros*	Land	Buildings	Machinery and equipment	Other assets	Total
DECEMBER 31, 2017 RESTATED	**32.1**	**131.5**	**25.0**	**6.6**	**195.3**
Translation adjustments	1.2	0.2	0.0	0.0	1.3
Acquisitions/Increases	0.6	18.9	6.9	0.1	26.3
Disposals/Decreases			0.0		0.0
Reclassifications		(5.2)	(3.9)	0.0	(9.2)
DECEMBER 31, 2018 RESTATED	**33.9**	**145.4**	**27.9**	**6.6**	**213.8**
Translation adjustments	0.5	1.1	0.3	0.0	1.9
Acquisitions/Increases	1.8	20.0	11.0	0.2	32.9
Disposals/Decreases		(23.3)	(9.8)	(0.7)	(33.8)
Reclassifications	(0.1)	0.1		0.0	0.0
DECEMBER 31, 2019	**36.1**	**143.4**	**29.4**	**6.1**	**214.9**

Accumulated depreciation *In millions of euros*	Land	Buildings	Machinery and equipment	Other assets	Total
DECEMBER 31, 2017 RESTATED	**2.6**	**41.0**	**11.7**	**6.2**	**61.5**
Translation adjustments	0.0	0.0	0.0	0.0	0.0
Additions	1.0	12.7	7.1	0.2	21.1
Disposals/Decreases					
Reclassifications		(2.3)	(3.9)	0.0	(6.3)
DECEMBER 31, 2018 RESTATED	**3.6**	**51.4**	**14.8**	**6.4**	**76.2**
Translation adjustments	0.0	0.4	0.1	0.0	0.5
Additions	0.9	15.6	8.1	0.2	24.8
Disposals/Decreases		(11.2)	(8.6)	(0.7)	(20.6)
Reclassifications		3.3	0.1	0.0	3.5
DECEMBER 31, 2019	**4.4**	**59.5**	**14.5**	**5.9**	**84.4**

Carrying amount *In millions of euros*	Land	Buildings	Machinery and equipment	Other assets	Total
DECEMBER 31, 2017 RESTATED	**29.5**	**90.5**	**13.4**	**0.4**	**133.8**
DECEMBER 31, 2018 RESTATED	**30.3**	**94.0**	**13.1**	**0.3**	**137.7**
DECEMBER 31, 2019	**31.6**	**83.8**	**14.9**	**0.2**	**130.5**

The increases are primarily linked to new leases. The decreases are primarily linked to leases having reached the end of their terms. In accordance with the provisions of the standard, and given the nature of the movements, increases and reductions related to rental agreements are not reported in the investment flows of the cash flow statement.

At the end of 2019, amortisation and depreciation for the fiscal year was €23.2 million, against €21.1 million at the end of 2018.

The table below shows the assets linked to the finance leases reclassified as right-of-use assets based on property, plant and equipment (see Note 6.2):

Carrying amount *In millions of euros*	Land	Buildings	Machinery and equipment	Other assets	Total
DECEMBER 31, 2017 RESTATED	**2.7**	**45.6**	**0.1**	**0.1**	**48.6**
DECEMBER 31, 2018 RESTATED	**2.7**	**42.7**	**0.2**		**45.6**
DECEMBER 31, 2019	**2.7**	**39.4**			**42.1**

6.3 Finance lease receivables

6.3.1 Accounting principles

Finance leases

As lessee: leases are classified as finance leases whenever they transfer to the lessee substantially all of the risks and rewards incidental to ownership. Leases qualify as finance leases based on the substance of each contract, and notably when:

- ownership of the leased asset is transferred to the lessee at the end of the lease term;
- the lessee has the option to purchase the asset at a preferential price;
- the lease term covers the major part of the leased asset's economic life;
- the present value of the minimum lease payments amounts to at least substantially all of the fair value of the leased asset;
- the leased assets are of such a specialised nature that only the lessee can use them without making major modifications.

Whenever the Group leases property under an agreement classified as a finance lease, the fair value of the asset concerned or, if lower, the present value of the minimum lease payments is capitalised and depreciated over the asset's useful life. A corresponding liability is recognised in the balance sheet. Lease payments are apportioned between the finance charge and the reduction of the outstanding liability.

Other leases are classified as operating leases and the lease payments are expensed on a straight-line basis over the term of the lease.

Certain instruments are sold *via* finance lease arrangements (see Note 6.1). The usual lease term is five years.

6.3.2 Change

Finance lease receivables totalled €24.7 million at December 31, 2019, against €24.5 million at December 31, 2018.

In millions of euros	In less than one year	Due in one to five years	In over five years	Total
Gross value of finance lease receivables	9.7	17.0	0.1	26.8
Accrued interest	(0.8)	(0.9)	0.0	(1.8)
Present value of minimum future lease payments	8.9	16.0	0.1	25.0
Impairment losses	(0.3)			(0.3)
NET PRESENT VALUE OF MINIMUM FUTURE LEASE PAYMENTS	**8.5**	**16.0**	**0.1**	**24.7**

The current portion of finance lease receivables is shown in trade receivables (see Note 9), while the non-current portion is carried in other non-current assets for €16.1 million.

The depreciation rules applied are presented in Note 9.

Note 7 Non-current financial assets

7.1 Accounting principles

Non-current financial assets include investments in non-consolidated companies, loans and receivables maturing in more than one year – including pension plan assets whenever these have not been definitively allocated to cover corresponding obligations – and deposits and guarantees. They are recognised and measured in compliance with the rules described in Note 27.

In application of the IFRS 9 standard, non-current financial assets are broken down into 3 categories:

- financial assets assessed at amortised cost:

  It concerns financial assets for which the objective of the economic model is to receive contractual flows, and for which the contractual conditions specify, at particular dates, flows corresponding only to repayments of capital and interest. They correspond to loans, deposits and sureties;
- financial assets valued at fair value, with recognition in other comprehensive income:
  - changes in fair value to be reclassified to income: these are financial assets for which the objective of the economic model is both to receive contractual flows and the sale of assets, and for which the contractual conditions specify, at particular dates, flows corresponding only to repayments of capital and interest. The Group has no significant assets within this category,
  - changes in fair value not to be reclassified to income (irreversible option taken on the acquisition date): these are assets that are strategic for the Group. They correspond to non-consolidated equity investments;
- financial assets valued at fair value through profit/loss: these are securities held by the Group for transaction purposes. This category is not used over the fiscal years presented, as the Group has decided to opt for recognition in other comprehensive income not to be reclassified.

Assets valued at amortised cost

The amortised cost is determined according to the effective interest rate method, as defined by the IFRS 9 standard. This rate is determined when putting in place the related contract.

Financial assets valued at fair value

Fair value is determined according to the methodology defined by the standard IFRS 13, according to the 3 levels of fair value defined in Note 27.1.

In exceptional cases where fair value of financial assets cannot be determined reliably (lack of recent information, wide range of valuations, etc.), the cost will be considered as the best estimate of the fair value.

No reclassification between the various categories occurred over the fiscal years presented.

The breakdown of other financial assets for which the Group has opted for this presentation is presented separately in the table below.

7.2 Change

In millions of euros	12/31/2019	12/31/2018 restated[(a)]	12/31/2018 published
Loans and receivables	10.4	8.0	13.0
Available-for-sale financial assets assessed at fair value against other comprehensive income	31.5	58.9	58.9
TOTAL	**41.9**	**66.9**	**71.8**

(a) The comparative data pertaining to 2018 were restated to take into account the modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

The loans and receivables include a surety intended to cover the post-employment benefit obligations in Germany for €2.5 million and the granting of a loan from bioMérieux Inc. to ABL Inc. for €1.8 million.

In millions of euros	Gross value	Variation in fair value against other comprehensive income	Impairment losses	Carrying amount
DECEMBER 31, 2017	**53.9**	**4.3**	**(0.3)**	**57.9**
Translation adjustments	0.0		0.0	0.0
Acquisitions/Increases	12.7		0.0	12.7
Disposals/Decreases	(1.2)		0.0	(1.2)
Reclassifications and changes in fair value				0.0
Changes in fair value of financial instruments		2.4		2.4
DECEMBER 31, 2018	**65.4**	**6.7**	**(0.3)**	**71.8**
DECEMBER 31, 2018 RESTATED[(a)]	**60.4**	**6.7**	**(0.3)**	**66.9**
Translation adjustments	0.1		0.0	0.1
Acquisitions/Increases	9.1		0.0	9.0
Disposals/Decreases	(34.4)		0.1	(34.2)
Reclassifications and changes in fair value				0.0
Changes in fair value of financial instruments		0.2		0.2
DECEMBER 31, 2019	**35.2**	**6.9**	**(0.2)**	**41.9**

(a) The comparative data pertaining to 2018 were restated to take into account the modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

The acquisitions of the fiscal year mainly concern the equity investment of bioMérieux Inc. in Specific Diagnostics for €4.5 million.

The disposals for the fiscal year concern the Quanterix shares, all of which were sold.

The change in fair value recorded in other comprehensive income stands at €16.4 million:

- €16.2 million related to changes in fair value prior to disposals;
- €0.2 million related to securities still held at closure of the fiscal year.

There was no change in fair value recognised through consolidated net profit/loss in 2019 (as in 2018).

The summary table below shows the change in fair value of the shares in non-consolidated companies at December 31, 2019 compared to December 31, 2018:

	12/31/2018			12/31/2019		
In millions of euros	NBV	Of which change in JV through profit and loss	Of which change in fair value through other comprehensive income	NBV	Of which change in JV through profit and loss	Of which change in fair value through other comprehensive income
Quanterix	32.9		5.3	0.0		15.5
Labtech/LBT Innovations	0.5		(0.7)	1.0		0.5
GNEH	3.2		(2.2)	3.4		0.2
Qvella	6.0			6.3		
Banyan Biomarkers	6.4			6.4		
Sino French Innovations	5.0			5.0		
Specific Diagnostics				4.5		
Other securities	4.9			4.9		
Securities under consolidation						0.2
TOTAL	**58.9**		**2.4**	**31.5**		**16.4**

The changes in fair value of securities classified as Level 3 are presented in Note 27.1.

There was no change in fair value recognised through profit/loss in 2019.

Note 8 Inventories and work-in progress

8.1 Accounting principles

As required under IAS 2 "Inventories", inventories are measured at the lower of cost and net realisable value.

Inventories of raw materials, goods held for resale and consumables are measured at their purchase price plus related expenses using the FIFO method. Work-in-progress and finished products are measured at their actual production cost, including direct and indirect costs.

Inventories are written down where necessary, taking into account selling prices, obsolescence, residual shelf life, product condition, sale prospects and, in the case of spare parts, changes in the corresponding instruments' installed base.

8.2 Change

In millions of euros	12/31/2019	12/31/2018 restated[(a)]	12/31/2018 published
Raw materials	191.9	166.6	162.9
Work-in-progress	54.8	47.3	45.8
Finished products and goods held for resale	285.1	240.0	238.2
GROSS VALUE	**531.8**	**453.9**	**446.9**
Raw materials	(14.2)	(13.3)	(13.3)
Work-in-progress	(2.6)	(1.6)	(1.6)
Finished products and goods held for resale	(20.3)	(20.2)	(17.1)
IMPAIRMENT LOSSES	**(37.1)**	**(35.1)**	**(32.0)**
Raw materials	177.6	153.3	149.6
Work-in-progress	52.2	45.7	44.2
Finished products and goods held for resale	264.8	219.8	221.1
CARRYING AMOUNT	**494.7**	**418.8**	**414.9**

(a) The comparative data pertaining to 2018 were restated to take into account the modifications involving the determination of the acquired assets and liabilities of Hybiome and Astute Medical Inc. The reconciliation between the published and the restated financial statements is provided in Note 32.

Inventories relating to instruments account for 17.4% of gross value.

No pledges of inventories had been granted at December 31, 2019.

Note 9 Trade receivables and assets related to contracts with customers

Trade receivables and finance leasing receivables

In millions of euros	12/31/2019	12/31/2018 restated[(a)]	12/31/2018 published
Gross trade receivables	579.9	507.8	505.9
Impairment losses	(27.8)	(16.0)	(16.0)
CARRYING AMOUNT	**552.1**	**491.8**	**490.0**

(a) The comparative data pertaining to 2018 were restated to take into account the modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

In total, 20.6% of the Group's trade receivables are due from government agencies and may be paid later than the date shown on the invoice.

Trade Receivables are recognised at amortised cost, which in practice corresponds to cost. There are no other financial assets including a financially significant component.

The due dates are mainly below 6 months except for lease contracts, financial lease contracts and contracts for the provision of equipment.

Net receivables overdue by more than 60 days relative to private companies and public organisations represent 11.6% of outstanding trade receivables in 2019, against 8.0% in 2018.

The weight of net additions to doubtful debts and bad debts represents €11.6 million, *i.e.* 0.44% of revenue.

Trade receivables include the current portion of finance lease receivables (see section 6.3).

Receivables and assets related to contracts with customers	12/31/2018 published	Hybiome restate-ment	12/31/2018 restated	Changes in scope of conso-lidation	Change in gross values	Change in provision	Currency impact	12/31/2019
Long-term finance lease receivables	16.2		16.2		(0.4)		0.4	16.1
NON-CURRENT ASSETS	**16.2**		**16.2**		**(0.4)**	**0.0**	**0.4**	**16.1**
Finance lease receivables	8.3		8.3		0.1	0.2	0.2	8.7
Gross trade receivables	481.7	1.8	483.5	0.7	66.2	(9.1)	2.2	543.4
Other assets related to contracts with customers	0.0		0.0					0.0
CURRENT ASSETS	**490.0**	**1.8**	**491.8**	**0.7**	**66.3**	**(8.9)**	**2.4**	**552.1**

The share of provisions on financial leasing receivables is not material (see Note 6.3).

Depreciation of trade receivables

Provisions for depreciation of trade receivables are recognised to take into account expected losses and are recognised according to the following model:

- doubtful trade receivables: provisioned case-by-case;
- customers for whom impairment loss indices have been identified (late payment, claims and litigation, etc.): individual and statistical provision;
- customers with no impairment loss index at the closing date: a provision for expected losses is recognised case-by-case, taking into account qualitative and quantitative information (*e.g.*: information on the customer, rating of the customer...) in the context of the customer credit risk monthly review process, according to information obtained on the customer.

The credit risk is assessed at each closure, taking into account guarantees received, where applicable.

Netting agreements

N/A.

Other assets related to contracts with customers

There are no assets related to the costs of obtaining or implementing contracts.

Note 10 Liabilities related to contracts with customers

Liabilities related to contracts with customers correspond essentially to advances of payment received and maintenance services invoiced in advance on service contracts (see Note 17). The associated revenue is recognised in income over the period that the service is rendered.

Liabilities related to contracts with customers	Notes	12/31/2018 published	Hybiome restate-ment	12/31/2018 restated	Changes in scope of consolidation	Change in gross values	Change in provision	Changes in translation differences	12/31/2019
Provisions for long-term guarantee	14	1.2		1.2	0.0		0.0	0.0	1.3
NON-CURRENT LIABILITIES		**1.2**		**1.2**	**0.0**	**0.0**	**0.0**	**0.0**	**1.3**
Provisions for short-term guarantee	14	6.8		6.8			(1.0)	0.1	5.9
Advances received on trade receivables	17	5.7	0.6	6.3		3.2		0.0	9.6
Credit note to be issued	17	1.2	1.4	2.6		(0.5)		0.0	2.2
Income invoiced in advance	17	54.7		54.7	0.0	8.5		1.2	64.4
CURRENT LIABILITIES		**68.4**	**2.0**	**70.4**	**0.0**	**11.3**	**(1.0)**	**1.4**	**82.1**

Note 11 Other receivables

In millions of euros	12/31/2019	12/31/2018 restated[(a)]	12/31/2018 published
Advances and downpayments	6.6	6.1	4.8
Prepaid expenses	14.9	13.5	14.2
Other operating receivables[(a)]	39.6	43.8	42.7
CARRYING AMOUNT OF OPERATING RECEIVABLES	**61.1**	**63.4**	**61.7**
CURRENT TAX RECEIVABLES	**42.3**	**39.2**	**39.2**
Non-operating receivables	13.3	12.9	9.6
CARRYING AMOUNT OF NON-OPERATING RECEIVABLES	**13.3**	**12.9**	**9.6**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 (see Notes 2 and 32) and modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

The other receivables related to customer contracts are not material.

Other operating receivables chiefly comprise research tax credit receivables (€8.3 million at December 31, 2019 *versus* €11.8 million at end-2018), and other tax-related receivables.

Non-operating receivables relate primarily to the fair value of derivative instruments carried in assets (€7.4 million in 2019 *versus* €9.3 million in 2018, see Note 27.2).

Note 12 Cash and cash equivalents

12.1 Accounting principles

Cash and cash equivalents includes cash and short-term highly liquid investments denominated in euros and subject to an insignificant risk of changes in value and counterparty default.

Investments meeting these criteria are measured at the end of the reporting period at their fair value, with fair value gains or losses recognised in income (see Note 27).

None of the Group's investments are pledged or subject to major restrictions.

Investment securities and other cash equivalents are valued at their fair value at each closure, according to the definition given in Note 7.

There are no other current financial assets.

12.2 Change

In millions of euros	12/31/2019	12/31/2018 restated[(a)]	12/31/2018 published
Cash at bank and in hand	241.0	239.9	231.7
Cash pooled with Institut Mérieux	14.0	23.6	23.6
Short-term investments	20.0	24.8	24.8
CASH AND CASH EQUIVALENTS	**275.0**	**288.3**	**280.1**

(a) The comparative data pertaining to 2018 were restated to take into account the modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

Some cash investments are in SICAV money-market funds (€15.0 million at December 31, 2019 *versus* €17.6 million at December 31, 2018).

Investments are placed with leading credit institutions. No adjustments were recognised in respect of the risk of non-collection associated with these financial assets following the analysis carried out pursuant to IFRS 13 (see Note 28.5).

Cash investments in SICAV money-market funds are as follows:

	12/31/2019	12/31/2018
Investment	BNP PARIBAS SIGNATURE PART CLASSIC money-market fund	BNP PARIBAS DEPOSIT money-market fund
Amount	€15 million	€17.6 million
Classification	Short-term money-market fund	Short-term money-market fund
ISIN Code	FR0011046085	FR0011046085

The Group regularly reviews the investments made by each SICAV euro money-market fund as well as their past performance in order to ensure that they qualify as cash and cash equivalents in accordance with the recognition criteria in IAS 7.

Note 13 Assets and liabilities held for sale

13.1 Accounting principles

In accordance with IFRS 5, net assets and liabilities whose recovery is expected through a sale transaction rather than by continuous usage are reclassified as assets held for sale or as liabilities held for sale.

Impairment tests were carried out by comparing the value of the net assets to their fair value less costs to sell (see Note 5.2).

13.2 Change

At December 31, 2019, the Group had no assets held for sale, as at the end of 2018.

Note 14 Shareholders' equity and earnings per share

14.1 Share capital

The Company's share capital amounted to €12,029,370 at December 31, 2019 and was divided into 118,361,220 shares, of which 78,060,118 carried double voting rights. Following a decision taken by the General Meeting of March 19, 2001, the Company's bylaws no longer refer to a par value for its shares.

Other than the free shares (see Note 18.2), there were no valid dilutive rights or securities on December 31, 2019.

There were no changes in the number of outstanding shares during the period.

The Company is not subject to any specific regulatory or contractual obligations in terms of its share capital.

The Group does not have any specific policy concerning equity financing. Decisions on whether to use debt or equity financing are made on a case-by-case basis for each proposed transaction. The equity used by the Group for its own operations corresponds to its consolidated equity.

14.2 Cumulative translation adjustments

In millions of euros	12/31/2019	12/31/2018 restated[(b)]	12/31/2017 restated[(b)]
Dollars[(a)]	54.9	35.6	(2.2)
Latin America	(15.2)	(14.0)	(10.9)
Europe - Middle East - Africa	(31.5)	(30.7)	(23.5)
Other countries	6.2	3.6	4.2
TOTAL	**14.4**	**(5.5)**	**(32.4)**

(a) US and Hong Kong dollars.
(b) The comparative data pertaining to 2018 were restated to take into account the application of IFRS 16 and modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

In 2019, the cumulative translation adjustments were mainly related to the appreciation of the dollar.

14.3 Treasury shares

The Company has entered into an agreement with an investment services provider for market-making purposes. It therefore sometimes has to buy, hold and resell a small number of its own shares in connection with this agreement. It also purchases treasury shares for the purpose of allocation under the share grant plans described in Note 18.

Treasury shares held under the liquidity agreement or for the purpose of allocation under share grant plans are recorded as a deduction from equity, and the impacts of all corresponding transactions recorded in the individual financial statements are also recognised directly in equity (disposal gains and losses, impairment, etc.).

Treasury shares held under the liquidity contract

At December 31, 2019, the parent company held 21,697 treasury shares as part of this contract. During the fiscal year, it purchased 486,240 and sold 491,699 treasury shares.

Other treasury shares

On January 1, 2019, the Company held 582,247 treasury shares. During the fiscal year, the Company bought 320,000 shares and definitively allocated 824,868 shares intended to provide free shares to employees and shares related to the stock option plan (see Notes 18.2 and 18.4).

At December 31, 2019, the Company held a total of 37,419 treasury shares intended for free share grants authorised by the Annual General Meeting.

14.4 Minority interests

The minority interests essentially cover the Company Suzhou Hybiome Biomedical Engineering for €50.7 million, representing 33.0%. The impact of the share of minorities on the key aggregates of the Group is not material over the fiscal year.

14.5 Other comprehensive income (expense)

The main elements making up comprehensive income are the changes in the fair value of financial instruments for which changes in fair value are recognised in this section (see Note 7), actuarial gains and losses on defined benefit pension plans, changes in fair value of cash flow hedges, changes in translation differences coming from subsidiaries whose accounts are denominated in foreign currencies and changes in the value of tangible or intangible assets (if the option has been exercised for fair value).

The Group presents other comprehensive income showing the components of other comprehensive income that may be subsequently reclassified to income separately from components not subsequently declassifiable.

14.6 Earnings per share

Basic earnings per share is calculated by dividing net income attributable to owners of the parent by the weighted average number of shares outstanding during the period (excluding shares intended for allocation under free share grants and treasury shares held for market-making purposes). The weighted average number of shares was 118,302,104 at December 31, 2019, against 117,791,777 at December 31, 2018.

Diluted (net) earnings per share are calculated from the number of shares defined in the basic earnings increased by the weighted average number of potential shares to be issued and which would have a dilutive effect on net income. The number of the latter was 118,709,370 at December 31, 2019, against 118,411,626 at December 31, 2018.

The restatements for 2018 mentioned in Notes 1 and 2 had no impact on the consolidated profit/loss for 2018.

Note 15 Provisions – contingent assets and liabilities

15.1 Accounting principles

In accordance with IAS 37 "Provisions, Contingent Liabilities and Contingent Assets", provisions are recognised when the Group has a legal or constructive obligation towards a third party, when it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and no inflow of resources of an equivalent amount is expected in return, and when the amount of the obligation can be reliably estimated.

Provisions for restructuring costs are recognised only when the restructuring has been announced and the Group has drawn up or has started to implement a detailed formal plan. Restructuring provisions notably cover the cost of severance payments.

Long-term provisions are discounted to present value when the impact of discounting is material and the date the underlying event is expected to materialise is known.

Material contingent liabilities are disclosed in Note 15.5, unless the probability of an outflow of resources embodying economic benefits is remote.

Material contingent assets are disclosed in Note 15.5 where an inflow of economic benefits is probable.

15.2 Change in provisions

In millions of euros	Retirement benefits and other benefits	Guarantees given	Restructuring	Disputes	Other contingencies and losses	Total
DECEMBER 31, 2017[b]	**101.5**	**6.4**	**0.2**	**8.0**	**24.7**	**140.8**
Additions	9.9	11.8	0.6	7.7	7.8	37.8
Reversals (utilisations)	(67.7)	(2.5)	(0.1)	(1.1)	(4.4)	(75.8)
Reversals (surplus)	(0.4)	(7.8)	0.0	(0.7)	(1.1)	(10.0)
Net additions (reversals)	(58.2)	1.5	0.5	5.9	2.3	(48.0)
Actuarial (gains) losses	(10.2)	0.0	0.0	0.0	0.0	(10.2)
Other changes	7.4	0.0	0.0	0.0	1.0	8.4
Translation adjustments	0.9	0.1	0.0	0.1	(0.1)	1.0
DECEMBER 31, 2018[b]	**41.6**	**8.0**	**0.7**	**14.0**	**27.7**	**92.0**
Additions	7.0	9.9	0.2	4.2	14.7	36.0
Reversals (utilisations)	(2.5)	(10.0)	(0.5)	(5.7)	(5.3)	(24.0)
Reversals (surplus)	(12.4)	(0.9)	0.0	(5.6)	(0.4)	(19.3)
Net additions (reversals)	(7.9)	(1.0)	(0.3)	(7.1)	9.0	(7.3)
Actuarial (gains) losses	23.8	0.0	0.0	0.0	0.0	23.8
Changes in scope of consolidation	0.0	0.0	0.0	0.0	0.0	0.0
Other changes	0.0	0.0	0.0	0.0	0.0	0.0
Translation adjustments	0.3	0.1	0.0	0.1	0.1	0.6
DECEMBER 31, 2019	**57.8**	**7.1**	**0.4**	**7.0[a]**	**36.9**	**109.3**

(a) See Note 15.4.1.
(b) The restatements related to the entry into force of IFRS 16 and the integration of Hybiome and Astute Medical Inc. had no impact on the provisions.

Provisions for product warranties are recognised based on an estimate of the costs relating to the contractual warranty for instruments sold over the remaining period under warranty (see Note 3.1.1).

Net reversals of provisions for the 2019 fiscal year amounted to -€7.3 million in recurring income, and mainly reflect the freezing of the US pension fund (see Note 1.2.1).

15.3 Pension and other long-term benefit obligations

15.3.1 Accounting principles

15.3.1.1 Short-term employee benefits

Short-term employee benefits include wages, salaries and payroll taxes as well as paid vacation and performance-related bonuses. They are expensed during the fiscal year in which employees perform the corresponding services. Outstanding payments at the end of the reporting period are included in "Other operating payables".

15.3.1.2 Post-employment benefits

These benefits notably correspond to pensions, contractual retirement payments, and post-employment health insurance. They are covered either by defined contribution plans or defined benefit plans.

Defined contribution plans: where required under local laws and practices, the Group pays salary-based contributions to pension and social security organisations. The Group's obligation is limited to the payment of contributions. The contributions are expensed during the fiscal year in which the employees perform the corresponding services. Outstanding payments at the end of the reporting period are included in "Other operating payables".

Defined-benefit plans: all plans other than defined-contribution plans:

- they concern: regular or supplementary post-employment benefit obligations paid in the form of annuities (primarily in the US, France and Germany) and contractual retirement payments (primarily in France and Japan);
- health insurance for retired employees.

The Group's defined benefit pension obligation is estimated by actuaries, in accordance with the amended IAS 19, as presented hereafter:

Post-employment benefit obligations are calculated in accordance with the projected unit credit method. They take into consideration actuarial assumptions such as discount rates, the rate of future salary increases, employee turnover and mortality rates. The main assumptions used are set out below in Note 15.3.2.

For the purpose of determining the discount rate, the Group analysed various market rates and, as prescribed by the amended IAS 19R, chose an estimated average of the Iboxx Corporate AA and Bloomberg indices (euro, US dollar and pound sterling) at December 31, 2019, taking into account the average durations of the Group's plans where these differ from the observable maturities of the bonds used for those indices.

Post-employment benefit obligations are presented in the balance sheet for their total amount less the fair value of plan assets.

The impact on the service cost for the year and on the interest cost net of the return on plan assets is recognised in operating income before non-recurring items.

The impacts of changes in actuarial gains and losses related to benefit obligations and plan assets (actuarial assumptions and experience adjustments) are immediately recognised under other comprehensive income at their net-of-tax amount. They are not reclassified to income.

The impacts resulting from amendments to and settlements of pension plans are immediately recognised in income.

The expected return on plan assets recognised in income is calculated using the discount rate used to estimate the total benefit obligation.

Tests are performed to measure the sensitivity of the Group's post-employment benefit obligation to changes in certain actuarial assumptions (see Note 15.3.8).

IFRIC 14 "The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction" is not relevant to the Group.

15.3.1.3 Other long-term benefits

Other long-term benefits include long-service awards and jubilee bonuses. The corresponding liabilities are recognised on an actuarial basis whenever they have a material impact. Actuarial gains and losses and past service cost are recognised immediately in income.

15.3.2 Assumptions used

Post-employment benefits and other obligations are covered by provisions and essentially concern the US and France. These obligations are calculated using actuarial methods based on a certain number of assumptions.

The main assumptions used are as follows:

	France		US	
	12/31/2019	12/31/2018	12/31/2019	12/31/2018
Expected salary increase rate	2.00%	2.00%	3.00%	3.00%
Discount rate	1.00%	2.00%	3.15%	4.50%
Average duration of plans	12.9	12.0	15.2	14.4

The expected return on plan assets corresponds to the discount rate applied to the Group's pension obligations, in accordance with the amended IAS 19, according to the calculated duration.

15.3.3 Breakdown of provisions for employee benefits

In millions of euros	12/31/2019	12/31/2018
Post-employment benefits	43.0	28.3
Long-service awards	14.8	13.3
TOTAL PROVISIONS FOR LONG-TERM EMPLOYEE BENEFITS	**57.8**	**41.6**

15.3.4 Change in provisions for employee benefits post employment.

In millions of euros	Present value of obligation	Fair value of funds[(a)]	Provisions for pensions	Post employment health insurance	Total provisions for post-employment benefits
DECEMBER 31, 2018	**227.3**	**(200.5)**	**26.7**	**1.6**	**28.3**
Current service cost	(6.8)		(6.8)	0.0	(6.8)
Interest cost	8.3	(7.8)	0.6	0.1	0.6
Retirements	(9.9)	8.4	(1.5)	(0.1)	(1.7)
Contributions	0.0	(2.3)	(2.3)		(2.3)
Impact on operating income	**(8.4)**	**(1.7)**	**(10.1)**	**(0.1)**	**(10.1)**
Actuarial gains and losses (Other comprehensive income)	**45.3**	**(21.8)**	**23.5**	**0.0**	**23.5**
Other movements (incl. impact of exchange rates)	3.7	(2.5)	1.2	0.0	1.2
DECEMBER 31, 2019	**268.1**	**(226.6)**	**41.5**	**1.5**	**43.0**

(a) Plan assets or scheduled payments.

In millions of euros	Present value of obligation	Fair value of funds[(a)]	Provisions for pensions	Post employment health insurance	Total provisions for post-employment benefits
DECEMBER 31, 2017	**234.0**	**(150.0)**	**84.0**	**2.6**	**86.6**
Current service cost	6.5		6.5	0.0	6.5
Interest cost	7.6	(5.9)	1.8	0.1	1.9
Retirements	(10.8)	9.3	(1.5)	(0.1)	(1.6)
Contributions	0.0	(56.7)	(56.7)		(56.7)
Impact on operating income	**3.4**	**(53.3)**	**(49.9)**	**0.0**	**(49.9)**
Actuarial gains and losses (Other comprehensive income)	**(18.2)**	**9.2**	**(9.0)**	**(1.2)**	**(10.2)**
Other movements (incl. impact of exchange rates)	8.1	(6.4)	1.7	0.1	1.8
DECEMBER 31, 2018	**227.3**	**(200.5)**	**26.7**	**1.6**	**28.3**

(a) Plan assets or scheduled payments.

The 2019 actuarial gains and losses are essentially related to the drop in discount rates.

During the 2018 fiscal year, bioMérieux Inc. made an exceptional payment of $67 million, representing €56 million, to the fund for covering American post-employment benefit obligations (see Note 1.2.1).

15.3.5 Net post-employment benefit expense for the year

In millions of euros	12/31/2019	12/31/2018
Current service cost	(6.8)	6.5
Return on plan assets	(7.8)	(5.9)
Interest cost	8.3	7.6
TOTAL	**(6.2)**	**8.3**

At December 31, 2019, the impact of post-employment benefits represented net income of €6.2 million, particularly given the impact of the freezing of bioMérieux Inc. employee retirement benefits (See Note 1.2.1).

15.3.6 Breakdown of net obligation by country

	12/31/2019			
In millions of euros	USA	France	Other countries	Total
Present value of obligation	198.6	37.9	31.4	267.9
Fair value of funds[(a)]	(187.4)	(26.4)	(12.7)	(226.5)
Provisions for pensions	**11.2**	**11.5**	**18.7**	**41.4**
Post-employment health insurance	1.5	0.0		1.5
TOTAL POST-EMPLOYMENT BENEFITS	**12.8**	**11.5**	**18.7**	**43.0**
Long-service awards		14.8		14.8
TOTAL PROVISIONS FOR PENSIONS AND OTHER LONG-TERM BENEFITS	**12.8**	**26.3**	**18.7**	**57.8**

(a) Plan assets and scheduled payments.

15.3.7 Information on plan assets

15.3.7.1 Allocation of funds

	12/31/2019		12/31/2018	
In millions of euros	France	US	France	US
Equities	1.6		1.5	16.6
Bonds	22.4	187.4	21.3	148.3
Other	2.4		2.0	
TOTAL	**26.4**	**187.4**	**24.7**	**164.9[(a)]**

(a) Excluding scheduled payments.

15.3.7.2 Actual return on plan assets

	Return 2019	Return 2018
France	2.5%	2.2%
USA	15.1%	-2.4%

15.3.8 Other Information

The timing of future benefit payments at December 31, 2019 is as follows:

In %	Future service payments (as % of the net commitment)
< 1 year	4%
1-5 years	33%
> 5 years	63%

This payment schedule is close to that calculated in 2018.

A portion of these payments will be funded by the plan assets. Contributions will be decided on a yearly basis.

A 0.5 point increase in the discount rate would have a favourable impact of around 7.3% on the amount of commitments (namely €19.3 million).

15.4 Other impairment

15.4.1 Provisions for claims and litigation

The Group is involved in a certain number of claims arising in the ordinary course of business, the most significant of which are described below. Based on available information, the Group considers that these claims will not have a materially adverse impact on its ability to continue as a going concern. When a risk is identified, a provision is recognised as soon as it can be reliably estimated. The provision for claims and litigation covers all disputes in which the Group is involved and amounted to €7.0 million at December 31, 2019, against €14.0 million at December 31, 2018 (excluding tax disputes detailed in Note 15.4.2).

Other than the tax litigation explained below, the litigation mainly included disputes with distributors following the termination of their distribution contracts. A provision has been set aside for the probable amounts that the Group will have to pay based on the plaintiff's claims.

15.4.2 Litigation and tax risks

The application, in 2019, of the IFRIC 23 interpretation on tax uncertainties did not lead to the recognition of an additional liability. On December 31, 2019, tax risks stood at €17.0 million.

In accordance with this interpretation, liabilities related to tax risks and litigation are recorded on the line "Current tax payables" (see Note 17). IAS 37 "Provisions, contingent liabilities and contingent assets" is applied to interest and penalties relative to these claims and litigation and to risks. Late-payment interest is recorded as a financial charge.

Tax audits in Italy

Further to two tax audits in Italy in respect of reporting periods 2004 to 2007 and 2009 to 2010, bioMérieux Italy has received tax deficiency notices relating to transfer prices and the portion of shared costs allocated to this subsidiary.

The total amount is €43 million, breaking down as €23 million in income tax, €15 million in penalties and €5 million in accrued interest.

In the context of this dispute, the Group has requested a mutual agreement procedure to be initiated between the relevant French and Italian authorities based on the European Arbitration Convention of July 23, 1990, as amended by the protocol of May 25, 1999. The aim of these proceedings is to prevent the double taxation of companies by different Member States owing to an upward adjustment of profits of one of the companies in a Member State (as regards transfer pricing). The neutralisation does not apply to penalties or late-payment interest.

During the 2016 fiscal year, the competent French and Italian authorities reached an amicable agreement for the period 2004 to 2007. This agreement, which was accepted by the Group, eliminates the tax adjustment for 2004 and limits the basis for subsequent adjustments. The corresponding late-payment interest and penalties will be subject to a claim under local Italian law.

The adjustments made for the fiscal years 2009 and 2010 are in the process of examination by the competent authorities under a similar negotiated procedure.

In parallel, adjustments made to the sales flows between Italy and the Group's American subsidiary continued to be subject to a local Italian law dispute. After an unfavourable ruling in appeal, the Group intends to pursue all available remedies to defend its position. The duration of this procedure cannot be estimated at this stage.

At December 31, 2019, a liability corresponding to its best estimate of the consequences of ongoing proceedings is booked to the Group's financial statements.

15.4.3 Other provisions for contingencies and losses

Manovra Sanità

This bill, which was passed in Italy in August 2015, requires healthcare providers to cover 40% of the difference between the health budget of each province and the actual expenditure incurred. No implementing decree has yet been adopted. Nevertheless, in accordance with market practice, the provision for risk already recorded in 2016 was updated at December 31, 2019.

Other provisions for risks

They relate to miscellaneous risks identified and to costs related to the discontinuation of certain product ranges.

15.5 Contingent assets and liabilities

Diagnostic tests for Lyme disease

On October 14, 2016, bioMérieux, like other industrialists, was summoned before the Paris District Court with a view to obtaining reparations for anxiety allegedly "caused by the lack of reliability of serodiagnostic tests" for Lyme disease. To date, there are 93 civil proceedings still ongoing, brought by 45 plaintiffs, following the addition of two new identical summonses. The date for the hearing has not yet been fixed. bioMérieux objects to the claims of the summons, which it considers baseless, while the serodiagnosis test manufactured by bioMérieux is compliant with the applicable regulations and the state of scientific knowledge, and with the recommendations from learned societies and expert consensus, at the national, European and international levels.

To date, it is impossible to reliably estimate the risk facing the Group.

Note 16 Net debt – cash

16.1 Consolidated cash flow statement

The consolidated cash flow statement is presented according to the recommendation of the French accounting standards authority (*Autorité des normes comptables* – ANC) No. 2013-03 dated November 7, 2013.

It lists separately:

- cash flows from operating activities;
- cash flows from investing activities;
- cash flows from financing activities.

Cash flows from investing activities include the amount of net cash of companies acquired or sold on the date of their first-time consolidation or their derecognition, as well as amounts due to suppliers of non-current assets and amounts receivable on disposals of non-current assets.

Net cash and cash equivalents correspond to the Group's net debit and credit cash positions.

The consolidated statement of cash flows shows the Group's EBITDA. EBITDA is not defined under IFRS and may be calculated differently by different companies. EBITDA as presented by bioMérieux is equal to the sum of operating income before non-recurring items and net additions to operating depreciation and amortisation.

In millions of euros	12/31/2019	12/31/2018 restated[a]
Additive method		
• Net income	269.7	255.4
• Non-recurring income and expenditure and acquisition fees and depreciation costs for the acquisition of BioFire	17.8	17.4
• Cost of net financial debt	20.6	21.3
• Other financial income and expenses, net	2.5	4.5
• Income tax expense	77.8	65.1
• Net income for the period - Investments in associates	0.0	(0.2)
• Net additions to operational depreciation - non-current provisions	189.5	177.0
EBITDA (BEFORE NON-RECURRING ITEMS)	**577.9**	**540.5**
Simplified additive method		
• Contributive operating income before non-recurring items[b]	388.5	363.5
• Depreciation and amortisation	189.5	177.0
EBITDA (BEFORE NON-RECURRING ITEMS)	**577.9**	**540.5**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 and modifications regarding the determination of the acquired assets and liabilities of Hybiome. The reconciliation between the published and the restated financial statements is provided in Note 32.

(b) The contributive operating income before non-recurring items corresponds to the operating income before non-recurring items excluding the charge for the amortisation of the intangible assets of BioFire recognised when assigning the acquisition price.

The available free cash flow is a key indicator for the Group. It is defined as cash flow from operating activities as well as cash flow from investing activities, excluding net cash and cash equivalents from acquisitions and disposals of subsidiaries.

16.2 Comments on the consolidated cash flow statement

Net cash generated from operating activities

EBITDA reached €577.9 million at the end of December 2019, representing 21.6% of revenue, up by 6.9% compared to €540.5 million for 2018. The increase reflected growth in contributive operating income before non-recurring items and net additions to depreciation and amortisation of operating items and operating provisions.

Amortisation and depreciation includes amortisation of rental agreements (see Note 6.2).

Tax disbursements represented €81.6 million, up on the €65.8 million paid in the previous year, due to the reduction in US taxes in 2018 related to the exceptional payment to pension funds and reimbursements in 2018 pursuant to the claim on the dividend tax in France.

During the 2019 fiscal year, the operating working capital requirement increased by €69.4 million, in line with the sustained growth of the Group's business over the period. The change was primarily a result of the following factors:

- inventories grew by €71 million in 2019, outpacing business, due to anticipation of inventory for the flu season and the re-stocking of certain raw materials;
- trade receivables were up by €57.3 million, mainly reflecting growth in sales and a slight increase in collection deadlines;
- changes related to trade payables increased by €32.9 million, in line with business;
- the other working capital items improved by €26 million, mainly due to the increase in tax and social-security debts, which include the

provision for variable compensation indexed on the share price (phantom shares).

Furthermore, in the first half of 2018, bioMérieux recorded an exceptional payment to the American pension fund for €56 million, classified in "other variations related to the activity".

At the end of the 2019 fiscal year, cash generated from operating activities reached €407.9 million, up by 2% compared to the €399.8 million recorded during the previous fiscal year.

Net cash used in investing activities

As expected, disbursement related to capital expenditure represented about 10.2% of revenue, *i.e.* €272.5 million in 2019, against €226.4 during the previous fiscal year.

In this context, free cash flow reached €150.1 million in 2019, against €178.8 million in 2018, representing a drop of nearly 16.1%.

Net cash used in financing activities

Collections related to minority interests stood at €48.4 million and reflect the income from selling Quanterix shares.

The impact of changes in the scope of consolidation, for €72.8 million, mainly includes the acquisition of Invisible Sentinel for €66.4 million.

In June 2019, the Company took an additional equity stake in Hybiome of 12.52% for €23.7 million, for ownership of 67% of capital, presented as a change in interests without gain or loss of controlling interest.

In addition, the Company paid out €41.3 million in dividends, almost stable year-over-year.

16.3 Change in net debt

No borrowings are recognised or re-estimated at fair value, with the exception of debts related to price supplements, recognised and re-valued at each closure at their fair value as defined contractually (see Note 27).

No debt restructuring occurred over the presented fiscal years. Likewise, current debts at December 31, 2018 were not restructured in the past.

At December 31, 2019, after the €41.3 million dividend pay-out to bioMérieux SA shareholders, the Group's net debt stood at €317.4 million and mainly comprised the October 2013 bond issue.

In October 2013, bioMérieux issued €300 million worth of seven-year bonds to institutional investors, redeemable at par on maturity. The bonds pay interest at an annual rate of 2.875%.

The bond issue is shown on the balance sheet at amortised cost calculated using the effective interest rate method for an amount of €299.6 million, reflecting the issue price net of issue fees and premiums. Interest costs were calculated by applying the effective interest rate including issue fees and premiums.

On December 31, 2019, bioMérieux SA also had a non-drawn syndicated credit facility of €500 million, put in place in 2017 and for which the maturity was brought to January 2024 following the exercise of two options for extension.

Furthermore, in order to meet the general financing needs of bioMérieux SA and its subsidiaries, the Company can use a program for the issuance of short-term marketable securities. The main characteristics of the program are as follows:

Maximum ceiling of the program	€500,000,000.00
Duration	< 1 year
Minimum amount per issue	€150,000 or the equivalent value of this amount in foreign currency determined at the time of issue
Issue currency	Euros or any other currency authorised by the French regulations applicable at the time of the issue
Domiciliary agent	CACEIS Corporate Trust
Arranger	Crédit Agricole Corporate and Investment Bank
Dealers	Aurel BGC BNP Paribas BRED Banque Populaire Crédit Agricole Corporate and Investment Bank Crédit Mutuel – CIC Natixis Société Générale ING Belgium Succursale France

The information memorandum pertaining to the short-term marketable securities issuance program can be consulted on the Bank of France website (www.banque-france.fr/en).

16.4 Maturities of net debt

The maturities schedule indicates the net liabilities or net cash and cash equivalents. This non-standardised schedule corresponds to the sum of cash and cash equivalents with a maturity of less than three months, less committed debt and bank overdrafts and other uncommitted borrowings.

The maturity schedule below refers to balance sheet amounts.

In millions of euros	12/31/2018 restated[a]	Change	Changes in scope of consolidation	Change to the table cash flows	Changes in the debt relating to the put	Non-active lease debts[d]	Translation adjustments	12/31/2019
Cash at bank and in hand	239.9	(1.1)	0.2	(0.9)	0.0	0.0	2.0	241.0
Short-term investments	48.4	(14.5)	0.0	(14.5)			0.0	34.0
Cash and cash equivalents[b]	**288.3**	**(15.6)**	**0.2**	**(15.4)**	**0.0**	**0.0**	**2.0**	**275.0**
Bank overdrafts[c]	(10.1)	7.2	0.0	7.2			(8.1)	(11.0)
NET CASH AND CASH EQUIVALENTS (A)	**278.2**	**(8.4)**	**0.2**	**(8.1)**	**0.0**	**0.0**	**(6.0)**	**264.0**
Committed debt (B)	**643.9**	**(69.2)**	**0.0**	**(69.2)**	**(15.2)**	**18.7**	**3.1**	**581.3**
o/w due beyond 5 years	*71.8*							*64.3*
o/w due in 1 to 5 years	*453.1*							*89.4*
o/w due within 1 year	*119.0*							*427.6*
NET DEBT (B) - (A)	**365.7**	**(60.8)**	**(0.2)**	**(61.1)**	**(15.2)**	**18.7**	**9.2**	**317.4**

(a) The difference between the financial statements published in 2018 (net debt of €266.9 million) and the above restated financial statements is primarily due to the retrospective application of IFRS 16 (see Note 2.2). Borrowings linked to lease liabilities calculated at December 31, 2018 totalled €96.9 million. The reconciliation between the published net debt and the restated net debt at December 31, 2018 is presented in Note 32.

(b) See Note 12.2

(c) Cash and bank overdrafts comply with the principles of the standard IAS 7, meaning that they are repayable on demand.

(d) The other changes in lease and non-asset debts are related to new lease contracts not presented in the financing flows in accordance with the standard.

At December 31, 2019, borrowings due beyond five years primarily comprise the debt relating to lease liabilities (see Note 16.4 below).

The borrowings between one and five years includes the put option on the Hybiome minority interests for €26.9 million and the debt relative to lease liabilities (see Note 16.4 below).

The portion of the borrowings that is due within one year mainly includes:

- the bond issue contracted for the acquisition of BioFire for €299.6 million (net of fees and issue premiums according to the amortised cost method);
- short-term marketable securities for €50 million;
- the loan contracted by Shanghai, corresponding to a revolving credit for €38.4 million;
- the portion of at least one year of the debt relative to lease liabilities that is due within one year (see Note 16.4 below).

In June 2019, an additional equity stake was acquired in Hybiome (see Note 1.1.2), which led to reducing the debt relative to the put option on minority interests of €15.2 million.

At the end of the fiscal year, the Group had not breached any of its repayment schedules.

No loan agreement was signed prior to December 31, 2019 concerning loans to be set up in 2020.

16.5 Impact of liabilities related to leases on borrowings and financial debt

In millions of euros	12/31/2019	12/31/2018	12/31/2017
Debt related to leases	**128.5**	**134.6**	**130.7**
Of which leases with purchase option	*34.1*	*37.7*	*41.7*
Due beyond 5 years	**61.1**	**66.2**	**60.1**
Of which leases with purchase option	*15.0*	*18.7*	*22.6*
Due in 1 to 5 years	**45.4**	**46.0**	**48.4**
Of which leases with purchase option	*15.3*	*15.5*	*15.2*
Due within 1 year	**23.9**	**22.4**	**22.2**
Of which leases with purchase option	*3.8*	*3.5*	*3.9*

Only reductions in loans are presented in the cash flow statement.

The amount of financial interest recorded pursuant to leases according to IFRS 16 stood at €3.0 million at December 31, 2019, against €3.2 million at December 31, 2018.

16.6 Debt covenants

In the event of a change of control of the Company as defined in the issue notice, bondholders may ask for their bonds to be redeemed.

The syndicated credit facility is subject to a single ratio: "net debt to operating income before non-recurring items before depreciation and amortisation", calculated outside the application of IFRS 16, which was modified by the addendum of January 2017; it should not exceed 3.5. The Group complied with this ratio at December 31, 2019.

Also, in January 2017, bioMérieux SA renegotiated this syndicated credit facility to bring its amount to €500 million at maturity in 2024.

The other term borrowings at December 31, 2019 primarily correspond to commercial paper, short-term local financing, share allocation plans delivered under cash and cash equivalents, and finance lease liabilities related to assets. None of these borrowings is subject to financial ratios.

16.7 Interest rates

Before hedging, 68% of the Group's borrowings are at fixed rates (€394.1 million), and the remainder is at floating rates (€187.2 million).

The fixed-rate debt is composed of:

- debts on lease liabilities (€94.5 million) at a rate that mostly corresponds to marginal borrowing rates (see Note 6.3.1);
- and the bond issue (maturity 2020) at a rate of 2.875% for €299.6 million. An interest rate swap was taken out converting the interest on half of the bond issue into a floating rate from the beginning, capped at 1.20% and with a floor of 0.30%. In April 2017, due to the forthcoming maturity of the ceiling and floor, a new swap contract was purchased to fix this variable rate at 0.094% from July 18, 2018.

Floating-rate borrowings are essentially based on the currency's interest rate plus a margin.

16.8 Breakdown of net debt (net cash) by currency

In millions of euros	12/31/2019	12/31/2018 published	IFRS 16 restatement	Hybiome restatement	12/31/2018 restated
Euro	268.5	271.5	21.6		293.1
Chinese yuan	42.0	74.3	0.9	1.8	77.0
Indian rupee	11.1	4.5	1.7		6.2
Brazilian real	5.1	3.9	0.4		4.4
South African rand	5.0	(1.8)	0.5		(1.3)
South Korean won	4.9	0.1	0.2		0.3
Japanese yen	5.9	3.4	1.6		5.0
Pound sterling	3.7	(13.2)	1.4		(11.8)
Mexican peso	0.7	(1.2)	0.3		(0.9)
Canadian dollar	1.6	(4.0)	3.3		(0.7)
Hong Kong dollars	(0.9)	(10.1)	1.8		(8.3)
Polish zloty	(0.7)	(2.7)	0.9		(1.8)
Thailand baht	(1.3)	(0.5)	0.0		(0.5)
Czech koruna	(1.4)	(1.1)	0.2		(0.9)
Danish krone	(1.6)	(1.8)	0.1		(1.7)
Turkish lira	(1.5)	(1.4)	0.6		(0.8)
Russian rouble	(2.4)	(0.6)	0.2		(0.4)
Swiss franc	(4.3)	(2.0)	0.4		(1.5)
Swedish krona	(4.4)	(3.8)	0.4		(3.4)
Australian dollars	(16.6)	(13.4)	3.0		(10.4)
US dollars	6.9	(30.4)	54.2		23.8
Other currencies	(3.0)	(2.9)	3.1		0.3
TOTAL	**317.4**	**266.9**	**96.9**	**1.8**	**365.7**

16.9 Loan guarantees

None of the Group's assets have been pledged as collateral to a bank.

For subsidiaries using external funding, bioMérieux SA may be required to issue a first call guarantee to banks granting these facilities.

Hedging agreements are discussed in Note 27.

Note 17 Trade and other payables

In millions of euros	12/31/2019	12/31/2018 restated[a]	12/31/2018 published
Trade payables	**211.9**	**179.7**	**176.9**
Advances and downpayments	9.6	6.3	5.7
Accrued payroll and other taxes	283.3	262.4	259.6
Deferred income	64.4	54.7	54.7
Other payables	23.8	28.8	25.3
Other operating payables	**381.1**	**352.2**	**345.1**
Current tax payables[b]	**32.3**	**33.5**	**33.5**
Due to suppliers of non-current assets	35.8	26.0	25.0
Other	23.6	30.8	30.8
NON-OPERATING PAYABLES	**59.3**	**56.9**	**55.8**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 (see Notes 2 and 32) and modifications regarding the determination of the acquired assets and liabilities of Hybiome and Astute Medical Inc. The reconciliation between the published and the restated financial statements is provided in Note 32.

(b) Payable tax debts include the valuation of tax risks according to IFRIC 23. Its application in 2019 did not lead to the recognition of additional liabilities. In accordance with this interpretation, the liabilities related to litigation and tax risks (excluding penalties and late-payment interest) are recorded in "Current tax payables", as previously (see Note 15.4.3).

The details of the other liabilities related to customer contracts are presented in Note 10.

Operating and non-operating payables generally fall due within one year, except for certain deferred income. Other non-operating payables relate mainly to the fair value of derivative instruments carried in liabilities (€19.1 million at end-2019 *versus* €27.0 million at end-2018, see Note 27.2).

Note 18 Share-based payments

18.1 Share-based payment and share grant plans

The transactions paid in shares concern the bioMérieux SA share grant plans approved by the Ordinary and/or Extraordinary Shareholders' Meetings of May 30, 2012; May 29, 2013; May 28, 2014; May 28, 2015; May 26, 2016; May 30, 2017; May 17, 2018; and May 23, 2019.

A summary of these plans is presented below.

In accordance with IFRS 2 "Share-based Payment", the fair value of the benefits granted is expensed over the vesting period, with a corresponding increase in equity. The expense is based on the value of the underlying shares or options at the grant date, *i.e.* the date on which the list of beneficiaries was approved by the Board of Directors. The probability that the rights will vest is reviewed at the end of each reporting period and until the vesting date, to take into account whether the continuous employment and performance conditions have been met. Any changes are taken to income. At the end of the vesting period, the amount of the cumulative expense is adjusted on the amount effectively vested and held in a specific reserve account. This account is liquidated if the rights are exercised or lapse.

When the share-based payment plan is settled in cash and cash equivalents, the fair value of the plan is updated at each balance sheet date during the vesting period. The counterparty of the expense recognised during the vesting period is recorded as a debt.

In accordance with IFRS 2 "Share-based Payment", the corresponding tax savings recognised in the parent company financial statements is allocated in the consolidated financial statements to the fiscal year during which the share-based payment expense is recognised.

18.2 Share grant plans

	Year in which plan opened				
Number of shares	2015	2016	2017	2018	**2019**
Initial number of options granted	53,100	402,300	40,116	169,685	**266,189**
Options cancelled	6,600	25,200	1,431	4,275	**27,759**
Number of shares remitted in 2019	46,500	376,200	0	0	**0**
Number of shares to be remitted as of December 31, 2019	0	900	38,685	165,410	**238,430**

The number of shares for plans prior to 2017 were tripled after the three-for-one split decided by the Combined General Meeting of June 2017.

Between 2012 and 2019, the Board of Directors granted free shares (out of existing shares) to certain employees and corporate officers.

These plans specify that shares will only be definitively assigned after a vesting period of between three and four years. The conditions for the acquisition of rights are related to presence conditions, and, for certain plans, the definitive acquisition of performance shares is subject to achieving objectives based on revenue and operating income or the achievement of specific objectives. The performance shares are no longer subject to a lock-up period if the vesting period is at least two years. The lock-up period may be waived for shares granted to non-French tax residents, provided the shares concerned are subject to a four-year vesting period.

In 2019, a net expense of €10.5 million was recognised in personnel costs due to compensation in shares, including the expenses related to employers' contributions (against a net expense of €6.6 million in 2018).

At December 31, 2019:

- for 407,266 free shares, the Company considered that the performance criteria were achieved;
- for 36,159 free shares, the Company considered that the performance criteria were not achieved.

At December 31, 2019, bioMérieux SA held 37,419 of its own shares for allocation under the above-described share grant plans. The Company would have to purchase a maximum of 406,006 additional shares at a cost of €32.2 million based on the share price at December 31, 2019.

The fair value of shares corresponds to the market price on the date of assignment of the plans.

18.3 Share-based payments delivered under cash and cash equivalents

In 2015, 2016 and 2017, the Group set up variable compensation plans in the United States indexed on the price of the bioMérieux share (phantom shares). This additional paid-in capital is comparable to allocation plans for free shares delivered under cash and cash equivalents. Due to the drop in the share price, the impact of these plans on the financial statements of the Group is an expense of €35.6 million in the 2019 fiscal year, against income of €7.2 million in 2018. The debt relative to these plans at December 31, 2019 stood at €39.2 million, against €27.0 million at December 31, 2018.

18.4 Stock option plans

Description of the "MyShare" stock option plan

In 2019, eligible employees of the Group were able to take part in an offer reserved for an employee share ownership plan, called "MyShare". The offer was implemented in the form of a transfer of treasury shares. The Group has offered employees an opportunity to acquire shares with a discount and employer top-up, directly or through the intermediary of a mutual fund. The amounts invested are frozen for four years or five years, except in the case of early release specified by the law, and may carry a risk of loss of capital. The main characteristics of the plan are:

- a 30% discount on the reference price of the share, which corresponds to the average opening price of the bioMérieux share over the twenty (20) trading days preceding October 30, 2019;
- a top-up by bioMérieux of 100% of the amount of subscriptions, up to a thousand euros per employee;
- in return, the funds are frozen over a period of five years for French employees and four years for international employees.

Accounting impact

The subscription price of the MyShare plan is defined by the average opening price of the bioMérieux share over the twenty (20) trading days preceding October 30, 2019. The reference price, fixed at €74.60, is reduced by 30%, namely €52.22.

The accounts expense for the plan corresponds to the difference between the fair value of the share subscribed and the subscription price. The fair value takes into account the securities' non-sellability, namely four years for international employees and five years for French employees.

The expense recognised for the plan corresponds to the difference between the fair value of the share subscribed and the subscription price.

The recognised expense of €8.1 million for the plan corresponds to the cost of the bioMérieux top-up for €4.2 million and an expense valued at €3.9 million, corresponding to the difference between the value of a non-sellable share and the subscription price. The value of a non-sellable share is calculated according to the following assumptions: riskless interest rate: 0.2%, refinancing rate for an employee: 3.9%, and borrowing rate of the share: 0.4%.

Employer contributions related to MyShare stand at €0.9 million (see Note 1.2.2).

Note 19 Other operating income and expenses

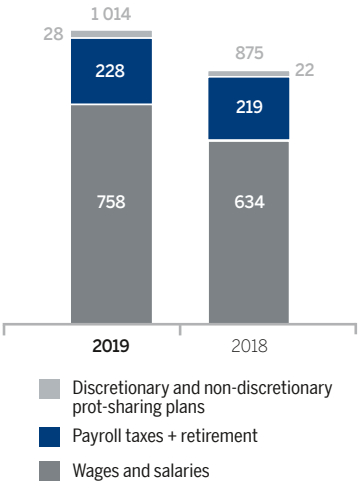
In millions of euros	2019	2018
Net royalties received	3.4	4.0
Research tax credits	28.9	24.0
Research grants	1.8	1.4
Other	11.8	1.8
TOTAL	**45.9**	**31.2**

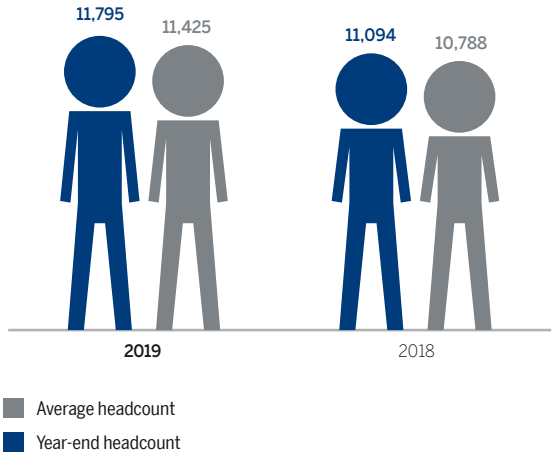
The other income related to customer contracts mainly corresponds to licence fees received.

Other income mainly includes rent in the United States for €5.3 million and income from the sale of assets in Australia for €2.0 million.

In accordance with IAS 20, bioMérieux presents research tax credits as a subsidy within other operating income.

Note 20 Personnel costs





Wages and salaries take into account the share in the fair value of share-based payment (see Note 18).

Payroll taxes include amounts paid into defined contribution plans for €5.4 million.

The inclusion of the tax credit for competitiveness and employment in the calculation of the social charges in 2019 had no impact, because it was recognised as a deduction from payroll taxes in 2018 (see Note 3.2).

The incentive plan only concerns bioMérieux SA.

Note 21 Depreciation, amortisation and provisions, net

	12/31/2019	12/31/2018 restated[a]	12/31/2018 published
Depreciation and amortisation of non-current assets	207.6	196.5	175.4
Impairment	(6.8)	(48.2)	(48.2)
Impairment of current assets	10.3	2.7	2.7
Impairment of non-current financial assets	(0.1)	(0.5)	(0.5)
TOTAL	**211.0**	**150.5**	**129.4**

(a) The 2018 data were restated to take into account the impact of IFRS 16.

Depreciation and amortisation expense includes €189.6 million shown within contributive operating income before non-recurring items and €17.9 million relating to the amortisation of the fair value of assets recognised in relation to the acquisition of BioFire.

The net reversals of provisions on December 31, 2018 mainly related to the American post-employment benefit obligations and followed on from an exceptional payment of $67 million, representing €59 million, to the fund for covering commitments (see Note 1.3).

Note 22 Net financial expense

22.1 Accounting principles

Financial income and expenses are shown on two separate lines:

- **cost of net debt**, which includes interest expense, fees and foreign exchange gains and losses arising on borrowings, as well as income generated by cash and cash equivalents;
- **other financial income and expenses**, net, which includes interest income on instruments sold under finance lease arrangements, the impact of disposals and writedowns of investments in non-consolidated companies, late-payment interest charged to customers, discounting gains and losses, and the ineffective portion of currency hedges on commercial transactions.

22.2 Cost of net financial debt

In millions of euros	12/31/2019	12/31/2018 restated[a]	12/31/2018 published
Finance costs	(19.4)	(16.9)	(16.9)
Interest rate hedging derivatives[b]	2.0	(2.7)	(2.7)
Foreign exchange gains (losses)	(0.5)	1.1	1.1
Interest on leasing debt (IFRS 16)	(2.7)	(2.8)	0.0
TOTAL	**(20.6)**	**(21.3)**	**(18.5)**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16. The reconciliation between the published and the restated financial statements is provided in Note 32.
(b) Corresponds to fair value gains and losses on interest rate hedging instruments taken out in connection with the BioFire acquisition.

The cost of net debt chiefly includes interest in respect of the bond issue and interest on lease debts (IFRS 16).

22.3 Other financial income and expenses, net

In millions of euros	12/31/2019	12/31/2018
Interest income on leased assets	1.2	1.2
Currency hedging derivatives	(4.4)	(6.6)
Other	0.6	1.0
TOTAL	**(2.5)**	**(4.5)**

The currency hedging derivatives mainly correspond to the ineffective part on commercial transactions.

22.4 Foreign exchange gains (losses)

Foreign exchange gains and losses result from differences between the transaction exchange rate and the settlement rate (or the year-end rate if the payment has not yet been made). These differences only partially reflect the impact of currency fluctuations.

The transaction exchange rate is the rate prevailing on the date the transaction takes place. The settlement exchange rate is either the rate in effect on the date of payment or the hedging rate (excluding time value) if a currency hedge was set up for the transaction.

Foreign exchange gains and losses on commercial transactions are recognised under the relevant headings in the consolidated income statement. The foreign exchange gains and losses impacted the consolidated income statement in the following manner:

In millions of euros	12/31/2019	12/31/2018
Sales	(0.7)	0.4
Purchases	(7.1)	(8.8)
Financial items	(0.5)	1.1
TOTAL	**(8.4)**	**(7.3)**

Note 23 Accumulated depreciation of assets linked to the acquisition of BioFire

In order to improve the understanding of operating income and due to the transaction's scale, fees relating to the acquisition of BioFire Diagnostics and BioFire Defense – consolidated for the first time at June 30, 2014 – are shown on a separate line of operating income before non-recurring items.

This line now comprises the amortisations of the assets acquired and valued during the purchase price allocation (technologies) for €17.9 million at the end of December 2019.

Over the 2018 fiscal year, the amount of depreciation of acquired assets stood at €17.5 million.

Note 24 Other non-recurring income (expenses)

24.1 Accounting principles

Other non-recurring income and expenses from operations, net are items that are material, unusual and non-recurring. They are presented on a separate line of the income statement in order to give a clearer picture of the Group's routine business performance. They chiefly include material amounts of net proceeds from disposals of non-current assets (other than instruments), restructuring costs and impairment losses (see Note 5).

Restructuring costs (which include the cost of severance payments) correspond to the expenses recognised when the Group officially announces the closure of a facility or a scaling down of operations in the ordinary course of business, as well as subsequent adjustments made to reflect the actual costs incurred.

24.2 Change

Other non-recurring income and expenses from operations were not material in 2019 or in 2018.

Note 25 Current and deferred income tax

25.1 Accounting principles

The income tax expense for the period comprises current and deferred tax.

Tax credits (excluding research tax credits and CICE tax credits for competitiveness and employment (see Note 3.2)) are presented as a deduction from income tax expense. The CICE is no longer presented in the financial statements at December 31, 2019 since it was eliminated effective January 1, 2019 and was replaced by a system to reduce expenses.

Deferred taxes are recognised using the liability method for all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. These differences arise in particular from:

- temporary differences between the recognition of certain income and expense items for financial reporting and tax purposes (e.g., non-deductible provisions, employee profit-sharing, etc.);
- consolidation adjustments (*e.g.*, accelerated depreciation, provisions, elimination of internal gains included in inventories and non-current assets, etc.);
- forecast withholding tax on dividend payments planned for the following year;
- calculation of the fair value of assets and liabilities relating to companies acquired.

Changes in deferred tax are recognised in profit/loss or in other comprehensive income, according to the recognition of the underlying restatement.

The deferred taxes are calculated using the liability method based on the probable dates of payment. They are recognised at the enacted tax rate (or nearly enacted rate) for their nominal value without discounting.

Deferred tax assets arising on temporary differences are only recognised if they can be utilised against future deductible temporary differences, or where there is a reasonable probability of their utilisation or recovery against future taxable income. In practice, and notably in the case of tax loss carryforwards, this rule is applied based on budget forecasts approved by management using a maximum time horizon of two years. The calculation of deferred taxes takes account of new tax provisions applicable for tax loss carryforwards (utilisation ceilings, etc.).

25.2 Analysis of income tax expense

In millions of euros	2019 Tax	2019 Rate	2018 restated[(a)] Tax	2018 restated[(a)] Rate
Theoretical tax at standard French tax rate	**119.4**	**34.4%**	**110.2**	**34.4%**
• Impact of income tax at reduced tax rates and foreign tax rates	(23.5)	-6.9%	(34.5)	-10.8%
• Impact of permanent differences	(8.7)	-2.5%	(2.4)	-0.7%
• Impact of tax on the payment of dividends	0.4	0.1%	0.7	0.2%
• Deferred tax assets not recognised on tax losses carried forward	1.4	0.4%	2.0	0.6%
• Impact of research and CICE tax credits presented in operating income	(8.8)	-2.5%	(9.0)	-2.8%
• Tax credits (other than research tax credits)	(2.3)	-0.7%	(1.9)	-0.6%
ACTUAL INCOME TAX EXPENSE	**77.8**	**22.4%**	**65.1**	**20.3%**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16. See Note 32.

The basic Corporate income tax rate in France is 33.33%. Act No. 99-1140 of December 29, 1999 on social security funding introduced a surtax that raised the statutory rate by 1.1%.

The Group's effective tax rate at December 31, 2019 stood at 22.4%, compared with 20.3% at end-2018.

As a reminder, the effective tax rate in 2018 had benefited from the positive effect of the exceptional contribution to the pension fund in the United States and the favourable resolution of a tax dispute in Sweden, which had materially affected the effective tax rate downwards.

In 2019, the Group had benefited from the positive impact of regulations relative to the US tax reform published in March 2019 (€7.0 million, of which €3.5 million pursuant to the 2018 fiscal year). In 2019, the effective tax rate also benefited from the positive impact of including a discount due to non-sellability in relation to the employee share ownership plan for €1.8 million (see Note 1.2.2).

Excluding these non-recurring effects, the effective tax rate of the Group stood at 24.1%.

The deferred tax rate was maintained at 32.02% for payments from January 1, 2020 and 25.83% for payments from January 1, 2021, to take into account the provisions of the 2020 finance law.

The income tax expense breaks down as follows:

In millions of euros	2019	2018 restated[(a)]	2018 published
Current tax	82.7	68.6	68.6
Deferred tax	(4.9)	(3.5)	(3.4)
TOTAL	**77.8**	**65.1**	**65.2**

(a) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16. See Note 32.

25.3 Change in deferred tax

In millions of euros	Deferred tax assets	Deferred tax shareholders' equity and liabilities
DECEMBER 31, 2017 PUBLISHED	**51.6**	**103.8**
Opening restatement	1.1	0.5
DECEMBER 31, 2017 RESTATED[(a)]	**52.7**	**104.3**
Translation adjustments	1.8	3.8
Changes in scope of consolidation	16.2	22.8
Movements recognised in income	7.8	4.5
Other comprehensive income (expense)	(0.8)	1.5
Other movements	(2.4)	(0.4)
DECEMBER 31, 2018 PUBLISHED	**74.3**	**136.0**
Opening restatement	4.2	(1.8)
DECEMBER 31, 2018 RESTATED[(a)]	**78.5**	**134.2**
Translation adjustments	0.9	1.8
Changes in scope of consolidation	6.2	4.4
Movements recognised in income	9.5	4.6
Other comprehensive income (expense)	1.4	(4.1)
Change in fair value of financial instruments	*(0.3)*	
IAS 19R	*1.7*	*(4.1)*
Other movements	2.5	0.3
DECEMBER 31, 2019	**99.0**	**141.2**

(a) The 2017 data were restated to take into account the impact of IFRS 16, as were the 2018 data to take into account the impact of IFRS 16 and the integrations of Hybiome and Astute Medical Inc. The reconciliation between the published and the restated financial statements is provided in Note 32.

Deferred tax assets are mainly generated in the US and result from:

- the activation of losses carried forward and tax benefits recognised for the purchase price allocation of Astute Medical Inc. and Invisible Sentinel Inc.;
- temporary differences due in particular to the non-deductibility of certain provisions and the elimination of internal margins on inventories;
- deferred tax on other comprehensive income items correspond to fair value adjustments to financial instruments (-€0.3 million in 2019) and deferred taxes on actuarial gains and losses relating to post-employment benefit obligations (€5.8 million in 2019).

In 2019, new deferred tax assets were recognised for €6.2 million for deficits carried forward and tax credits recognised for the acquisition of Invisible Sentinel Inc.

At December 31, 2019, deductible timing differences deriving from tax losses that were not recognised as deferred tax assets amounted to €24.4 million (of which €22.6 million in respect of unrecognised tax loss carryforwards), representing a potential tax savings of €7.2 million (of which €6.8 million in respect of unrecognised tax loss carryforwards).

At December 31, 2018, deductible timing differences deriving from tax losses that were not recognised as deferred tax assets amounted to €19.2 million (of which €17.6 million in respect of unrecognised tax loss carryforwards), representing a potential tax savings of €6.0 million (of which €5.5 million in respect of unrecognised tax loss carryforwards).

Deferred tax liabilities were primarily from BioFire (€54.2 million), bioMérieux SA (€25.5 million), and Hybiome (€10.4 million), mainly corresponding to the accounting of fixed assets at fair value. New deferred tax liabilities were recognised on the Group's latest acquisition (€4.4 million relative to Invisible Sentinel Inc.).

Note 26 Fees of Statutory Auditors

	12/31/2019							12/31/2018						
In thousands of euros	Ernst &Young		Grant Thornton		Other		Total	Ernst &Young		Grant Thornton		Other		Total
Statutory audit	**1,167**	**91%**	**580**	**100%**	**211**	**100%**	**1,958**	**1,064**	**91%**	**586**	**97%**	**36**	**100%**	**1,685**
• bioMérieux SA	169	13%	156	27%		0%	325	158	13%	153	25%		0%	311
• fully consolidated subsidiaries	998	78%	424	73%	211	100%	1,633	906	78%	433	72%	36	100%	1,374
Services other than statutory audit	**119**	**9%**		**0%**			**119**	**105**	**9%**	**19**	**0%**		**0%**	**124**
Audit	**1,286**	**100%**	**580**	**100%**	**211**	**100%**	**2,077**	**1,168**	**100%**	**605**	**100%**	**36**	**100%**	**1,809**
Legal, tax, labour-related services	0	0%	0	0%			0		0%	0	0%			0
Other	0	0%		0%			0		0%		0%			0
Other services	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**
TOTAL	**1,286**	**100%**	**580**	**100%**	**211**	**100%**	**2,077**	**1,168**	**100%**	**605**	**100%**	**36**	**100%**	**1,809**

Note 27 Financial instruments: financial assets and liabilities

27.1 Recognition and measurement of financial instruments

Financial instruments include financial assets, financial liabilities and derivatives (swaps, forward contracts, etc.).

Financial instruments appear under several headings in the balance sheet: non-current financial assets, other non-current assets, trade receivables, other receivables and other payables (*e.g.* changes in the fair value of derivatives), short-term and long-term borrowings, trade payables, cash and cash equivalents.

• Financial assets:

The IFRS 9 standard breaks down the financial assets into 3 categories. These categories are described in Note 7 "Non-current financial assets".

Current financial assets (excluding assets related to derivatives) are only assets valued at amortised cost.

• Financial liabilities:

Borrowings are recognised at amortised cost, with the exception of debts on price supplements, revalued at each closure at their fair value as defined contractually.

Other financial liabilities included in the other sections of current and non-current liabilities mainly concern trade payables, and are recognised at amortised cost, which in practice corresponds to their cost.

For information, the only liabilities having a material financing component are the commitments for retirement benefits and liabilities related to termination benefits in Italy.

• Reclassifications of financial assets and liabilities:

There were no reclassifications of financial assets and liabilities over the fiscal years presented between the various categories presented above.

• Derivative instruments:

The Group has set up interest-rate and foreign exchange hedging instruments that meet the definition of hedges as specified in IFRS 9 and coherent with its general policy on risk management (hedging relationship clearly defined and documented at the date of establishment of the hedge, demonstrated efficiency, eligible hedging instrument, and no dominant credit risks).

In practice, the hedging instruments mainly correspond to simple products covering a single risk (swaps, forward sales, and options), for which the main characteristics (reference rates and interest payment dates) back the items covered, with the exception of cross-currency swaps, which cover exchange rate risks, and interest rate risks related to the repayment of loans made in dollars by bioMérieux SA to bioMérieux Inc. for financing BioFire.

The hedging instruments are recognised originally at their fair value. They are subsequently remeasured to fair value at year-end and are recorded in the balance sheet under "Non-operating receivables" and "Non-operating payables". Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (IFRS 13). The fair

value of currency derivatives is determined using standard market valuation techniques based on observable market data (interest rates, exchange rates, observable implied volatility). Fair value generally corresponds to a level 2 of fair value.

Accounting for changes in their fair value depends on the type of derivative concerned and whether there is a hedging relationship, and if so what type of hedge is involved:

- fair value gains and losses on derivatives not qualifying as hedging instruments are recognised in the consolidated income statement. Fair value gains and losses on derivatives qualifying and used as cash flow hedges (*i.e.* hedges of foreign currency receivables and payables) are recognised in full in the consolidated income statement on a symmetrical basis with the loss or gain on the hedged item;
- fair value gains and losses on derivatives qualifying and used as cash flow hedges (i.e. hedges of future commercial transactions in foreign currencies, mainly in the form of forward transactions and cross-currency swaps) are recognised directly in other comprehensive income for the effective portion, and in the income statement for the non-effective portion (mainly the time value of money in the case of currency forward transactions). Amounts recognised under other comprehensive income are reclassified to income in the same period(s) during which the hedged forecast cash flows affect income.

Presentation of financial assets and liabilities at fair value through income

In accordance with IFRS 13, financial instruments are presented in one of the three levels (see Note 27.2) of the fair value hierarchy:

- level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- level 2: market inputs for the asset or liability that are observable either directly (*e.g.*, adjusted level 1 quoted prices), or indirectly (*e.g.*, inputs derived from quoted prices);
- level 3: non-market inputs for the asset or liability that are not observable (*e.g.* price on an inactive market or valuation based on multiples for unlisted securities).

27.2 Change

The breakdown of financial assets and liabilities according to the categories specified by the IFRS 9 standard "non-accounted" categories (see Note appendix 27.1), and the comparison between the accounting values and fair values, are given in the table below (excluding receivables, tax debts and liabilities to personnel):

	December 31, 2019						
In millions of euros	Financial assets at fair value through income (excl. derivatives)	Shares in non-consolidated companies with change in fair value by other components of comprehensive income	Receivables and borrowings at amortised cost	Derivative instruments	Value accounting	Fair value	Level
Financial assets							
Shares in non-consolidated companies		31.5			31.5	31.5	1-3
Other non-current financial assets			10.4		10.4	10.4	-
Other non-current assets			16.1		16.1	16.1	
Derivative instruments (positive fair value)				7.4	7.4	7.4	2
Trade receivables			552.1		552.1	552.1	-
Other receivables			6.6		6.6	6.6	-
Cash and cash equivalents	275.0				275.0	275.0	1
TOTAL FINANCIAL ASSETS	**275.0**	**31.5**	**585.2**	**7.4**	**899.1**	**899.1**	
Financial liabilities							
Bond issue[(a)]			299.6		299.6	306.2	1
Other financing facilities			153.7		153.7	153.7	2
Derivative instruments (negative fair value)				19.1	19.1	19.1	2
Borrowings - current portion			139.0		139.0	139.0	2
Trade payables			211.9		211.9	211.9	-
Other current liabilities			69.2		69.2	69.2	-
TOTAL FINANCIAL LIABILITIES	**-**	**-**	**873.4**	**19.1**	**892.5**	**899.1**	

(a) The book value of the bond issue is shown net of issue fees and premiums.

Levels 1 to 3 correspond to the fair value hierarchy as defined by IFRS 13 (see Note 27.1).

In practice, financial assets and liabilities at fair value essentially concern certain securities, cash investments and derivative instruments. In other cases, fair value is shown in the table above for information purposes only.

No level in the fair value hierarchy is shown when the carrying amount approximates fair value.

bioMérieux enters into derivative instruments as part of master agreements that provide for offsetting in the event of counterparty default. The impact of these master netting agreements on the fair value of derivative instruments at December 31, 2019 was a net negative exposure of €11.7 million *versus* a net exposure of €17.7 million at end-2018.

No inter-category reclassifications were carried out in 2019. None of the Group's financial assets has been pledged as collateral.

Impairment losses recorded against financial assets primarily relate to write-downs of trade receivables (see Note 9) and non-current financial assets (see Note 7).

	December 31, 2018 restated[b]						
In millions of euros	Financial assets at fair value through income (excl. derivatives)	Shares in non-consolidated companies with change in fair value by other components of comprehensive income	Receivables and borrowings at amortised cost	Derivative instruments	Value Book	Fair value	Level
Financial assets							
Other shares in non-consolidated companies		58.9			58.9	58.9	1-3
Other non-current financial assets			8.0		8.0	8.0	-
Other non-current assets			16.2		16.2	16.2	
Derivative instruments (positive fair value)				9.3	9.3	9.3	2
Trade receivables			491.8		491.8	491.8	-
Other receivables			6.1		6.1	6.1	-
Cash and cash equivalents	288.3				288.3	288.3	1
TOTAL FINANCIAL ASSETS	**288.3**	**58.9**	**522.1**	**9.3**	**878.6**	**878.6**	
Financial liabilities							
Bond issue[a]			299.1		299.1	313.8	1
Other financing facilities			225.8		225.8	225.8	2
Derivative instruments (negative fair value)				27.0	27.0	27.0	2
Borrowings - current portion			129.1		129.1	129.1	2
Trade payables			179.7		179.7	179.7	-
Other current liabilities			61.1		61.1	61.1	-
TOTAL FINANCIAL LIABILITIES	**-**	**-**	**894.8**	**27.0**	**921.8**	**936.5**	

(a) The book value of the bond issue is shown net of issue fees and premiums.

(b) The comparative data pertaining to 2018 were restated to take into account the full retrospective application of IFRS 16 (see Notes 2 and 32) and modifications regarding the determination of the acquired assets and liabilities of Hybiome and Astute Medical Inc. The reconciliation between the published and the restated financial statements is provided in Note 32.

In millions of euros	December 31, 2018 published						
	Financial assets at fair value through income (excl. derivatives)	Shares in non-consolidated companies with change in fair value by other components of comprehensive income	Receivables and borrowings at amortised cost	Derivative instruments	Value Book	Fair value	Level
Financial assets							
Shares in non-consolidated companies		58.9			58.9	58.9	1-3
Other non-current financial assets			12.9		12.9	12.9	-
Other non-current assets			14.6		14.6	14.6	
Derivative instruments (positive fair value)				9.3	9.3	9.3	2
Trade receivables			446.4		446.4	446.4	-
Other receivables			4.8		4.8	4.8	-
Cash and cash equivalents	280.1				280.1	280.1	1
TOTAL FINANCIAL ASSETS	**280.1**	**58.9**	**478.7**	**9.3**	**827.0**	**827.0**	
Financial liabilities							
Bond issue[(a)]			299.1		299.1	318.8	1
Other financing facilities			147.7		147.7	147.7	2
Derivative instruments (negative fair value)				27.0	27.0	27.0	2
Borrowings - current portion			100.2		100.2	100.2	2
Trade payables			176.9		176.9	176.9	-
Other current liabilities			56.0		56.0	56.0	-
TOTAL FINANCIAL LIABILITIES	**-**	**-**	**779.9**	**27.0**	**806.9**	**826.6**	

(a) The book value of the bond issue is shown net of issue fees and premiums.

Movements in financial instruments whose fair value was determined using Level 3 inputs under IFRS 13 (see Note 27.1) at December 31, 2019 were as follows:

In millions of euros	Shares in non-consolidated companies
DECEMBER 31, 2017	**44.3**
Change of level 3 to 2	(27.7)
Gains and losses recognised in income	
Gains and losses recognised in other comprehensive income	
Acquisitions	5.5
Disposals	0.0
Changes in Group structure, translation adjustments	0.1
DECEMBER 31, 2018	**22.3**
Change of level 3 to 2	
Gains and losses recognised in income	
Gains and losses recognised in other comprehensive income	(0.4)
Acquisitions	5.2
Disposals	
Changes in Group structure, translation adjustments	
DECEMBER 31, 2019	**27.1**

Note 28 Risk management

28.1 Exchange rate risk

28.1.1 Group policy

Since more than two-thirds of the Group's operations are conducted outside the eurozone, its revenue, results and balance sheet may be affected by fluctuations in exchange rates between the euro and other currencies. Revenue is particularly affected by movements in exchange rates between the euro and the US dollar (about 43% of revenue in 2019) and, more occasionally, other currencies.

However, given the Group's significant presence in the United States, certain operating expenses are settled in dollars, thereby mitigating the impact of fluctuations in the dollar on operating income.

Currencies other than the euro and the dollar represent 31% of the Group's revenue. However, as costs incurred in these other occurrences are limited, the Group's operating income is greatly exposed to fluctuations in these currencies. This exposure is spread over approximately 20 currencies, none of which accounts for more than 8% of the Group's revenue. This exposure thus becomes significant only if several of the currencies concerned fluctuate against the euro in the same direction, without any set-off.

The Group's current policy is to seek to hedge the impact of exchange rate fluctuations on budgeted net income. According to their availability and cost, the Group may make use of hedging instruments to limit the risks related to the fluctuation of exchange rates. Its current practice is to put in place global hedges covering similar risks.

Hedging contracts are purchased to cover transactions included in the budget and not for speculative purposes.

Distribution subsidiaries are currently mainly billed in their local currencies by manufacturing entities (except where prohibited by law), so that currency risks can be managed at Corporate level for these latter.

Whenever possible, the Group hedges currency risks arising on debt denominated in currencies other than those of the country in which operations are located, so as to offset any foreign currency translation risks. However, when these hedges are extended during the loan transaction, the Group recognises foreign exchange gains or losses when the hedges are unwound and simultaneously recontracted. These gains and losses cancel each other out over the term of the loan, but may be material in a given fiscal year.

In addition to having an impact on the Group's net income, exchange rate fluctuations can affect its equity: due to its worldwide presence, many of its assets and liabilities are recorded in US dollars or in other foreign currencies. To date, the Group does not hedge these exchange rate risks on its net assets.

Hedges consist mainly of forward currency sales and purchases and options (maturing within 12 months at December 31, 2019). Detailed information on hedging transactions is provided in Note 28.1.3.

28.1.2 Exposure of revenue to exchange rate risk

In millions of euros	12/31/2019		12/31/2018	
Euro	**706**	**26%**	**679**	**28%**
Other currencies				
Dollars[(a)]	1,142	43%	1,009	42%
Renminbi	222	8%	170	7%
Indian rupee	67	3%	59	2%
Pound sterling	54	2%	52	2%
Japanese yen	52	2%	46	2%
Canadian dollar	41	2%	39	2%
South Korean won	40	2%	42	2%
Brazilian real	36	1%	32	1%
Australian dollar	32	1%	33	1%
Other currencies	282	11%	261	11%
SUB-TOTAL		**74%**		**72%**
TOTAL	**2,675**	**100%**	**2,421**	**100%**
Sensitivity	**(20)**		**(17)**	

(a) US and Hong Kong dollars.

The sensitivity analysed above shows the impact on revenue of a 1% increase in the euro exchange rate against all currencies.

Consolidated equity

A 10% increase in the euro exchange rate against all currencies would have had the following effect:

	2019	2018
Net income	(41.7)	(38.3)
Shareholders' equity[a]	(146.9)	(128.1)

(a) Translated at the year-end (closing) exchange rate.

Exposure of assets and liabilities

The table below shows the US dollar and the four main currencies to which the Group is exposed at December 31, 2019:

In millions of currency units	USD	CNY	INR	KRW	MXN
Assets denominated in foreign currencies	48	167	971	11,592	162
Liabilities denominated in foreign currencies	(24)	(4)	0	0	0
Net exchange exposure before hedging	**24**	**163**	**971**	**11,592**	**162**
Impact of hedging	5	107	0	8,300	52
Net exchange exposure after hedging	**19**	**56**	**971**	**3,292**	**110**
In millions of euros					
Net exchange exposure after hedging	**17**	**7**	**12**	**3**	**5**
SENSITIVITY	**(1.6)**	**(0.7)**	**(1.1)**	**(0.2)**	**(0.5)**

The sensitivity analysed above shows the impact of a 10% increase in the exchange rate on the net foreign exchange exposure at December 31, 2019, taking into account hedging transactions.

Exposure of borrowings

The Group's borrowings with third parties are primarily denominated in euros and contracted by bioMérieux SA. However, since these borrowings were contracted in order to finance an acquisition in the US, they were converted into US dollars using a cross-currency swap (see Note 28.4.1).

The Group's policy is to prefer inter-company financing in the currency of the subsidiary; these loans are generally hedged by currency swap contracts. When it is difficult for the Group to grant loans to its foreign subsidiaries, the subsidiaries borrow from leading banks in their local currency.

28.1.3 Hedging instruments

As part of the currency hedging policy, the following currency hedging instruments were in effect at December 31, 2019:

Currency hedge at December 31, 2019 *In millions of euros*	Expiration date 2019		Value 2019 Market[a]
	< 1 year	1 to 5 years	
Hedges of existing commercial transactions			
• currency forward contracts	67.0	0.0	(0.2)
• options	0.4	0.0	0.0
TOTAL	**67.4**	**0.0**	**(0.2)**
Hedges of future commercial transactions			
• currency forward contracts	289.9	0.0	(1.6)
• options	5.9	0.0	0.1
TOTAL	**295.8**	**0.0**	**(1.5)**

(a) Difference between the hedging price and the market price at December 31, 2019.

Currency hedges in effect at December 31, 2018 were as follows:

Currency hedge at December 31, 2018 *In millions of euros*	Expiration date 2018		Value 2018 Market[(a)]
	<1 year	1 to 5 years	
Hedges of existing commercial transactions			
• currency forward contracts	70.1	0.0	0.1
• options	0.0	0.0	0.0
TOTAL	**70.1**	**0.0**	**0.1**
Hedges of future commercial transactions			
• currency forward contracts	332.7	1.9	(2.8)
• options	11.8	0.0	0.2
TOTAL	**344.5**	**1.9**	**(2.6)**

(a) Difference between the hedging price and the market price at December 31, 2018.

There were no net investment hedges of foreign operations at December 31, 2019.

All of the currency forward contracts and options outstanding at December 31, 2019 had maturities of less than 12 months.

The table below gives the summary of hedging instruments held by the Group, and their variation in fair value:

			Fair value of the hedging instrument at closing		Change in the fair value of the hedging instrument over the financial year	
In millions of euros	Category of the hedge	Notional hedge amount at closing	assets	shareholders' equity and liabilities	of which portion recognised as net income	of which portion recognised in other comprehensive income
FAIR VALUE HEDGE						
EUR interest rate risk						
Debt in EUR	Interest rate swap rate	300.0	2.2		(2.3)	
Debt in EUR	rate options					
Exchange rate risk					**0.5**	
trade receivables in currencies	forward sales	67.0	0.0	(0.2)		
trade debts in currencies	forward purchases		0.0			
trade receivables in currencies	options	0.4				
financial receivables in currencies	forward sales	24.0		(0.1)		
borrowings in currencies	forward purchases	80.0		(0.4)		
CASH FLOW HEDGING						
EUR interest rate risk						
Debt in EUR	Interest rate swap rate					
USD interest rate risk						
loan in $	cross currency swap	49.2		(10.9)	(0.4)	(0.8)
Exchange rate risk					**0.4**	**(0.4)**
future commercial sales in currencies	forward sales	289.9		(1.6)		
future commercial purchases in currencies	forward purchases					
future commercial sales in currencies	options	5.9	0.1			

The Group does not hold any instruments that fall under the category of net investment hedges.

28.2 Credit risk

With revenue in more than 160 countries from government organisations and private customers, bioMérieux is exposed to a risk of non-payment of debts.

The management of credit risk includes the prior examination of the financial position to determine a credit limit, the establishment of specific guarantees or insurance, and monitoring of the payment deadline and late payments.

The policy of the Group in terms of the depreciation of trade receivables is described in Note 9.

28.3 Liquidity risk

Financial liabilities due in less than one year and in more than one year are classified in the balance sheet as current and non-current liabilities, respectively.

The Group is not exposed to liquidity risk on its current financial assets and liabilities since its total current financial assets far exceed its total current financial liabilities.

Accordingly, the only maturity schedule disclosed pertains to net debt (see Note 16.3).

The table below shows the projected cash flows from the bond issue and the hedges related to contractual redemption of the principal at par and to contractual interest payments at December 31, 2019:

In millions of euros	Due within 1 year	Due in 1 to 5 years	Due beyond 5 years
Bond issue[a]	(308.6)	0.0	0.0
Cross currency swap	(11.6)	0.0	0.0
Optional strategies[b]	0.0	0.0	0.0
Interest rate swap[b]	2.2	0.0	0.0

(a) Contractual flows of principal and interest.
(b) Based on the IRS yield curve at December 31, 2019.

28.4 Interest rate risk

28.4.1 Exposure to interest rate risks

As part of its interest rate risk management policy aimed primarily at managing the risk of an increase in interest rates, the Group splits its debt between fixed and floating interest rates.

The bond issue for €300 million at a fixed rate breaks down at December 31, 2019 into €150 million of debt at a fixed rate and €150 million of debt for which the sensitivity to interest-rate risk is nil after taking into account derivative instruments.

In order to hedge the exchange rate and interest rate risks on the repayments of the US dollar-denominated loan granted by bioMérieux SA to bioMérieux Inc. to finance the acquisition of BioFire, the Group set up a cross-currency swap in January 2014 for a notional amount of $67 million on December 31, 2019. The instrument thus converts the debt in dollars into a debt in euro, one of the legs of which, representing 57% of the notional amount, receives the variable interest rate.

An indexed variable-rate real estate lease financing agreement for an original notional amount of €44.4 million was put in place in 2016 to finance Campus de l'Etoile. This financing is not backed by any hedging mechanism. The capital outstanding at December 31, 2019 was €32.7 million.

28.4.2 Hedging instruments and sensitivity

At December 31, 2019, the hedging portfolio against exchange-rate risk was broken down into interest rate swap contracts at €150 million and a cross-currency swap of $470 million originally (see Note 28.4.1).

The market value of these instruments represents a net liability of €8.7 million. It breaks down as follows:

In millions of euros	2019 market value
Cross currency swap	(10.9)
Options	0.0
Interest rate swap	2.2

Sensitivity of net income to changes in the cost of net debt (excluding the impact of the cross-currency swap) attributable to fluctuations in short-term interest rates

The impact on the cost of debt (calculated on a full-year basis) resulting from changes in net debt at year-end attributable to fluctuations in short-term interest rates is shown in the table below including the impact of interest rate hedging:

In millions of euros	Net income
50-bp increase	(0,059)
50-bp decrease	0,000

Sensitivity of equity and net income to changes in the fair value of interest rate derivatives

Changes in the fair value of interest rate derivatives attributable to changes in the interest rate curve adopted at year-end would have the following impact on the Group's equity and net income:

- the impacts recognised in equity relate to the effective portion of the instruments classified as cash flow hedges;
- the impacts recognised in income relate to the ineffective portion of instruments classified as cash flow hedges, and to the impact of changes in the fair value of instruments that do not qualify for hedge accounting.

A change of 50 basis points applied to the entire yield curve at the closing date and to transactions in effect at December 31, 2019 would have led to an increase (decrease) in equity and net income for the following amounts (based on constant exchange rates and volatility):

In millions of euros	Equity (excluding net income)	Net income
50-bp increase	0.0	(0,003)
50-bp decrease	0.0	0,003

Sensitivity of equity and net income to changes in the fair value of the cross-currency swap

A change of 50 basis points applied to the entire yield curve (euro and US dollar) would have led to an increase (decrease) in equity and net income for the following amounts:

In millions of euros	Shareholders' equity (excl. net income)	Net income
50-bp increase	0.0	0.1
50-bp decrease	0.0	(0.1)

A change of 5% in the closing euro/dollar rate (1.1234 at the closing date) applied to operations in progress on December 31, 2019 would cause an increase (reduction) in equity and income, for the following amounts:

In millions of euros	Shareholders' equity (excl. net income)	Net income
Increase of 5%	0.0	2.9
Decrease of 5%	0.0	(3.2)

These impacts on income would have been perfectly offset by the impact that the underlying change would have had if it had been subject to the same changes.

The impact on the cost of debt (calculated on a full-year basis) resulting from a 50 basis point change and a 5% change in the euro/dollar closing rate applied to net debt at year-end, attributable to fluctuations in short-term interest rates, is shown in the table below, including the impact of interest rate hedging at that date:

In millions of euros	Net income
Increase of 50 bp and 5%	3.0
Decrease of 50 bp and 5%	(3.3)

28.5 Counterparty risk

Since there is currently no major financial or economic crisis, the Group is not exposed to a significant credit risk. At December 31, 2019 and 2018, investments were solely in short-term instruments, with a net asset value calculated daily.

The Group's financial transactions (credit facilities, financial market transactions, financial investments, etc.) are with leading banks and are spread among all of its banking partners in order to limit counterparty risk.

No IFRS 13 adjustments were therefore applied to financial assets in respect of the risk of non-collection.

Still in the context of the IFRS 13 standard, an analysis was carried out to assess the credit risk related to the fair value of financial instruments. Counterparty risk was not considered material, given the short-term maturity (less than one year) of the Group's currency hedges, the fair value of interest rate derivatives at December 31, 2019, and the rating of bioMérieux's banking counterparties.

Note 29 Off-balance sheet commitments

Outstanding commitments given or received at December 31, 2019 are described below:

29.1 Off-balance sheet commitments relating to Group companies

- The Group is subject to a number of earn-out clauses relating to acquisitions and disposals. At the closing date, it was not deemed probable that these clauses would be triggered, or that the amount involved could be reliably estimated.

29.2 Off-balance sheet commitments relating to the Company's financing

- Commitments related to borrowings are described in Note 16.3.
- Commitments related to derivative instruments are described in Note 27.

29.2.1 Commitments given

- Bank guarantees given by the Group in connection with bids submitted totalled €133.4 million at December 31, 2019.

29.2.2 Commitments received

- At December 31, 2019, bioMérieux SA has an undrawn syndicated credit facility of €500 million, which was amended in 2018, bringing its maturity to January 2024 (five years with the option for extension twice for one year, one of which remains to be exercised) (see Note 16.2).

29.3 Off-balance sheet commitments relating to the Group's operating activities

29.3.1 Commitments given

- bioMérieux Inc. and bioMérieux SA are parties to various agreements that provide for payments based on progress in corresponding research projects or a minimum volume of sales (€3.2 million).
- Within the framework of the free share grant plans approved by the Board of Directors, bioMérieux SA, which holds 37,419 shares as coverage, would need to purchase 406,006 additional shares if all of the promised shares were to be granted. This commitment represents an amount of €32.2 million based on the share price at December 31, 2019.
- bioMérieux SA entered into a ten-year partnership with BIOASTER, a Technological Research Institute in Lyon specialised in infectious diseases. In the period 2012-2015, its contribution to research activities resulted in new partnership agreements being put in place with BIOASTER for almost €4 million. bioMérieux's own employees are also involved in these partnership agreements. A new collaboration cycle was opened for the period between January 1, 2016 and end of July 2020 during which bioMérieux SA has made a commitment to BIOASTER in the same proportions.
- bioMérieux SA participates in a research program coordinated by Institut Mérieux, together with bioMérieux, Transgène, Genosafe and the Genethon association. The aim of this program is to develop a new generation of diagnoses and therapies focusing on cancers, infectious diseases and genetic disorders. This program is known under the acronym "ADNA" (for "Advanced Diagnostics for New therapeutic Approaches"). In this context, and given the addendums that modified the initially-adopted research programme, bioMérieux SA began research and development work for an estimated amount of €67.5 million covering the period 2007 to 2017. The programme ended in December 2017. In return, bioMérieux SA received subsidies (€16.1 million) and repayable grants (€7.5 million). If it succeeds, bioMérieux SA must reimburse the reimbursable aid according to a payment schedule that depends on the revenue made on certain products, then pay a profit share until 2029 (3.4% of this revenue).
- Other commitments given (endorsements and guarantees other than real estate rent obligations) amounted to €0.6 million. bioMérieux SA has committed to participate in a capital increase by ATI in the amount of €0.2 million.

29.3.2 Commitments received

- Other commitments received amount to €4.3 million.

Note 30 Transactions with related parties

30.1 Directors' and officers' compensation

Members of the Company's administrative, management and supervisory bodies were paid an aggregate €12.3 million in compensation during the 2019 fiscal year.

Executive compensation *In millions of euros*	2019	2018
Fixed compensation	5.1	4.8
Variable compensation	3.5	4.7
Benefits-in-kind	0.3	0.2
Free shares	2.9	2.4
Directors' fees	0.0	0.0
Termination benefits	0.5	0.0
TOTAL	**12.3**	**12.2**

30.2 Other transactions with non-consolidated affiliates

- The Institut Mérieux, which held 58.9% of bioMérieux SA at December 31, 2019, provided €8.2 million in services and research for the bioMérieux Group over the fiscal year, reinvoiced to bioMérieux Inc. for €2.9 million, and to BioFire for €2.0 million. The companies of the bioMérieux Group re-invoiced €1.2 million to the Institut Mérieux for expenses borne on its behalf (bioMérieux SA for €0.7 million and bioMérieux India for €0.4 million).
- During 2019, the Group supplied €14.2 million worth of reagents and instruments to entities of the Mérieux NutriSciences Corp. Group, in which Institut Mérieux holds a majority interest.
- Thera Conseil, which is 99.2% owned by Institut Mérieux, billed bioMérieux SA €1.7 million for services in respect of 2019.
- Also during the year, bioMérieux SA contributed €2.0 million to the Fondation Christophe & Rodolphe Mérieux.
- ABL, fully owned by Institut Mérieux, invoiced raw materials to bioMérieux SA for €2.4 million during the 2019 fiscal year. Conversely, bioMérieux Inc. re-invoiced ABL Inc. €3.1 million. Also, ABL received a loan of $1.8 million from bioMérieux Inc.
- During the 2019 fiscal year, bioMérieux SA invoiced services for €1.7 million to Mérieux Université, which it held at 40%; the remaining 60% was held by the Institut Mérieux (40%) and Mérieux NutriSciences (20%). Conversely, it paid €3.9 million to Mérieux Université for training fees.

Note 31 Subsequent events

The Group did not identify any events subsequent to closing.

Note 32 Impacts on the consolidated financial statements

The Group restated the comparative financial statements for the retrospective application of IFRS 16 to the lease accounts in 2019 (see Notes 2 and 6.2) and for the adjustments linked to the preparation of the balance sheet at acquisition for companies acquired in 2018 (see Note 1.1).

In accordance with IAS 8, the comparative financial statements were restated as if IFRS 16 had been applied effective January 1, 2018.

Impact on the consolidated profit & loss statement

The implementation of IFRS 16 resulted in the cancellation of the lease payments linked to restated leases and the recording of amortisation and depreciation and financial expenses.

Impact on the balance sheet

The implementation of IFRS 16 resulted in the recording of right-of-use assets, financial liabilities for lease liabilities and deferred taxes. The negative restatements on the property, plant and equipment line correspond to the reclassification of lease financing agreements, previously restated according to IAS 17, to the right-of-use assets line.

Impact on the consolidated cash flow statement

The implementation IFRS 16 primarily resulted in:

- the recording as financing cash flows of the repayments of borrowings associated with lease liabilities;
- an increase in restated amortisation and depreciation in the operating cash flows;
- the presentation of interest paid for the lease liability as operating cash flows.

Impact on earnings per share

No information is provided since the impact is not material.

32.1 Impact on the main aggregates of the consolidated profit & loss statement at December 31, 2018

In millions of euros	12/31/2018 published	IFRS 16 restatement	12/31/2018 restated
REVENUES	**2,421.3**		**2,421.3**
Cost of sales	(1,119.1)	0.1	(1,119.0)
GROSS PROFIT	**1,302.2**	**0.1**	**1,302.3**
OTHER OPERATING INCOME AND EXPENSES	**31.2**		**31.2**
Selling and marketing expenses	(480.3)	0.4	(479.9)
General and administrative expenses	(165.2)	2.0	(163.2)
Research and development expenses	(326.9)		(326.9)
TOTAL OPERATING EXPENSES	**(972.4)**	**2.4**	**(970.0)**
CONTRIBUTIVE OPERATING INCOME BEFORE NON-RECURRING ITEMS	**361.0**	**2.5**	**363.5**
BioFire acquisition's fees and depreciation costs	(17.5)		(17.5)
OPERATING INCOME BEFORE NON-RECURRING ITEMS	**343.5**	**2.5**	**346.0**
Other non-recurring income (expenses)	0.2		0.2
OPERATING INCOME	**343.6**	**2.5**	**346.1**
Cost of net financial debt	(18.5)	(2.8)	(21.3)
Other financial income and expenses, net	(4.5)		(4.5)
Income tax	(65.2)	0.1	(65.1)
Share in earnings (losses) of equity-accounted companies	0.2		0.2
NET INCOME OF CONSOLIDATED COMPANIES	**255.6**	**(0.2)**	**255.4**
Non-controlling interests	(1.1)		(1.1)
ATTRIBUTABLE TO OWNERS OF THE PARENT	**256.6**	**(0.2)**	**256.5**
Basic earnings per share	€2.18		€2.18
Diluted earnings per share	€2.17		€2.17

32.2 Impact on the main aggregates of the consolidated balance sheet at December 31, 2018

Assets

In millions of euros	12/31/2018 published	IFRS 16 restatement	Hybiome adjustment	Astute adjustment	12/31/2018 restated
Intangible assets	507.3		18.8		526.0
Goodwill	616.5		(15.6)	2.1	603.0
Property, plant and equipment	807.5	(45.6)	(0.5)		761.4
Right-of-use assets		137.7			137.7
Non-current financial assets	71.8		(4.9)		66.9
Net income for the period - Investments in associates	0.3				0.3
Other non-current assets	16.2				16.2
Deferred tax assets	74.3	1.5	1.9	0.7	78.5
NON-CURRENT ASSETS	**2,093.9**	**93.5**	**(0.3)**	**2.8**	**2,189.9**
Inventories and works-in-progress	414.9		6.3	(2.4)	418.8
Trade receivables and assets related to contracts with customers	490.0		1.8		491.8
Other operating receivables	61.7	(0.9)	2.6		63.4
Current tax receivables	39.2				39.2
Non-operating receivables	9.6		3.3		12.9
Cash and cash equivalents	280.1		8.2		288.3
CURRENT ASSETS	**1,295.6**	**(0.9)**	**22.2**	**(2.4)**	**1,314.4**
ASSETS HELD FOR SALE	**0.1**				**0.1**
TOTAL ASSETS	**3,389.6**	**92.6**	**21.9**	**0.4**	**3,504.4**

Shareholders' equity and liabilities

In millions of euros	12/31/2018 published	IFRS 16 restatement	Hybiome adjustment	Astute adjustment	12/31/2018 restated
Share capital	12.0				12.0
additional paid-in capital and reserves	1,660.6	(1.7)	0.5		1,659.5
Attributable net income for the period	256.6	(0.1)			256.5
EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT	**1,929.3**	**(1.8)**	**0.5**		**1,928.0**
NON-CONTROLLING INTERESTS	**74.0**		**0.1**		**74.0**
TOTAL EQUITY	**2,003.3**	**(1.8)**	**0.6**		**2,002.1**
Long-term borrowings and debt	446.8	68.0	10.1		524.9
Deferred tax shareholders' equity and liabilities	136.0	0.8	(2.6)		134.2
Impairment	47.1				47.1
NON-CURRENT LIABILITIES	**629.9**	**68.8**	**7.5**		**706.1**
Short-term borrowings and debt	100.2	28.9			129.1
Impairment	45.0				45.0
Trade payables	176.9		2.4	0.4	179.7
Other operating payables	345.1	(3.3)	10.3		352.2
Current tax payables	33.5				33.5
Non-operating payables	55.8		1.1		56.9
CURRENT LIABILITIES	**756.4**	**25.6**	**13.8**	**0.4**	**796.3**
LIABILITIES RELATED TO ASSETS HELD FOR SALE	**0.0**				**0.0**
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES	**3,389.6**	**92.6**	**21.9**	**0.4**	**3,504.4**

32.3 Impact on the main aggregates of the consolidated balance sheet at January 1, 2018

Assets

In millions of euros	12/31/2017 published	IFRS 16 restatement	01/01/2018
Intangible assets	430.7		430.7
Goodwill	442.7		442.7
Property, plant and equipment	711.4	(48.4)	663.0
Right-of-use assets		133.8	133.8
Non-current financial assets	57.9		57.9
Net income for the period - Investments in associates	0.1		0.1
Other non-current assets	14.1	(0.8)	13.3
Deferred tax assets	51.6	1.1	52.7
NON-CURRENT ASSETS	**1,708.5**	**85.7**	**1,794.2**
Inventories and works-in-progress	380.3		380.3
Trade receivables and assets related to contracts with customers	460.1		460.1
Other operating receivables	75.1		75.1
Current tax receivables	36.1		36.1
Non-operating receivables	15.7		15.7
Cash and cash equivalents	312.1		312.1
CURRENT ASSETS	**1,279.4**	**0.0**	**1,279.4**
ASSETS HELD FOR SALE	**2.1**		**2.1**
TOTAL ASSETS	**2,990.0**	**85.7**	**3,075.7**

Shareholders' equity and liabilities

In millions of euros	12/31/2017 published	IFRS 16 restatement	01/01/2018
Share capital	12.0		12.0
Additional paid-in capital and reserves	1,487.5	(1.8)	1,485.7
Attributable net income for the period	238.1		238.1
EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT	**1,737.6**	**(1.8)**	**1,735.8**
NON-CONTROLLING INTERESTS	**(0.9)**		**(0.9)**
TOTAL EQUITY	**1,736.7**	**(1.8)**	**1,734.9**
Long-term borrowings and debt	391.1	71.1	462.2
Deferred tax shareholders' equity and liabilities	103.8	0.5	104.3
Impairment	106.7		106.7
NON-CURRENT LIABILITIES	**601.5**	**71.6**	**673.1**
Short-term borrowings and debt	76.9	17.8	94.7
Impairment	34.1		34.1
Trade payables	161.3		161.3
Other operating payables	300.7	(1.9)	298.8
Current tax payables	24.2		24.2
Non-operating payables	54.6		54.6
CURRENT LIABILITIES	**651.8**	**15.9**	**667.7**
LIABILITIES RELATED TO ASSETS HELD FOR SALE	**0.0**	**0.0**	**0.0**
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES	**2,990.0**	**85.7**	**3,075.7**

32.4 Impact on the main aggregates of the consolidated cash flow table at December 31, 2018

In millions of euros	12/31/2018 published	Hybiome restatement	IFRS 16 restatement	12/31/2018 restated
Net income of consolidated companies	**255.5**		**(0.1)**	**255.4**
Investments in associates	(0.2)		0.0	(0.2)
Cost of net financial debt	18.5		2.8	21.3
Other financial income and expenses	4.5		0.0	4.5
Income tax expense	65.2		(0.1)	65.1
Net additions to operational depreciation - non-current provisions	157.9		19.1	177.0
Non-recurring income and expenditure and acquisition fees and depreciation costs for the acquisition of BioFire	17.4		0.0	17.4
EBITDA (before non-recurring items)	**518.8**	**0.0**	**21.7**	**540.5**
Elimination of other non-cash/non-operating income and expenses	**(45.3)**	**0.0**	**0.0**	**(45.3)**
Change in operating working capital requirement	**(2.8)**	**(6.1)**	**0.5**	**(8.4)**
Change in working capital requirement	**(1.6)**	**(7.0)**	**0.5**	**(8.1)**
Income tax paid	**(66.5)**		**0.7**	**(65.8)**
Cost of net financial debt	**(18.5)**		**(2.8)**	**(21.3)**
NET CASH FROM OPERATING ACTIVITIES	**386.9**	**(7.0)**	**19.7**	**399.8**
FREE CASH FLOW	**165.5**	**(7.0)**	**20.1**	**178.8**
NET CASH USED IN INVESTING ACTIVITIES	**(418.2)**	**4.7**	**0.4**	**(413.1)**
NET CASH USED IN FINANCING ACTIVITIES	**52.7**	**10.4**	**(20.1)**	**43.0**
NET CHANGE IN CASH AND CASH EQUIVALENTS	**21.4**	**8.1**	**0.0**	**29.7**
NET CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	**260.4**			**260.4**
Impact of currency changes on net cash and cash equivalents	(11.8)			(11.8)
NET CASH AND CASH EQUIVALENTS AT END OF YEAR	**270.0**	**8.1**	**0.0**	**278.2**

32.5 Impact on the main aggregates of the consolidated financial position at December 31, 2018

In millions of euros	12/31/2018 published	IFRS 16 restatement (Note 2.2)	Hybiome adjustment	12/31/2018 restated
Cash at bank and in hand	231.7		8.2	239.9
Short-term investments	48.4			48.4
Cash and cash equivalents	**280.1**	**0.0**	**8.2**	**288.3**
Bank overdrafts	(10.1)			(10.1)
NET CASH AND CASH EQUIVALENTS (A)	**270.0**	**0.0**	**8.2**	**278.2**
COMMITTED DEBT (B)	**536.9**	**96.9**	**10.0**	**643.9**
o/w due beyond 5 years	*24.3*	*47.5*		*71.8*
o/w due in 1 to 5 years	*422.5*	*30.6*		*453.1*
o/w due within 1 year	*90.1*	*18.9*	*10.0*	*119.0*
NET DEBT (B) - (A)	**266.9**	**96.9**	**1.8**	**365.7**

32.6 Impact on the main aggregates of the consolidated financial earnings at December 31, 2018

In millions of euros	12/31/2018 published	IFRS 16 restatement (Note 2.2)	12/31/2018 restated
Finance costs	(16.9)		(16.9)
Interest rate hedging derivatives	(2.7)		(2.7)
Foreign exchange gains (losses)	1.1		1.1
Interest on leasing debt (IFRS 16)	0.0	(2.8)	(2.8)
TOTAL	**(18.5)**	**(2.8)**	**(21.3)**

Note 33 Consolidation

bioMérieux is a fully consolidated entity of Compagnie Mérieux Alliance (17 rue Bourgelat, 69002-Lyon, France).

Note 34 List of consolidated companies at December 31, 2019

Changes in the scope of consolidation during the 2019 fiscal year are described in Note 1.1.

		2019[(a)]	2018	2017
bioMérieux SA	69280 Marcy l'Étoile - France R.C.S. (Trade and companies register) Lyon B 673 620 399			
AB bioMérieux	Dalvägen 10 169 56 Solna, Stockholm – Sweden	100%	100%	100%
ABG STELLA	1105 N Market St Suite 1300 Wilmington, Delaware 19801 – US	100%	100%	100%
AES Canada Inc.	500 boul. Cartier Ouest, suite 262 H7V 5B7 Laval, QC – Canada	100%	100%	100%
AES Chemunex GmbH	Zeiloch 20 – 76646 Bruschal – Germany			100%
Applied Maths Inc.	11940 Jollyville Road, Suite 115N Austin, Texas 78759 – US	100%	100%	100%
Applied Maths NV	Keistraat 120,9830 Sint-Martens-Latem Belgium	100%	100%	100%
Astute Medical Inc.	3550 General Atomics Court Building 02/620 San Diego, CA 92121 - United States	100%	100%	
Bacterial Barcodes Inc.	425 River Road – Athens – GA 30602 – US	100%	100%	100%
BioFire Defense Inc.	79 W 4500 S, Suite 14 Salt Lake City, UT 84107 – US	100%	100%	100%
BioFire Diagnostics Inc.	390 Wakara Way Salt Lake City, Utah 84108 – US	100%	100%	100%
bioMérieux South Africa	1st Floor, 44 on Grand Central, 1 Bond Street, cnr Grand Central Boulevard, Midrand 1682 – South Africa	100%	100%	100%
bioMérieux West Africa	Avenue Joseph Blohorn -08 BP 2634 Abidjan 08 - Ivory Coast	100%	100%	100%
bioMérieux Algeria	Bois des cars 2 - Lot 11 1st t floor -16302 Dely Ibrahim Alger - Algeria	100%	100%	100%
bioMérieux Germany	Weberstrasse 8 – D 72622 Nürtingen – Germany	100%	100%	100%
bioMérieux Argentina	Edificio Intecons - Arias 3751 3er piso - C1430CRG Buenos Aires - Argentina	100%	100%	100%

		2019[a]	2018	2017
bioMérieux Asia Pacific Pte Ltd.	11 – Biopolis Way – Helios – Unit # 10-05 – 138667 – SINGAPORE	100%		
bioMérieux Australia	Unit 25B, Parkview Business Centre – 1 Maitland Place Baulkham Hills NSW 2153 – Australia	100%	100%	100%
bioMérieux Austria	Eduard-Kittenberger-Gasse 95-B, A-1230 Wien – Austria	100%	100%	100%
bioMérieux Belgium	Media Square – 18-19 Place des Carabiniers 1030 Brussels – Belgium	100%	100%	100%
bioMérieux Benelux BV	Regus - Amersfoort A1, Databankweg 26, 3821 AL Amersfoort - The Netherlands	100%	100%	100%
bioMérieux Brazil	Estrada Do Mapuá, 491 Jacarepaguá - CEP 22713 320 Rio de Janeiro - RJ - Brazil	100%	100%	100%
bioMérieux Canada	7815 boulevard Henri Bourassa – West – H4S 1P7 Saint Laurent (Québec) – Canada	100%	100%	100%
bioMérieux Chile	Seminario 131 – Providencia – Santiago – Chile	100%	100%	100%
bioMérieux China	19/Floor Billion Plaza 8 Cheung Yue Street – Kowloon – Hong Kong	100%	100%	100%
bioMérieux Colombia	Carrera 7 No. 127–48 – Oficina 806 – Bogota DC – Colombia	100%	100%	100%
bioMérieux Korea	1st and 2nd floor Yoo Sung Building #830-67, Yeoksam-dong, Kangnam ku – Seoul – South Korea	100%	100%	100%
bioMérieux CZ	Hvezdova 1716/2b – Prague 4 – 140 78 – Czech Republic	100%	100%	100%
bioMérieux Denmark	Lautruphøj 1-3, DK-2750, Ballerup – Denmark	100%	100%	100%
bioMérieux Egypt	Room 2, Unit 23, 2nd Floor, Star Capital Tower A2, Citystars, Heliopolis, Cairo, Egypt	100%		
bioMérieux Spain	Manuel Tovar 45-47 – 28034 Madrid – Spain	100%	100%	100%
bioMérieux Finland	Tekniikantie 14 FI-02150 Espoo – Finland	100%	100%	100%
bioMérieux Greece	Papanikoli 70 – 15232 Halandri – Athens – Greece	100%	100%	100%
bioMérieux Hong Kong Investment	19/Floor Billion Plaza 8 Cheung Yue Street – Kowloon – Hong Kong	100%	100%	100%
bioMérieux Hungary	Vaci ut 175 – 1138 Budapest – Hungary	100%	100%	100%
bioMérieux Inc.	100 Rodolphe Street – Durham NC 27712 – US	100%	100%	100%
bioMérieux India	A-32, MohanCo-operative Ind. Estate - New Delhi 110 044 - India	100%	100%	100%
bioMérieux International SAS (formerly Stella SAS)	69280 Marcy l'Étoile - France			100%
bioMérieux Italy	Bagno a Ripoli, Via di Campigliano, 58 – 50012 Ponte a Ema – Florence – Italy	100%	100%	100%
bioMérieux Japan Ltd. (formerly Sysmex bioMérieux)	Akasaka Tameike Tower 2F, 2-17-7, Akasaka, Minato-ku, Tokyo	100%	100%	100%
bioMérieux Kenya	Delta Office Suites, Land Reference No. 4393/27, Waiyaki Way, P. O. Box 30333 – 00100 - G.P.O Nairobi - Kenya	100%	100%	
bioMérieux Malaysia	A-15-13A Tower A, Menara Prima Avenue, Jalan PJU 1/39, Dataran Prima 47301 Petaling Jaya, Selangor darul Ehsan - Malaysia	100%	100%	100%
bioMérieux Mexico	Chihuahua 88, col. Progreso – Mexico 01080, DF – Mexico	100%	100%	100%
bioMérieux Middle East	DHCC Al Baker Building 26 - Office 107 - P.O. Box 505 201 Dubai – United Arab Emirates	100%	100%	100%

		2019[(a)]	2018	2017
bioMérieux Norway	Nydalsveien 28 P.B. 4814 Nydalen - N-0484 Oslo - Norway	100%	100%	100%
bioMérieux Philippines	1004, 20th Drive Corporate Center, McKinley Business Park, Bonifacio Global City, Taguig City PHILIPPINES ZIP CODE 1634	100%		
bioMérieux Poland	ul. Gen. J. Zajączka 9 -01-518 Warsawa - Poland	100%	100%	100%
bioMérieux Portugal	Av. 25 de Abril de 1974, No. 23-3° – 2795-197 Linda A Velha Portugal	100%	100%	100%
bioMérieux United Kingdom	Grafton Way, Basingstoke Hampshire RG 22 6HY - United Kingdom	100%	100%	100%
bioMérieux Russia	1st Nagatinskiy proezd, 10, str.1, business center "Newton Plaza" - Moscow 115 533 - Russia	100%	100%	100%
bioMérieux (Shanghai) Biotech Co. Ltd. (formerly Meikang)	4633 Pusan Road, Kangqiao Industrial Park – Pudong New District – Shanghai – 201315 – China	100%	100%	100%
bioMérieux Shanghaï Company Ltd.	4633 Pusan Road, Kangqiao Industrial Park – Pudong New District – Shanghai – 201315 – China	100%	100%	100%
bioMérieux Singapore	11 – Biopolis Way – Helios – Unit # 10-04 – 138667 – Singapore	100%	100%	100%
bioMérieux Sweden	Hantverksvagen 15 – 43633 Askim – Sweden	100%	100%	100%
bioMérieux Suzhou Biotech Co. Ltd.	Jiangsu Suzhou New District County Township Hong Xi Rd Village No. 148.	100%		
bioMérieux SRB doo	Belgrade Office Park, Djordja Stanojevica 12/III, New Belgrade, 11070 Belgrade - Serbia	100%	100%	100%
bioMérieux Switzerland	51 Avenue Blanc – Case Postale 2150–1202 Geneva – Switzerland	100%	100%	100%
bioMérieux Thailand	3195/9 Vibulthani Tower, 4th floor – Rama IV Road – Klongton – Klongtoey – Bangkok 10110 – Thailand	100%	100%	100%
bioMérieux Turkey	Isiklar Cad. NO 29, Atasehir -34750 istanbul - Turkey	100%	100%	100%
bioMérieux Vietnam	Floor 10, Vinaconex Tower, 34 Lang Ha, Lang Ha ward, Dong Da District, Hanoi – Vietnam	100%	100%	100%
BTF Pty Limited	PO Box 599 – North Ryde BC – NSW 1670 – Australia	100%	100%	100%
Cambridge Biotech	365 Plantation Street One Biotech Park Worcester, MA 01605 – United States	100%	100%	100%
Huilai	Room 8738, Building 1, No. 1758, Luchaogang Road, Nanhui New Town, Pudong New District - China	100%	100%	
Hyglos Invest GmbH	Am Neuland 3 – 82347 Bernried am Starnberger See Germany	100%	100%	100%
Hyglos GmbH	Am Neuland 3 – 82347 Bernried am Starnberger See Germany	100%	100%	100%
Invisible Sentinel	3711 Market St., Ste. 910 Philadelphia, PA 19104 United States	100%		
Mérieux Université	113 Route de Paris – 69160 Tassin-La-Demi-Lune – France	40%	40%	40%
Quercus Scientific NV	Keistraat 120,9830 Sint-Martens-Latem Belgium	100%	100%	100%
RAS Lifesciences	Plot No. 13, 4-7-18/13/2, Raghavendra Nagar, Nacharam, Hyderabad -500 076 - India	100%	100%	70%

		2019[(a)]	2018	2017
SSC Europe	ul. Gen. J. Zajączka 9 -01-518 Warsawa - Poland	100%	100%	100%
Suzhou Hybiome Biomedical Engineering Co Ltd.	Building 4, No. 8, Jinfeng Road, Suzhou High-tech Zone - China	67%	54%	
Yan Set Invest Development	19/F Billion Plaza, 8 Cheung Yue Street Cheung Sha Wan Kowloon - Hong-Kong	100%	100%	100%

(a) Percentage control is identical to percentage interest, except in the case of Hyglos Invest GmbH, for which the percentage interest is 75%.

6.1.3 Report of the Statutory Auditors on the consolidated financial statements

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. The Statutory Auditors' report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the opinion on the consolidated financial statements and includes an explanatory paragraph discussing the Auditors'assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account captions or on information taken outside of the consolidated financial statements. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

At the bioMérieux Annual General Meeting,

Opinion

In performing the duty assigned to us by your Annual General Meetings, we conducted an audit of the consolidated financial statements of bioMérieux for the financial year ended December 31, 2019, as appended to this report.

In our opinion, the consolidated financial statements are, in accordance with International Financial Reporting Standards as adopted by the European Union, reliable and give a true and fair view of the results of the operations for the year under review as well as of the financial position and assets, at the end of the year, of the parties and entities included in the consolidation scope.

The opinion expressed above is consistent with the contents of our report to the Audit Committee.

Basis for opinion

Audit Standard

We conducted our audit according to generally accepted professional standards in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Our responsibilities by virtue of these standards are stated in the section "Statutory Auditors' responsibilities relating to the audit of the consolidated financial statements" of this report.

Independence

We have conducted our audit in compliance with the rules of independence that apply to us, from the period between January 1, 2019 to the date of issue of our report, and, in particular, we have not provided services prohibited by Article 5, Paragraph 1, of EU Regulation No. 537/2014 or by the Statutory Auditors' Professional Code of Ethics.

Notes

Without questioning the opinion expressed above, we would like to draw your attention to Notes "2. General accounting principles" and "6.2 Right-of-use assets (lessee)" of the notes to the consolidated financial statements relating to the application of IFRS 16 "Leases" as of January 1, 2019, the impact of which is presented in Note 32. "Impact on the consolidated financial statements".

Justification for our assessments – Key points of the audit

Pursuant to the provisions of Articles L.823-9 and R.823-7 of the French Commercial Code relating to the justification of our assessments, we draw your attention to the key points of the audit relating to risks of material misstatements which, according to our professional judgement, were the most significant for the audit of the consolidated financial statements for the financial year, plus the answers we have provided to control these risks.

Our assessments on these matters are part of the audit process for consolidated financial statements taken as a whole and the formation of our opinion expressed above. We do not express an opinion on the elements of these consolidated financial statements taken separately.

Acquisition of Invisible Sentinel Inc. and Suzhou Hybiome Biomedical Engineering Co. Ltd

Risk identified	Our response
As described in Note 1.1.1 of the notes to the consolidated financial statements, on February 6, 2019, the Group acquired 100% of the shares in Invisible Sentinel Inc., for a total cash amount of €66.4 million. Invisible Sentinel Inc. was consolidated by the full consolidation method from the takeover date, mainly giving rise to recognition of technologies net of deferred tax liabilities for €5.6 million, a client relationship net of deferred tax liabilities for €8.6 million, deferred tax assets of €6.2 million, and goodwill of €45.3 million. As described in Note 1.1.2 to the consolidated financial statements, in June 2019, the Group acquired an additional 12.52% interest in the capital of Suzhou Hybiome Biomedical Engineering Co. Ltd for €23.7 million by exercising part of the existing put on minority interests. The Group now holds 67% of Suzhou Hybiome Biomedical Engineering Co. Ltd. The debt relating to the put was reduced by €15.2 million, recognised through shareholders' equity - attributable to the parent company. In the case of acquisitions, the Group applies the accounting principles stipulated by IFRS 3, as amended, and as described in Note 5.1 of the notes to the consolidated financial statements. We considered that the recognition and presentation of these transactions was a key audit matter, considering the significant character of these acquisitions and the judgement required in the valuations carried out, in particular the estimated fair value of property, plant and equipment and intangible assets and the valuation of liabilities.	Our work consisted primarily of: • reviewing the legal aspects of these acquisitions, the consideration of the principal contractual clauses, when determining the accounting treatment of the transactions; • assessing the application of the provisions of IFRS 3, as amended, and the arrangements for implementing this standard (in particular, determining the price of the acquisition, identifying assets and liabilities, and evaluating the resulting goodwill); • reviewing the fair value of financial liabilities, including data underlying the determination of the discount rate selected and the calculation formulas used, in comparison with the contractual provisions; • assessing the appropriateness of the information provided in the notes to the consolidated financial statements in relation to this acquisition.

Evaluation of consolidated goodwill

Risk identified	Our response
At December 31, 2019, goodwill amounted to €652.5 million and represented 17.3% of the Group's balance sheet. As described in Note 5 of the notes to the consolidated financial statements, on the date of acquisition, goodwill is attached to a cash-generating unit depending on the synergies expected for the Group. At the end of each reporting period, the Group systematically tests cash-generating units (CGUs) for impairment and also determines whether there are any indications of a loss of value. Impairment testing is used to determine the recoverable amount of a CGU or group of CGUs, representing the higher of their value in use and fair value less costs to sell. In practice, the value in use of a CGU or group of CGUs is determined primarily on the basis of discounted operating cash flow projections covering a period of five years and based on the most recent business plan, and a terminal value. We consider this issue to be a key point of our audit given the fact that the recoverable amount of this goodwill is based to a very large extent on the judgement of senior management, in particular with respect to operating margins, the growth rate rates used for cash flow projections and the discount rates applied to them.	We included assessment specialists in the audit team in order to examine the impairment tests performed by senior management. Our work consisted mainly in: • assessing the principles and methods for determining evidence of impairment losses and the recoverable amount of goodwill; • analysing, most notably through interviews with senior management, the main data and assumptions on which the estimates are based (such as the discount rate and the perpetuity growth rate); • reviewing the business outlook of legal entities or ranges that show evidence of loss of value through interviews with senior management and in comparing the accounting estimates of cash flow projections of previous periods with the corresponding actual figures; • comparing, through random sampling, the accounts of the data used in carrying out impairment tests and testing the accuracy of the arithmetic calculations of the valuations used by the Group.

Assessment of obligations related to defined benefit pension plans

Risk identified	Our response
The Group creates provisions to cover defined benefit scheme and other long-term benefit obligations primarily in the United States and France. As at December 31, 2019, the Group recorded a net liability of €57.8 million for these obligations, of which €41.5 million in post-employment benefit obligations. The amount of post-employment benefit obligations corresponds to the difference between the present value of the defined benefit obligations (€268.1 million) and the fair value of the plan assets, amounting to €226.6 million. These obligations are calculated according to the "projected unit credit" method and take into consideration actuarial assumptions, in particular the discount rate, the rate of future salary increases, employee turnover and the mortality rate, as described in Note 15.3 of the notes to the consolidated financial statements; We consider the valuation of obligations linked to pension scheme benefits to be a key point of our audit inasmuch as the determination of these assumptions depends on the judgements made by senior management, and any change in these assumptions is likely to prompt a significant variation in the amount of net liability.	We noted the process of measuring post-employment employee benefits implemented by management. With the help of our actuarial specialists, we examined the key assumptions used by senior management and the information used by the actuaries appointed by senior management to assess pension benefit obligations, more especially in the United States and France. We carried out the following: • a review of the main actuarial assumptions used; • sampling of the employee data used in order to carry out the valuation of the obligations; • a reconciliation of the fair value of plan assets against external comparisons; • a review of the calculation method; • consistency checks on the weight of the current service cost, the interest expense given the discount rate assumption, the rate of return of financial assets, the impact on profit and equity. We have analysed the appropriateness of the level of information provided in the notes to the consolidated financial statements and, in particular, the correctness of the assessment of the sensitivity of the value of the obligation to a change in the discount rates.

Specific verification

As required by the legal and regulatory provisions, and in accordance with the professional standards applicable in France, we have also verified the information presented in the Board of Directors' management report for the Group.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

We hereby certify that the consolidated statement of non-financial performance set forth in Article L. 225-102-1 of the French Commercial Code appears in the Group's management report, it being specified that, in accordance with the provisions of Article L. 823-10 of that Code, we have not verified the fairness of the information contained in this statement, nor its consistency with the consolidated financial statements, which must be the subject of a report by an independent third party.

Information from other legal and regulatory obligations

Appointment of Statutory Auditors

We were appointed Statutory Auditors of bioMérieux by your General Meeting of May 30, 2017 for GRANT THORNTON and May 30, 2012 for ERNST & YOUNG et Autres.

At December 31, 2019, GRANT THORNTON was in the third continuous year of its audit engagement, while ERNST & YOUNG et Autres was in the eighth year.

Responsibilities of senior management and the persons constituting corporate governance for the consolidated financial statements

Senior management is responsible for the preparation of consolidated financial statements that present a true view in accordance with the IFRS standard adopted by the European Union, together with the implementation of the internal control it deems relevant to the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

When preparing the consolidated financial statements, senior management is responsible for assessing the Company's ability to continue as a going concern, to present in these financial statements, if necessary, information concerning the continuity of the Company's operations and to apply the accounting policy of going concern, unless there are plans to unwind the Company or discontinue the business.

The Audit Committee is responsible for monitoring the financial reporting preparation process and the effectiveness of internal control and risk management systems and, if necessary, the Internal Audit Department with respect to procedures relating to preparation and treatment of financial and accounting information.

These consolidated financial statements have been approved by the Board of Directors.

Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements

Audit objective and procedure

It is our duty to draw up a report on the consolidated financial statements. Our objective is to obtain reasonable assurance that the consolidated financial statements as a whole are free from material misstatement. Reasonable assurance corresponds to a high level of assurance, without however guaranteeing that an audit conducted in accordance with professional standards will systematically detect any material misstatement. Misstatements may arise from fraud or result from errors and are considered as material when it can be reasonably expected that, taken singly or together, they can influence the economic decisions that users of the financial statements take based thereon.

As stated in Article L.823-10-1 of the French Commercial Code, our engagement to certify the financial statements does not consist in guaranteeing the viability or quality of management of your Company.

Within the framework of an audit conducted in compliance with professional standards applicable in France, the statutory Auditor exercises his professional judgement throughout the audit. Furthermore:

- the statutory auditor identifies and assesses the risks whereby the consolidated financial statements may contain material misstatements, whether from fraud or errors; defines and implements audit procedures in view of those risks; and collects the elements they consider sufficient and appropriate on which to base their opinion. The risk of not detecting a material misstatement arising from fraud is higher than the risk of a material misstatement resulting from error, because fraud may imply collusion, falsification, voluntary omissions, false declarations or the circumvention of internal control;
- the statutory auditor reviews the relevant internal control for the audit in order to define the appropriate audit procedures for the circumstances and not to express an opinion on the effectiveness of internal control;
- he assesses the appropriateness of the accounting methods used and the reasonable nature of the accounting estimates made by senior management, as well as information concerning these methods provided in the consolidated financial statements;
- he assesses the appropriateness of the application by the management of the going concern concept and, according to the elements collected, whether or not there is a material uncertainty linked to events or circumstances likely to compromise the Company's ability to continue as a going concern. This assessment is based on the information collected until the date of his report. It is however pointed out that subsequent circumstances or events could jeopardise continuity as a going concern. If he concludes that there is a material uncertainty, the statutory auditor draws the attention of the readers of the report to the information provided in the consolidated financial statements about such uncertainty, or if this information is not provided or is not relevant, he issues a certification with reservations or a refusal to certify;
- they assess the overall presentation of the consolidated financial statements and whether these reflect underlying operations and events, so as a give a true view;
- concerning the financial information of the persons or entities included in the consolidation scope, he collects the information considered sufficient and appropriate to express an opinion on the consolidated financial statements. He is responsible for the management, supervision and performance of the audit of the consolidated financial statements as well as the opinion expressed thereafter.

Report to the Audit Committee

We submit a report to the Audit Committee that presents, in particular, the scope of the audit and the work schedule implemented as well as the conclusions of our audit. Our audit also informs the Audit Committee of any material weaknesses of internal control that we have identified with respect to the procedures relating to the preparation and treatment of accounting and financial information.

The points mentioned in the report to the Audit Committee include the risks of material misstatements that we consider to have been the most significant for the audit of the year's consolidated financial statements, which therefore constitute the key points of the audit and which it is our duty to describe in this report.

We also submit to the Audit Committee the declaration provided in Article 6 of EU Regulation No. 537-2014 confirming our independence, as defined in the rules applicable in France, as set out in Articles L. 822-10 to L. 822-14 of the French Commercial Code and in the Statutory Auditors' Professional Code of Ethics. If necessary, we will meet the Audit Committee to discuss the risks that threaten our independence and the safeguard measures applied.

Lyon, February 28, 2020

The Statutory Auditors

GRANT THORNTON
French member of Grant Thornton International
Françoise Mechin

ERNST & YOUNG et Autres
Nicolas Perlier

6.2 Parent company financial statements

6.2.1 Parent company financial statements of bioMérieux SA for the financial years ended December 31, 2018 and 2019

Balance sheet

Assets

In millions of euros	Notes	Net Dec. 31, 2019	Net Dec. 31, 2018
Fixed assets			
• Intangible assets	3.1	182.4	191.7
• Property, plant and equipment	3.2	270.8	247.8
• Investments and related receivables	3.3	748.3	731.4
• Other non-current financial assets	3.3	11.1	10.3
TOTAL		**1,212.7**	**1,181.2**
Current assets			
• Inventories and work-in progress	4	149.5	161.5
• Trade receivables	5	387.0	360.4
• Other operating receivables	5	34.3	32.8
• Non-operating receivables		20.1	31.1
• Cash and cash pooling	6	219.1	225.8
TOTAL		**810.0**	**811.6**
Deferred charges spread over several years		0.4	0.6
Bond redemption premiums		0.3	0.6
Unrealised foreign exchange losses	7	2.4	4.3
TOTAL ASSETS		**2,025.7**	**1,998.3**

Shareholders' equity and liabilities

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018
Shareholders' equity			
• Share capital		12.0	12.0
• Additional paid-in capital		63.5	63.5
• Reserves		877.7	843.9
• Statutory provisions and grants		60.4	60.0
• Net income for the year		119.6	75.1
TOTAL	**8**	**1,133.2**	**1,054.5**
Impairment	**9**	**52.1**	**63.1**
Liabilities			
• Borrowings and debt	10	493.2	548.9
• Trade payables	11	168.7	163.9
• Other operating payables	11	142.6	144.4
• Non-operating payables		35.6	22.8
TOTAL		**840.1**	**880.0**
Unrealised foreign exchange gains	7	0.2	0.7
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES		**2,025.7**	**1,998.3**

Consolidated income statement

In millions of euros	2019	2018
Sales of goods and finished products	1,046.2	1,008.1
Other income	212.0	180.6
SALES	**1,258.2**	**1,188.8**
Production included in inventories (work-in-progress and finished products)	(3.7)	(2.8)
Capitalised production	11.2	7.8
TOTAL PRODUCTION	**1,265.7**	**1,193.8**
Purchases	(441.6)	(445.9)
Change in raw material and instrument inventories	(7.8)	16.5
External charges	(322.0)	(275.5)
ADDED VALUE	**494.3**	**488.9**
Taxes other than income tax	(20.6)	(21.6)
Payroll and benefits	(309.7)	(313.5)
GROSS OPERATING INCOME	**164.0**	**153.9**
Depreciation, amortisation and provisions	(62.5)	(50.7)
Other operating income (expense)	(44.0)	(44.9)
OPERATING INCOME	**57.5**	**58.2**
Net financial expense	(1.7)	(4.2)
Net investment income	38.5	16.8
NET INCOME BEFORE NON-RECURRING ITEMS AND TAX	**94.2**	**70.8**
Non-recurring income	26.4	3.7
Income tax	(1.1)	0.6
NET INCOME	**119.6**	**75.1**
BASIC EARNINGS PER SHARE	**1.01**	**0.64**

Basic earnings per share is calculated by dividing net income by the weighted average number of shares outstanding during the period (excluding shares intended for allocation under free share grants and treasury shares held for market-making purposes).

Diluted (net) earnings per share are calculated from the number of shares defined in the basic earnings increased by the weighted average number of potential shares to be issued and which would have a dilutive effect on net income. They stood at 1.01 for 2019 and 0.63 for 2018.

6.2.2 Notes

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Note 1 General accounting principles

The financial statements have been prepared in accordance with regulation No. 2015-06 and No. 2016-07 of the French accounting standards authority (*Autorité des normes comptables* – ANC).

The Company prepares consolidated financial statements which include the annual financial statements of its subsidiaries based on the full consolidation method whenever bioMérieux has effective control over those subsidiaries, or based on the equity method when the Company exercises significant influence over the entities concerned.

The Company's financial statements are fully consolidated in the financial statements of Compagnie Mérieux Alliance (17 rue Bourgelat, 69002-Lyon, France).

Note 2 Significant events of the fiscal year

2.1 Change in the securities portfolio

In 2019, bioMérieux SA subscribed to the capital of several subsidiaries for a total of €74.5 million, including:

- the capital increase of bioMérieux China for €64.2 million (US$72 million);
- part of the capital in bioMérieux Suzhou Biotech Co. Ltd. paid up for €7 million (54.5 million Chinese yuan);
- the capital increase of bioMérieux Argentina for €2.9 million (142.6 million Argentine pesos).

The bioMérieux Hong Kong Investment subsidiary carried out a capital reduction by reducing the par value of its shares, thus reducing the value of the securities held by bioMérieux SA by €6 million.

Lastly, all of the Quanterix securities, historically valued at €17.9 million, were sold for €48.4 million in 2019, thus generating a gain of €30.5 million recorded in non-recurring income.

2.2 Subsidiaries financing

In 2019, bioMérieux SA supported the financing of the growth and creation of its subsidiaries by granting loans to bioMérieux South Africa and bioMérieux Egypt for €6.3 million and €1 million, respectively.

The loan granted to bioMérieux Inc. in 2014 to finance the acquisition of BioFire was repaid for €49.2 million during the fiscal year.

2.3 Employee share ownership plan

In 2019, the Company launched an employee share ownership plan open to all Group employees. Employees benefited from a subscription price of €52.22 per share, discounted by 30% compared to the reference price (€74.60), and a matching contribution of 100% of the amount of subscriptions up to €1,000 per employee. Employees subscribed to 320,841 shares (of which 173,045 shares for French employees), and the Company delivered 402,168 shares (of which 214,229 shares for French employees), taking into account the discount and matching contribution. The cost of the plan recognised in operating income/expenses was €7.4 million. The cost of the plan for the employees of other Group companies was fully rebilled to the subsidiaries and did not have an impact on operating income.

2.4 Significant subsequent events

There was no significant subsequent event.

Note 3 Fixed assets

3.1 Intangible assets

3.1.1 Accounting principles

In accordance with regulation ANC No. 2015-06, technical merger losses were assigned to specific fixed asset accounts in January 2016 relating to acquired goodwill such as intangible business assets, technology and customer relations.

Historical goodwill and assets originating from the assignment of technical elements merger losses do not constitute stand-alone individual items that can generate their own cash flow. They are intrinsically attached to plants, to the R&D effort that supports the acquired range, to technology and the sales forces that contribute to distributing the product ranges across the Group's entire distribution channels.

Acquired goodwill is therefore grouped together with the other assets of the technological range to which they are linked in order to constitute a homogeneous and stand-alone range. In practice, tests are performed to group together assets that serve the same client typology (industrial microbiology laboratories) or health issue (pathology/detection of disease-causing organisms: microbiology, molecular biology or immunoassays). An impairment test is carried out systematically from asset groups close to the groups identified at Group level (CGU) when their analysis reveals their fungibility (monitoring and pooled management of acquired goodwill by technological range and customer typology).

At each year-end, the net value of the asset groups thus identified is compared with the current value of assets determined from discounted net cash generated by these assets (including acquired goodwill). An impairment is recorded if a loss of value is observed.

Intangible assets also include software applications acquired or developed in-house, amortised over periods of three to ten years based on their estimated useful lives, and patents and licences amortised over the contractual or statutory term of use. In practice, a period of five years is usually applied. These assets are measured at cost (purchase price and incidental costs) or at their production cost.

Lastly, intangible assets acquired in exchange for the payment of indexed royalties are measured at the time of acquisition on the basis of estimated future royalties to be paid over the term of the contract. These estimates are subsequently adjusted based on royalties effectively paid.

3.1.2 Change

Breakdown *In millions of euros*	Gross value	Accumulated depreciation & impairment losses	Carrying amount 12/31/19	Carrying amount 12/31/18
R&D expenses	17.2	16.7	0.5	1.1
Software	89.7	71.2	18.5	18.6
Goodwill and intangible business assets	142.4[(a)]	3.9	138.5	142.4
Assets under construction	3.2		3.2	13.1
Other	57.5[(b)]	35.8[(c)]	21.7	16.5
TOTAL	**309.9**	**127.6**	**182.4**	**191.7**

(a) Including acquired goodwill linked to the assignment of merger losses: €130.4 million.
(b) Including technologies and customer relationships following the assignment of merger losses: €35.7 million and distribution rights for Suzhou Hybiome Biomedical Engineering Co.Ltd.: €7.5 million.
(c) Including amortisation of the technologies and customer relations linked to the assignment of merger losses: €21.8 million.

Change *In millions of euros*	Gross value	Accumulated depreciation and impairment	Net Value
DECEMBER 31, 2018	**309.2**	**117.5**	**191.7**
Acquisitions/Increases	7.0	14.4	(7.5)
Disposals/Decreases	(6.1)	(4.3)	(1.9)
DECEMBER 31, 2019	**310.0**	**127.6**	**182.4**

The increase in the gross value of intangible assets over the year primarily corresponds to the acquisition of software and the development costs of IT solutions for €6.7 million (mainly external costs).

The decrease in the gross value of intangible assets over the year primarily corresponds to scrapped unused licences for €3.8 million and disposals of software and development costs for IT solutions for €2.3 million.

The increase in amortisation and impairment during the fiscal year results from the amortisation of software for €7.6 million, impairment of goodwill for €3.9 million, amortisation of merger losses for €2.3 million, and amortisation or impairment of research & development expenses previously capitalised by AES Chemunex for €0.5 million. These research & development expenses are being amortised over a period of five years.

Technical merger losses are allocated as follows:

In millions of euros	Gross value	Accumulated depreciation	Carrying amount
AES Chemunex			
Goodwill	111.0		111.0
Technology	12.5	7.9	4.6
Customer relationships	5.4	2.6	2.8
TOTAL	**128.9**	**10.5**	**118.4**
Argène			
Goodwill	19.4		19.4
Technology	12.8	7.6	5.2
TOTAL	**32.2**	**7.6**	**24.6**
CEERAM			
Technology	2.4	1.1	1.3
TOTAL	**2.4**	**1.1**	**1.3**
Advencis			
Technology	2.6	2.6	
TOTAL	**2.6**	**2.6**	
TOTAL	**166.1**	**21.8**	**144.3**

3.2 Property, plant and equipment

3.2.1 Accounting principles

Property, plant and equipment are shown on the balance sheet at purchase or production cost.

In accordance with rules concerning the recognition of assets in effect since January 1, 2005, components are separately recognised and depreciated whenever their cost represents a significant portion of the total cost of the asset to which they relate and their useful life is not the same as that of the main asset.

The only property, plant and equipment assets to which this method is applied are buildings.

For buildings, the depreciation periods are adapted to each group of components:

Depreciation period	Accounting	Tax
Shell	30-40 years	Straight line basis 30 years
Finishing work, fixtures and fittings	10-20 years	Straight line basis 15 years

The depreciation is calculated using the straight-line method over the estimated useful lives of the various asset categories. The main durations for useful lives are:

Depreciation period	Accounting	Tax
Machinery and equipment	3-10 years	Degressive 5-10 years
Instruments*	3-10 years	Degressive 3-5 years

* Instruments either installed at third-party sites or used in-house.

Impairment tests are carried out for property, plant and equipment whenever events or market developments indicate that an asset may have declined in value. If the carrying amount exceeds the recoverable amount, an impairment loss is recognised to reduce the assets to their realisable value.

Most capitalised instruments are installed at customers' sites.

3.2.2 Change

Breakdown *In millions of euros*	Gross value	Accumulated depreciation & impairment losses	Carrying amount 12/31/19	Carrying amount 12/31/18
Land and land improvements	17.8	1.0	16.8	17.9
Buildings	275.9	165.5	110.4	98.8
Machinery and equipment	216.1	160.2	55.9	58.1
Capitalised instruments	53.0	31.2	21.8	16.3
Other assets	50.6	37.4	13.2	11.1
Fixed assets in progress	52.7		52.7	45.6
TOTAL	**666.1**	**395.3**	**270.8**	**247.8**

Change *In millions of euros*	Gross value	Accumulated depreciation and impairment	Net Value
DECEMBER 31, 2018	**625.5**	**377.7**	**247.8**
Acquisitions/Increases	59.3	36.1	23.2
Disposals/Decreases	(18.7)	(18.5)	(0.2)
DECEMBER 31, 2019	**666.1**	**395.3**	**270.8**

The main investments for the fiscal year concern the construction, equipment and fixtures and fittings for the Campus of Craponne for €11 million, and for the Campus of Marcy for €6 million.

3.3 Financial assets

3.3.1 Accounting principles

Non-current financial assets are recognised at their purchase price.

An impairment loss is recognised against equity investments whenever their value in use falls below their acquisition cost. Value in use is initially estimated taking into account the net carrying amount of the subsidiary's assets at the reporting date. This may be adjusted to reflect the value of any unrecognised identifiable assets (particularly real estate or technologies). Depending on the economic and financial situation of the subsidiary, value in use may also be estimated taking account of sales, borrowings and any associated technological assets and real estate. Given the specific nature of certain investments, in some cases value in use may be measured by estimating the enterprise value based on discounted future cash flows or on observable market financial inputs.

Non-controlling interests held in unlisted companies are measured based on various criteria including the economic outlook, the net equity of the investment or the valuation used based on recent investments in these shares.

Other investments are written down whenever their market value falls below cost. The market value of listed securities corresponds to the average trading price during the last month of the year.

Other non-current financial assets include treasury shares purchased under a liquidity agreement entered into with an investment firm for the specific purpose of maintaining an orderly market in the Company's shares. Own shares held are measured at their average trading price during the last month of the year.

3.3.2 Change

Breakdown *In millions of euros*	Gross value	Impairment losses	Carrying amount 12/31/19	Carrying amount 12/31/18
Investments	779.4	98.1	681.3	621.0
Other financial assets	20.6	11.5	9.1	8.3
Related receivables	67.0		67.0	110.4
Other	2.0		2.0	2.0
TOTAL	**869.0**	**109.6**	**759.4**	**741.7**

Change *In millions of euros*	Gross value	Accumulated depreciation and impairment	Net Value
DECEMBER 31, 2018	**847.5**	**105.8**	**741.7**
Acquisitions/Increases	102.1	4.7	97.3
Disposals/Decreases	(80.5)	(0.9)	(79.6)
DECEMBER 31, 2019	**869.0**	**109.6**	**759.4**

Acquisitions and increases in securities and receivables related to subsidiaries

During the 2019 fiscal year, bioMérieux SA subscribed to the capital increases of several subsidiaries: bioMérieux China for €64.2 million (US$72 million), bioMérieux Argentina for €2.9 million (142.6 million Argentine pesos), and bioMérieux Côte d'Ivoire for €0.2 million (CFA francs 130 million).

In April 2019, the Company subscribed to the unpaid capital of bioMérieux Suzhou Biotech Co. Ltd. for €20 million (150.1 million Chinese yuan). Capital was paid up during the fiscal year for €7 million. At December 31, 2019, the unpaid capital amounted to €12.7 million, and exchange gains were generated for €0.3 million.

The bioMérieux Philippines subsidiary was created during the fiscal year for subscribed capital of €0.2 million.

bioMérieux SA granted a loan of €6.3 million (100 million South African rands) to bioMérieux South Africa and two loans of €1 million to bioMérieux Egypt (€18.1 million in Egyptian pounds).

Disposals and reductions in securities and receivables related to subsidiaries

The decreases in securities and related receivables during the 2019 fiscal year are mainly due to the repayment of the loan granted to the subsidiary bioMérieux Inc. for €49.2 million (US$67.1 million). At end December 2019, the balance of this loan stood at €48.2 million (US$67.1 million).

The HK Investment subsidiary carried out a capital reduction by reducing the par value of its shares, thus reducing the value of the securities held by bioMérieux SA by €6 million (HK$68.1 million).

In December 2019, ABG Stella was absorbed by bioMérieux Inc. without an impact on the share valuation.

bioMérieux Germany repaid the balance of its loan of €1.6 million.

Changes in capital expenditure

The Company purchased bonds convertible into shares for €0.7 million (US$0.8 million), took part in the subscription to the Qvella fund for €0.3 million, and subscribed to the capital increase in Lumed Inc. for €0.3 million (Can$0.5 million).

The Company sold all of the Quanterix shares (see Note 2.1).

Accumulated depreciation and impairments

The increase in the impairment of non-current financial assets corresponds primarily to impairments recognised on the securities of bioMérieux distribution subsidiaries.

3.3.3 List of subsidiaries and investments

See table below.

		Share capital	Equity other than share capital	Share of holding	Value of the securities held before Impairment losses	Value of the securities held after Impairment losses	Loans and receivables granted by the Company and not Repaid	Sales total of the last fiscal year	Net profit or net loss of last fiscal year	Dividends received by Company in progress of the fiscal year	Notes
		Currencies in millions	*Currencies in millions*	*In %*	*In millions of euros*	*In millions of euros*	*In millions of euros*	*Currencies in millions*	*Currencies in millions*	*In millions of euros*	
A - Subsidiaries (up to 50% owned by bioMérieux)											
AB bioMérieux	SEK	0.2	84.9	100.0%	74.2	8.1	0.0	0.0	20.5	3.0	01/01/2019-12/31/19
bioMérieux West Africa	CFA	180.0	289.8	100.0%	0.3	0.3	0.0	0.0	119.5	0.0	01/01/2019-12/31/19
bioMérieux Germany	EUR	3.5	18.0	100.0%	3.8	3.8	14.0	113.0	1.2	0.0	01/01/2019-12/31/19
bioMérieux Algeria	DZD	58.0	57.8	100.0%	0.6	0.6	0.0	26.2	22.4	0.0	01/01/2019-12/31/19
bioMérieux Argentina	ARS	15.4	312.7	99.1%	8.3	4.8	0.0	814.7	108.2	0.0	01/01/2019-12/31/19
bioMérieux Asia Pacific PTE Ltd.	SGD	0.0	0.0	100.0%	0.0	0.0	0.0	0.0	0.0	0.0	Subsidiary created in 2019
bioMérieux Austria	EUR	0.1	1.5	100.0%	0.1	0.1	0.0	17.5	0.9	0.8	01/01/2019-12/31/19
bioMérieux Colombia	COP	0.5	25.4	100.0%	2.2	2.2	0.0	78.3	3.9	0.0	01/01/2019-12/31/19
bioMérieux Brazil	BRL	136.8	(91.8)	100.0%	49.7	23.5	0.0	164.1	(3.4)	0.0	01/01/2019-12/31/19
bioMérieux Belgium	EUR	0.3	2.5	100.0%	0.3	0.3	0.0	29.4	1.2	1.5	01/01/2019-12/31/19
bioMérieux Bénelux BV	EUR	0.0	8.7	100.0%	0.1	0.1	0.0	111.1	1.3	1.0	01/01/2019-12/31/19
bioMérieux Chile	CLP	1,686.6	5,252.0	100.0%	3.1	3.1	0.0	18,722.4	600.0	0.0	01/01/2019-12/31/19
bioMérieux China	HKD	971.6	156.9	100.0%	112.4	112.4	2.8	255.8	13.8	0.0	01/01/2019-12/31/19
bioMérieux Korea	KRW	1,000.0	10,731.3	100.0%	0.7	0.7	0.0	52,862.6	661.4	0.0	01/01/2019-12/31/19
bioMérieux Denmark	DKK	0.5	7.9	100.0%	0.5	0.5	0.0	65.0	2.6	0.4	01/01/2019-12/31/19
bioMérieux Spain	EUR	0.2	34.0	100.0%	0.6	0.6	2.1	89.1	3.4	0.0	01/01/2019-12/31/19

		Share capital	Equity other than share capital	Share of holding	Value of the securities held before Impairment losses	Value of the securities held after Impairment losses	Loans and receivables granted by the Company and not Repaid	Sales total of the last fiscal year	Net profit or net loss of last fiscal year	Dividends received by Company in progress of the fiscal year	Notes
		Currencies in millions	*Currencies in millions*	*In %*	*In millions of euros*	*In millions of euros*	*In millions of euros*	*Currencies in millions*	*Currencies in millions*	*In millions of euros*	
bioMérieux Egypt	EGP	0.2	0.7	100.0%	0.0	0.0	1.0	33.9	0.7	0.0	Subsidiary created in 2019
bioMérieux Finland	EUR	0.0	0.6	100.0%	0.1	0.1	0.0	7.6	0.3	0.3	01/01/2019-12/31/19
bioMérieux Greece	EUR	2.0	3.9	100.0%	4.1	4.1	0.0	15.0	0.9	1.5	01/01/2019-12/31/19
bioMérieux Hungary	HUF	3.0	234.6	100.0%	0.0	0.0	0.3	1,709.3	79.5	0.5	01/01/2019-12/31/19
bioMérieux HK Investment LTD	HKD	0.7	2.7	100.0%	0.1	0.1	0.0	0.0	0.9	1.1	01/01/2019-12/31/19
bioMérieux India	INR	66.0	1,377.0	99.9%	2.9	2.9	0.0	5,341.3	74.0	0.0	01/01/2019-12/31/19
bioMérieux Inc.	USD	0.0	1,214.6	100.0%	397.5	397.5	49.8	1,023.5	161.3	0.0	01/01/2019-12/31/19
bioMérieux Italy	EUR	9.0	26.0	100.0%	12.8	12.8	0.0	130.8	8.1	15.0	01/01/2019-12/31/19
bioMérieux Japan	JPY	0.5	0.6	100.0%	15.4	15.4	0.0	6.3	0.1	0.0	01/01/2019-12/31/19
bioMérieux Kenya	KES	18.3	9.4	100.0%	0.2	0.2	0.0	0.0	8.6	0.0	01/01/2019-12/31/19
bioMérieux Malaysia	MYR	0.1	0.2	100.0%	0.0	0.0	0.1	0.0	0.0	0.0	01/01/2019-12/31/19
bioMérieux Middle East	AED	0.1	1.5	100.0%	0.0	0.0	0.7	0.0	0.4	0.0	01/01/2019-12/31/19
bioMérieux Norway	NOK	2.8	3.7	100.0%	0.3	0.3	0.0	46.7	1.9	0.2	01/01/2019-12/31/19
bioMérieux Philippines	PHP	10.4	0.0	100.0%	0.2	0.2	0.0	0.0	0.0	0.0	Subsidiary created in 2019
bioMérieux Poland	PLN	0.4	24.8	100.0%	1.5	1.5	0.0	104.4	2.8	1.0	01/01/2019-12/31/19
bioMérieux Portugal	EUR	1.6	7.4	100.0%	2.0	2.0	0.0	17.3	1.1	0.0	01/01/2019-12/31/19
bioMérieux Czech Republic	CZK	0.2	13.7	100.0%	0.0	0.0	1.2	886.0	6.6	0.3	01/01/2019-12/31/19
bioMérieux Russia	RUB	55.7	258.0	100.0%	1.3	1.3	0.0	1,435.2	112.8	0.3	01/01/2019-12/31/19
bioMérieux South Africa	ZAR	50.0	72.7	100.0%	5.4	5.4	6.4	380.5	2.9	0.0	01/01/2019-12/31/19
bioMérieux Sweden	SEK	0.5	7.7	100.0%	0.2	0.2	0.0	217.6	3.5	0.2	01/01/2019-12/31/19
bioMérieux Switzerland	CHF	0.4	4.4	100.0%	0.6	0.6	0.0	36.8	2.7	1.5	01/01/2019-12/31/19
bioMérieux Suzhou Biotech Co. Ltd.	CNY	54.5	(5.0)	100.0%	7.0	7.0	0.0	0.0	(5.0)	0.0	Subsidiary created in 2019
bioMérieux Thailand	THB	35.0	50.3	100.0%	0.9	0.9	0.0	547.1	0.0	0.1	01/01/2019-12/31/19
bioMérieux Turkey	TRY	3.3	75.1	100.0%	2.7	2.7	0.0	131.1	10.4	0.0	01/01/2019-12/31/19
bioMérieux UK	GBP	0.0	9.4	100.0%	1.2	1.2	3.6	57.9	4.6	8.1	01/01/2019-12/31/19
bioMérieux Vietnam	VND	6.3	1.2	100.0%	0.2	0.2	0.0	0.0	1.1	0.1	01/01/2019-12/31/19

		Share capital	Equity other than share capital	Share of holding	Value of the securities held before Impairment losses	Value of the securities held after Impairment losses	Loans and receivables granted by the Company and not Repaid	Sales total of the last fiscal year	Net profit or net loss of last fiscal year	Dividends received by Company in progress of the fiscal year	Notes
		Currencies in millions	*Currencies in millions*	*In %*	*In millions of euros*	*In millions of euros*	*In millions of euros*	*Currencies in millions*	*Currencies in millions*	*In millions of euros*	
bioMérieux Serbia	RSD	1.2	13.5	100.0%	0.0	0.0	0.0	0.0	3.4	0.0	01/01/2019-12/31/19
bioMérieux Singapore	SGD	0.1	4.0	100.0%	0.1	0.1	2.8	16.7	0.5	0.3	01/01/2019-12/31/19
AES Canada	CAD	0.0	(0.1)	100.0%	0.0	0.0	0.1	0.0	0.0	0.0	01/01/2019-12/31/19
BTF	AUD	4.1	22.5	100.0%	13.6	13.6	0.0	31.7	17.0	5.1	01/01/2019-12/31/19
Quercus Scientific NV	EUR	3.9	4.2	100.0%	19.9	19.9	0.0	0.0	0.0	0.2	01/01/2019-12/31/19
Total subsidiaries					**747.2**	**651.3**					
B - Investments (5%-50% owned by bioMérieux)											
Banyan Biomarkers Inc.	USD	6.1	0.0	19.3%	6.4	6.4	0.0	4.8	(4.8)	0.0	07/01/2017-06/30/18
GNEH	EUR	0.0	0.0	18.9%	4.2	3.2	0.0	0.0	0.0	0.0	Company created in 2018
Labtech system Ltd.	AUD	35.6	(6.0)	4.2%	1.3	1.0	0.0	2.9	(4.4)	0.0	07/01/2018-06/30/19
Lumed Inc.	CAD	0.8	(0.7)	16.3%	0.7	0.7	0.0	0.2	(0.4)	0.0	02/17-01/18 Unaudited
Mérieux Université	EUR	1.7	(0.6)	40.0%	1.6	0.4	0.0	5.1	(0.1)	0.0	01/01/2018-12/31/18
Qvella	CAD	54.8	(20.6)	5.7%	6.3	6.3	0.0	0.3	(4.0)	0.0	01/01/2017-12/31/17
Total equity investments					**20.6**	**18.1**					

		Share capital	Equity other than share capital	Share of holding	Value of the securities held before Impairment losses	Value of the securities held after Impairment losses	Loans and receivables granted by the Company and not Repaid	Sales total of the last fiscal year	Net profit or net loss of last fiscal year	Dividends received by Company in progress of the fiscal year	Notes
	Currencies in millions	*Currencies in millions*	*In %*	*In millions of euros*	*In millions of euros*	*In millions of euros*	*Currencies in millions*	*Currencies in millions*	*In millions of euros*		
C - Other securities											
Amorçage Technologique Investissement	EUR	32.0	(12.3)	2.5%	0.8	0.8	0.0	0.0	(3.4)	0.0	01/01/2018-12/31/18
Avesthagen	INR	76.1	(1,217.3)	3.5%	1.4	0.0	0.0	0.0	(174.8)	0.0	04/01/2018-03/31/19
Dynavax	USD	1,131.3	(1,068.2)	0.0%	0.7	0.0	0.0	8.2	(158.9)	0.0	01/01/2017-12/31/17
Innovaprep	USD	0.0	0.0	3.5%	0.4	0.0	0.0	0.0	0.0	0.0	Company created in 2018
Knome Tafkak	USD	31.3	(31.3)	0.3%	7.3	0.0	0.0	0.0	(0.1)	0.0	01/18-12/18 Unaudited
LyonBiopôle	EUR	1.0	(1.1)	0.0%	0.3	0.0	0.0	1.1	0.0	0.0	01/01/2018-12/31/18
My Cartis	EUR	29.6	(27.2)	1.6%	1.2	0.0	0.0	0.6	(6.8)	0.0	01/01/2018-12/31/18
Sino French (Innovations) Fund II	EUR	0.0	0.0	1.4%	5.0	5.0	0.0	0.0	0.0	0.0	Company created in 2018
Supernova 2	EUR	9.6	(2.6)	1.3%	1.0	1.0	0.0	0.0	(1.7)	0.0	01/01/2018-12/31/18
Théra conseil	EUR	0.5	0.4	0.8%	0.0	0.0	0.0	5.8	0.1	0.0	01/01/2018-12/31/18
Total other securities					**18.1**	**6.9**					
GRAND TOTAL					**785.9**	**676.3**					

Note 4 Inventories

4.1 Accounting principles

Inventories are measured at the lower of cost and net realisable value.

Inventories of raw materials, consumables and goods for resale are measured at their purchase price plus related expenses using the FIFO method. Work-in-progress and finished products are measured at their actual production cost.

Inventories are written down where necessary, taking into account selling prices, obsolescence, residual shelf life, product condition, sale prospects and, in the case of spare parts, changes in the corresponding instruments' installed base.

4.2 Change

Inventories *In millions of euros*	12/31/2019	12/31/2018
Raw materials	41.9	39.9
Work-in-progress	28.1	26.9
Finished products and goods held for resale	90.1	104.8
TOTAL GROSS VALUE	**160.1[(a)]**	**171.6**
Impairment losses	(10.6)	(10.1)
TOTAL CARRYING AMOUNT	**149.5**	**161.5**

(a) Including gross value of instruments and the related spare parts: 19.8% compared to 23.7% in 2018.

Note 5 Trade and operating receivables

5.1 Accounting principles

Receivables are recognised at face value. An impairment loss is recognised when the receivables present a risk of non-recovery.

5.2 Change

Trade receivables *In millions of euros*	12/31/2019	12/31/2018
Gross trade receivables	395.1	367.4
Impairment losses	(8.1)	(7.0)
CARRYING AMOUNT	**387.0**	**360.4**

Other operating receivables *In millions of euros*	12/31/2019	12/31/2018
Advances and downpayments	8.6	8.5
Prepaid expenses	5.6[(a)]	4.5
Other operating receivables	20.1[(b)]	19.8
TOTAL GROSS VALUE	**34.3**	**32.8**

(a) Prepaid expenses primarily consist of purchases of external charges.
(b) Including a VAT receivable for €14 million.

Maturities of trade and other receivables *Carrying amount in millions of euros*	12/31/2019	12/31/2018
Trade receivables	**387.0**	**360.4**
Due in less than one year	387.0	360.4
Due in more than one year		
Other operating receivables	**34.3**	**32.8**
Due in less than one year	34.2	32.6
Due in more than one year	0.1	0.2

Note 6 Cash at bank and in hand

6.1 Accounting principles

Cash and cash equivalents include available cash and short-term investments.

Changes in the cash pool are valued at the average monthly exchange rate. Cash pooling accounts are remeasured at the end of the month at the closing rate. This remeasurement is offset by an entry to financial income and expenses taking into account currency hedges related to these positions.

6.2 Change

Cash at bank and in hand *In millions of euros*	12/31/2019	12/31/2018
Short-term investments	22.1	53.9
Cash pooling	44.8	43.6
Cash at bank and in hand, and financial instruments	152.0	128.3
TOTAL	**219.1**	**225.8**

Short-term investments break down as follows:

	12/31/2019	12/31/2018
Investment	Treasury shares	Treasury shares
Amount	€2.2 million	€31.3 million
Classification	Equities	Equities
ISIN Code	FR0010096479	FR0010096479
Investment	BNP PARIBAS DEPOSIT money-market fund	BNP PARIBAS DEPOSIT money-market fund
Net amount	€14.9 million	€17.6 million
Classification	Euro money-market fund	Euro money-market fund
ISIN Code	FR0011046085	FR0011046085
Investment	Time-deposit account	Time-deposit account
Amount	€5.0 million	€5.0 million
Classification	Euro money-market fund	Euro money-market fund
ISIN Code	-	-

Among short-term investments are 37,419 shares purchased within the framework of the establishment of a hedging program intended to ensure the cost of the various share grant plans.

Note 7 Translation adjustments

7.1 Accounting principles

In application of regulation ANC 2015-05, income and expenses in foreign currencies are recognised at their value in euros on the transaction date based on the average monthly exchange rate. Foreign exchange gains or losses on commercial transactions resulting from differences in rates between the transaction date and payment date are recognised under the corresponding line in the income statement (sales and purchases).

Receivables and payables in foreign currencies are converted based on their exchange rate on the closing date of the fiscal year. Any differences resulting from this valuation are recognised under unrealised foreign exchange gains and losses. Provisions are set aside for unrealised foreign exchange losses and are recognised in income (sales and purchases) whenever the receivable or payable is related to a commercial transaction.

When, for business transactions with relatively close maturities, unrealised foreign exchange gains and losses may be considered as contributing to an overall position, the amount of the allowance for exchange rate risks is capped at the excess of losses over gains. This estimate of losses takes into account, if applicable, the hedging rate linked to the derivative instruments related to these transactions.

Foreign exchange gains and losses concerning financial flows are recorded under financial income and expenses. Translations adjustments concerning cash pooling are recognised as income as well as hedging instruments symmetrically to the hedged item.

7.2 Unrealised foreign exchange losses

In millions of euros	12/31/2019	12/31/2018
On operating items	1.3	3.3
On borrowings and financial receivables	1.1	1.0
TOTAL	**2.4**	**4.3**

7.3 Unrealised foreign exchange gains

In millions of euros	12/31/2019	12/31/2018
On operating items	0.2	0.7
On borrowings and financial receivables	0.1	0.0
TOTAL	**0.3**	**0.7**

Note 8 Equity and share grant plans

8.1 Accounting principles

Investment grants are recognised in equity. The Company has elected to spread an investment grant financing an amortisable fixed asset over several periods. The investment grant is reversed over the same period based on the same pattern as the value of the asset acquired or created as a result of the grant.

Share grant plans

Shares were acquired as part of a hedging plan, without specific allocation to a plan.

8.2 Change in shareholders' equity

The Company's share capital amounted to €12,029,370 at December 31, 2019 and was divided into 118,361,220 shares with a total of 197,362,371 voting rights (of which 79,001,151 shares carrying double voting rights). Following a decision taken by the General Meeting of March 19, 2001, the Company's bylaws no longer refer to a par value for its shares. No rights or securities with a dilutive impact on capital were outstanding at December 31, 2019.

At December 31, 2019, the Company held:

- 21,697 treasury shares under a liquidity agreement with an independent investment service provider. During 2019, the Company purchased 486,240 and sold 491,699 of its own shares;
- 37,419 treasury shares were purchased as part of a hedging programme for the various share grant plans. During the 2019 fiscal year, the Company did not purchase any shares, but awarded 422,700 and delivered 82,168 shares under the 2019 employee share ownership plan;
- in respect of the 2019 employee share ownership plan, 320,000 shares were vested and 82,168 were transferred from the free share grant plan. These shares were all delivered to employees at a preferential price.

Change in shareholders' equity *In millions of euros*	Share capital	Additional paid-in capital	Reserves & Retained Earnings	Statutory provisions	Subsidies	Total
EQUITY AT DECEMBER 31, 2018	**12.0**	**63.5**	**919.0**	**59.9**	**0.1**	**1,054.6**
Attributable net income for the period			119.6			119.6
Dividends paid			(41.3)			(41.3)
Changes in statutory provisions				0.4		0.4
EQUITY AT DECEMBER 31, 2019	**12.0**	**63.5**	**997.3**	**60.3**	**0.1**	**1,133.2**

The following table presents the Company's share grant plans:

	Date on which plans opened				
Number of shares	2015	2016	2017	2018	2019
Initial number of options granted	53,100	402,300	40,116	169,685	266,189
Options cancelled	6,600	25,200	1,431	4,275	27,759
Number of shares remitted in FY 2019	46,500	376,200			
Number of shares to be remitted as of Dec. 31, 2019		900	38,685	165,410	238,430

The number of shares for plans prior to 2017 were tripled after the three-for-one split decided by the Combined General Meeting of June 2017.

Between 2015 and 2019, the Board of Directors granted free shares (out of existing shares) to certain employees and corporate officers, subject to presence and performance conditions, as applicable.

Under the terms of the different plans, the free shares are subject to a vesting period of three or four years.

Furthermore, the vesting of performance shares is contingent on the achievement of objectives based on operating income, or on the achievement of specific objectives. The performance shares are no longer subject to a lock-up period if the vesting period is at least two years. The lock-up period may be waived for shares granted to non-French tax residents provided that the shares concerned are subject to a four-year vesting period.

In 2019, after taking into account the rebilling of free shares, a net expense of €3 million was recognised in operating income/expenses (compared to a net expense of €8.8 million the previous year).

Given the 37,419 treasury shares held at December 31, 2019, the Company will have to purchase 406,006 additional shares at a cost of €32.2 million based on the share price at December 31, 2019.

8.3 Changes in statutory provisions

Statutory provisions *In millions of euros*	Accelerated amortisation	Provisions for price increases	Total
DECEMBER 31, 2018	**58.0**	**1.9**	**59.9**
Additions	11.7	0.5	12.2
Reversals	(11.5)	(0.2)	(11.7)
DECEMBER 31, 2019	**58.2**	**2.2**	**60.4**

Note 9 Provisions for contingencies and losses

9.1 Accounting principles

Contingency and loss provisions are recognised in accordance with French accounting rules applicable to liabilities (CRC 2000-06).

The Company is involved in a certain number of claims and litigation arising from the normal course of its business. It believes that these claims and litigation will not have a materially adverse impact on its ability to continue as a going concern. When a risk is identified, a provision is recognised as soon as it can be reliably estimated.

9.2 Change

Impairment *In millions of euros*	Other employee benefits[a]	Guarantees given[b]	Other provisions[c]	Total
DECEMBER 31, 2018	**20.2**	**0.8**	**42.1**	**63.1**
Additions	*7.6*	*0.8*	*18.0*	*26.4*
Reversals (utilisations)	*(1.5)*	*(0.8)*	*(31.1)*	*(33.5)*
Reversals (surplus)			*(3.8)*	*(3.8)*
Net additions (reversals)	6.1	0.0	(16.9)	(10.9)
DECEMBER 31, 2019	**26.3**	**0.8**	**25.2**	**52.1**

(a) Provisions for other employee benefits comprise retirement benefits, long-service awards and bonuses and mutual health insurance benefits. Reversals for the year were primarily due to the payment of €1 million made to the pension fund.
(b) Estimate of the costs relating to warranties issued on the sale of instruments in the period that may be incurred over the remaining warranty period.
(c) Including a provision for free share grants of €11.8 million, retirement benefit provisions for €3.8 million, provisions for commercial claims and litigation of €2.7 million, a provision for unrealised foreign exchange losses of €2.6 million, other provisions for charges of €2.6 million, and provisions covering losses on termination of sales contracts of €1.7 million.

9.3 Provisions for pensions and other post-employment benefits

9.3.1 Accounting principles

The Company applies ANC recommendation No. 2013-02 of November 7, 2013 and applies the principles of IAS 19 as amended in June 2011 for its statutory financial statements, with the exception of the option to recognise actuarial gains and losses in equity.

9.3.2 Change

Obligations in respect of pensions and other post-employment benefits are calculated using actuarial methods based on the following assumptions:

	Retirement benefits		Long-service awards	
	12/31/2019	12/31/2018	12/31/2019	12/31/2018
Salary increase rate	2.00%	2.00%	2.00%	2.00%
Discount rate	1.00%	2.00%	0.80%	1.60%
Employee mobility rate[a]	0% to 5%	0% to 5%	0% to 5%	0% to 5%
Average duration	14	13	10	9

(a) Depending on the age and status of the employee (managerial/non-managerial grade).

At December 31, 2019, the Company recognised provisions for retirement benefits of €11.5 million, compared to €6.8 million at December 31, 2018. In 2019, the Company paid €1 million to the retirement benefits hedging fund. This hedging fund stood at €26.4 million at December 31, 2019.

The provision for long-service awards amounts to €14.8 million, compared to €13.3 million at December 31, 2018.

9.4 Contingent liabilities

The declared dispute with regard to the collective action of patients against bioMérieux as manufacturer of diagnostic tests for Lyme disease has not given rise to a provision for risk in the consolidated financial statements for the year ended December 31, 2019 as at this stage it is not possible to assess the risk incurred by the Company.

Note 10 Net debt

10.1 Statement of changes in net debt

The statement of changes in net debt includes all changes in borrowings and financial debt, regardless of maturity, net of cash and short-term bank borrowings.

It lists separately:

- cash flow relating to operating activities;
- cash flow relating to investing activities;
- cash flow relating to shareholders' equity.

Cash flow from operating activities corresponds to the aggregate of net income, depreciation and amortisation, net additions to provisions (impairment and contingencies and losses), less capital gains or losses on disposals of fixed assets.

Net debt corresponds to the Company's financial situation with regard to financing third parties outside of operating payables. This aggregate is determined by the sum of mandatory and bank debt (short, medium and long term) and bank overdrafts, less cash at bank and in hand and investment securities.

In millions of euros	12/31/2019	12/31/2018
Net income	119.6	75.1
Depreciation, amortisation and provisions, net	44.0	60.6
Gains and losses on Corporate actions	(30.4)[(a)]	(3.0)
Merger premium/loss		(1.2)
Cash flow from operating activities	**133.3**	**131.6**
Change in inventories	11.5	(13.7)
Increase of requirements in accounts receivable	(26.3)[(b)]	(41.3)
Change in trade payables and other operating working capital	1.5[(c)]	17.6
Operating working capital requirement	**(13.2)**	**(37.5)**
Decrease in receivables, net of tax	11.0[(d)]	19.5
Total change in working capital requirement	**(2.2)**	**(18.0)**
NET CASH FLOW FROM OPERATIONS	**131.0**	**113.7**
Investments	(66.2)	(69.0)
Income from disposal of fixed assets	52.3[(e)]	8.6
Increase in net amounts payable on fixed assets	12.9[(f)]	2.3
Equity acquisitions, subscriptions to capital increases	(82.2)[(g)]	(373.0)[(h)]
Net change in advances and loans to subsidiaries	43.5[(i)]	123.4[(j)]
Net change in other non-current financial assets	(0.8)	(7.1)
NET CASH FLOW FROM (USED IN) INVESTMENT ACTIVITIES	**(40.7)**	**(314.7)**
Dividends paid	(41.3)	(40.2)
Net cash used in shareholders' equity	**(41.3)**	**(40.2)**
Change in net debt (excluding exchange rate impact)	**49.0**	**(241.3)**
Breakdown of change in net debt		
Net debt at beginning of year	323.1	81.7
Net debt from the merger		(1.2)
Impact of changes in exchange rates on net debt		1.3
Change in net debt	**(49.0)**	**241.3**
• Committed debt	15.4	21.8
• Cash and bank overdrafts	(64.3)	219.4
NET DEBT AT END OF YEAR	**274.1**	**323.1**

(a) Including the capital gain on the disposal of Quanterix securities (-€30.5 million).
(b) Including amounts owed by Group customers (-€8.3 million) and by export customers (-€17.1 million).
(c) Including accrued payroll and other taxes (-€4.1 million), trade payables (+€4.8 million) and other receivables and operating payables (+€0.6 million).
(d) Including repayments obtained for the research tax credit (+€10.5 million).
(e) Including the disposal of Quanterix securities (€48.4 million).
(f) Including capital outstanding from bioMérieux Suzhou Biotech for €12.7 million.
(g) Including the capital increases of the subsidiaries bioMérieux China (-€64 million) and bioMérieux Argentina (-€3 million), the equity participation in the subsidiary bioMérieux Suzhou Biotech (-€20 million), and the capital reduction of bioMérieux HK (+€6 million).
(h) Including the capital increases of the subsidiaries ABG Stella (-€342 million), bioMérieux China (-€23.5 million), and bioMérieux Brazil (-€3 million), and the transfer value of the Geneuro shares to GNEH (-€4.2 million).
(i) Including the repayment of the bioMérieux Inc. loan (+€49.2 million), the bioMérieux Gmbh loan (+1.6 million), the new South Africa loans (-€6.2 million), and the bioMérieux Egypt loans (-€1 million).
(j) Including repayment of the BioFire loan (+€72.3 million), the bioMérieux Inc. loan (+€49.2 million), the bioMérieux Gmbh loan (+€3.2 million), and an additional loan to bioMérieux India (-€1.4 million).

10.2 Debt refinancing

bioMérieux SA has a syndicated credit facility for an amount of €500 million following the renegotiation of January 2017. The initial maturity of this loan is January 22, 2022 and may be extended twice for a duration of one additional year. Two extensions were exercised in 2018, deferring the maturity date to January 2024. This credit facility did not incur any drawdowns during 2019.

The syndicated credit facility is subject to the following covenant: bioMérieux Group net debt may not exceed 3.5 times operating income before non-recurring items (EBITDA) before depreciation/amortisation and acquisition expenses. The Company complied with this covenant at December 31, 2019.

bioMérieux SA had €50 million in outstanding commercial paper at December 31, 2019 (€35 million at December 31, 2018).

In early October 2013, bioMérieux SA carried out its first bond issue, placing €300 million worth of seven-year bonds (maturing October 14, 2020) with institutional investors. The bonds pay interest at an annual rate of 2.875%, and the sixth instalment was paid in October 2019 for €8.6 million. The bonds were issued with an issue premium. The expense relating to the issue premium and bond issue fees is being amortised over the term of the bonds.

The financial cost of half of the bond issue has been transformed into a floating rate cost through the setting up of a swap contract that matures in July 2020, and has a 0.3% floor and is capped at 1.2 until July 2018. A swap contract in the opposite direction was set up in 2017 for the period between July 2018 and July 2020.

10.3 Debt schedule

In millions of euros	12/31/2019	12/31/2018
Due beyond 5 years	3.2	5.5
Due in 1 to 5 years	10.7	308.0
TOTAL DUE BEYOND 1 YEAR	**13.9**	**313.5**
Due within 1 year	479.3[(a)]	235.4
TOTAL BORROWINGS	**493.2**	**548.9**
Short-term investments	(22.1)[(b)]	(53.9)
Cash at bank and in hand, and financial instruments	(197.0)[(c)]	(171.9)
NET DEBT	**274.1**	**323.1**

(a) Including a bond issue for €300 million, and cash pooling for €124.4 million, compared to €196.8 million at December 31, 2018.
(b) The book value of cash investments is identical to their market value, except for treasury shares, which are carried at historical cost.
(c) Including cash pooling for €44.8 million, compared to €43.6 million at December 31, 2018.

Note 11 Trade and operating payables

Trade and other operating payables *In millions of euros*	12/31/2019	12/31/2018
Trade payables	**168.7**	**163.9**
Accrued payroll and other taxes	126.2	130.3
Deferred income	4.7[(a)]	3.4
Other payables	11.8	10.8
Other operating payables	**142.6**	**144.4**

(a) Including a lease and maintenance agreement for €3.5 million and the sale of reagents and instruments for €1.2 million.

Trade and other operating payables *In millions of euros*	12/31/2019	12/31/2018
Trade payables		
Due within one year	168.7	163.9
TOTAL	**168.7**	**163.9**
Other operating payables		
Due within one year	142.4	144.4
Due beyond one year	0.2	
TOTAL	**142.6**	**144.4**

Note 12 Accrued expenses and income

Accrued expenses and income *In millions of euros*	12/31/2019	12/31/2018
Miscellaneous borrowings	2.3	2.5
Trade payables	50.1	52.4
Accrued payroll and other taxes	112.2	115.1
Other operating payables	10.0	8.6
Other non-operating payables	12.7[(a)]	14.9
TOTAL ACCRUED EXPENSES	**187.3**	**193.5**
TOTAL ACCRUED INCOME	**21.2[(b)]**	**27.5**

(a) Including €3.6 million of the Sino-French Innovation Fund 2 securities balance, compared to €4.7 million at December 31, 2018.
(b) Including unbilled customer payables (€17.9 million compared to €24.2 million at December 31, 2018) and accrued interest on loans to subsidiaries (€2 million at December 31, 2019 and December 31, 2018).

Note 13 Sales

13.1 Accounting principles

Revenue from product sales (reagents and instruments) and related services (after-sales, training, delivery, etc.) are presented in "revenues" in the profit & loss statement.

Revenue arising from the sale of products is recognised when all of the following criteria have been satisfied:

- the significant risks and rewards of ownership have been transferred to the buyer;
- the Company no longer has a continuing involvement in the effective control over the goods sold;
- the revenue and the costs incurred or to be incurred in relation to the transaction can be measured reliably;
- it is probable that the economic benefits associated with the transaction will flow to the Company.

These criteria are satisfied when reagents are delivered and when sold instruments are installed.

In the case of services (training, technical support, etc.), revenue is recognised only after the services have been rendered. Revenue from instrument maintenance contracts is deferred and recognised on the basis of the elapsed portion of the service contract.

Sales are measured at the fair value of the consideration received or receivable, net of any discounts and rebates granted to customers. Sales taxes and value-added taxes are not included in sales.

13.2 Change

Breakdown of sales *In millions of euros*	France	Export	Total 12/31/2019	Total 12/31/2018
Sales of goods for resale	12.9	122.8	135.7	128.4
Sold production (goods)	159.9	729.6	889.5	860.1
Sold production (services)	21.1	211.9	233.0	200.3
TOTAL	**193.8**	**1,064.4**	**1,258.2**	**1,188.8**

Revenues by geographic area *In millions of euros*	12/31/2019	12/31/2018
France & Dom Tom	197.7	200.8
Europe, Africa, Middle East	512.2	479.5
South America	44.5	40.4
North America	145.7	154.9
Asia Pacific	173.6	159.8
Other related activities not broken down	184.5	153.4
TOTAL	**1,258.2**	**1,188.8**

Note 14 Research & development expenses

Research & development expenses are expensed as incurred except for research & development programs capitalised following the merger with the companies AES Chemunex and CEERAM.

Research & development expenses at December 31, 2019 amounted to €123.1 million, compared to €121 million the previous year.

Note 15 Personnel costs and employee benefits

15.1 Accounting principles

When an expense is not considered as definitive on recognition, the expense transfer accounts are used to subsequently reclassify the expense based on the appropriate economic nature.

15.2 Change

Personnel costs *In millions of euros*	12/31/2019 12 months	12/31/2018 12 months
Wages and salaries	197.8	192.9
Discretionary profit-sharing	16.5	17.2
Payroll taxes	95.3	103.4
TOTAL	**309.7**	**313.5**
AVERAGE HEADCOUNT	**3,674**	**3,649**
HEADCOUNT AT YEAR-END	**3,686**	**3,679**

In accordance with the law, no non-discretionary profit-shares could be granted to employees out of net income for 2019.

Compensation allocated to members of the administrative, management and supervisory bodies and senior management (Company directors and members of the Executive Committee who are employees of the Company) in respect of their duties in 2019 consisted of directors' fees of €0.4 million, and fixed and variable compensation of €7.1 million.

Breakdown of headcount *In FTE*	12/31/2019 12 months	12/31/2018 12 months
AVERAGE HEADCOUNT		
Managers	1,794	1,790
Supervisors	53	63
Employees	30	27
Technicians	1,190	1,181
Blue-collar workers	607	588
TOTAL	**3,674**	**3,649**
HEADCOUNT AT YEAR-END		
Managers	1,818	1,813
Supervisors	53	66
Employees	38	29
Technicians	1,176	1,177
Blue-collar workers	601	594
TOTAL	**3,686**	**3,679**

Note 16 Net financial expenses

16.1 Accounting principles

Dividends received are recognised net of withholding taxes applicable in the country of origin.

16.2 Change

In millions of euros	12/31/2019	12/31/2018
Net finance costs	(5.3)	(3.5)
Impairment of investments	(3.9)[a]	(9.5)[b]
Merger premium/loss		1.2
Provisions for financial contingencies and losses		0.2
Dividends	42.4	25.3
Foreign exchange gains (losses)	3.5	(1.0)
TOTAL	**36.8**	**12.6**

(a) Including net additions relating to shares in subsidiaries for €4 million, and -€0.1 million relating to other investments.
(b) Including net additions relating to shares in subsidiaries for €7.7 million, and €1.8 million relating to other investments.

bioMérieux SA absorbed SAS International on July 30, 2018 with retroactive tax effect to January 1, 2018. The contributions measured at their net book value resulted in a merger premium of €1.2 million during the previous fiscal year.

16.3 Foreign exchange gains (losses)

Foreign exchange gains and losses result from differences between the transaction exchange rate and the settlement rate (or the year-end rate if the payment has not yet been made). These differences only partially reflect the impact of currency fluctuations.

Foreign exchange gains and losses on commercial transactions are recognised under the relevant headings in the consolidated income statement. The table below shows their income statement impact:

In millions of euros	12/31/2019	12/31/2018
Operation	(10.7)	(7.3)
Financial items	3.5	(1.0)
TOTAL	**(7.3)**	**(8.3)**

Note 17 Non-recurring income

In millions of euros	Income	Expenses	Net 12/31/2019	Net 12/31/2018
Exits and disposals of fixed assets	52.3	21.9	30.3	2.9
Statutory provisions	11.7	12.1	(0.4)	(1.0)
Other non-recurring income and expenses	21.4	24.9	(3.6)	1.8
TOTAL	**85.3**	**59.0**	**26.4**	**3.7**

Disposals of fixed assets take into account the €30.5 million in capital gains from the disposal of Quanterix securities.

Note 18 Corporate income tax

18.1 Change

At December 31, 2019, the Company recognised various tax credits totalling €22 million, including a research tax credit for an estimated €19 million. These various tax credits accumulated since 2018 represented the majority of non-operating receivables at December 31, 2019, and have a maturity of less than one year.

The net Corporate income tax expense totalled €1.1 million in 2019, compared to income of €0.6 million the previous year.

18.1.1 Breakdown of Corporate income tax

In millions of euros	Before tax	Tax	12/31/2019 After tax	12/31/2018
Recurring income	94.3	(1.4)	92.9	70.9
Non-recurring income	26.4	0.1	26.5	3.7
Prior-year adjust.		0.2	0.2	0.5
NET INCOME FOR THE YEAR	**120.7**	**(1.1)**	**119.6**	**75.1**

18.1.2 Net income for the year excluding valuation allowances

In millions of euros	12/31/2019	12/31/2018
Net income for the year	119.6	75.1
Income tax	(1.1)	0.6
Net income before tax	**120.6**	**74.5**
Accelerated depreciation, amortisation and statutory provisions	(0.4)	(1.0)
Total valuation allowances	**(0.4)**	**(1.0)**
NET INCOME BEFORE TAX AND EXCLUDING VALUATION ALLOWANCES	**121.0**	**75.5**
Income tax	(1.1)	0.6
Tax on valuation allowances (34.43%)	0.1	0.3
NET TAX BENEFIT (EXPENSE)	**(1.2)**	**0.3**
NET INCOME FOR THE FISCAL YEAR EXCLUDING VALUATION ALLOWANCES	**119.9**	**75.8**

18.1.3 Change in deferred taxes

In millions of euros	12/31/2019 Rate 32.02%	12/31/2018 Rate 34.43%
Accelerated depreciation, amortisation and statutory provisions	19.3	20.6
TOTAL DEFERRED TAX LIABILITIES	**19.3**	**20.7**
Non-deductible provisions and expenses	(10.5)	(6.9)
Unrealised foreign exchange gains	(0.1)	(0.2)
TOTAL DEFERRED TAX ASSETS	**(10.5)**	**(7.2)**
TOTAL DEFERRED TAX BENEFIT OR EXPENSE	**8.8**	**13.5**

Note 19 Hedging instruments

19.1 Accounting principles

The Company only uses financial instruments for hedging purposes, in order to limit risks stemming from changes in exchange rates and interest rates, whether related to assets and liabilities at the end of the period or to future transactions.

19.2 Exchange rate risk

In view of the significant proportion of bioMérieux SA's operations conducted outside the euro zone, its sales, earnings and assets and liabilities may be impacted by changes in exchange rates between the euro and other currencies. Sales are particularly affected by euro/US dollar exchange rate variations and, more occasionally, by fluctuations in the rate of the euro against other currencies.

bioMérieux SA's current policy is to seek to hedge the impact of exchange rate fluctuations on budgeted net income. It uses hedging instruments, when they are available at a reasonable cost, in order to mitigate risks relating to currency fluctuations. Hedging contracts are purchased to cover transactions included in the budget and not for speculative purposes.

Hedges consist mainly of forward currency sales and purchases (maturing within 18 months at December 31, 2019).

Hedging instruments used are backed against trade and financial receivables and payables.

Unrealised foreign exchange gains and losses on hedging instruments, related to the basis of trading prices at December 31, 2019 are recognised in the balance sheet whenever they are in a hedging relationship with receivables or payables.

Hedges in effect at December 31, 2019 were as follows:

- forward sales of €23.4 million to hedge trade receivables;
- forward sales of €24.0 million to hedge financial receivables;
- forward purchases of €80.0 million to hedge borrowings.

Furthermore, currency hedges were set up to cover the budget positions of the 2019 fiscal year. The net amount of these hedges is €198.1 million.

The market value at December 31, 2019 of all the budget hedges represents an unrealised loss of €0.3 million.

At December 31, 2019, the Company had no hedges covering the earnings of foreign subsidiaries.

The market value at December 31, 2019 of financial hedges represents an unrealised loss of €0.6 million.

The table below shows the currencies in which revenues were generated:

	12/31/2019		12/31/2018	
In millions of euros	12 months	%	12 months	%
Euro	**727.8**	**58%**	**673.8**	**57%**
Other				
US dollar	187.0	15%	193.0	16%
Chinese Yuan	67.0	5%	69.4	6%
Indian rupee	36.0	3%	30.2	3%
Pound sterling	34.8	3%	32.7	3%
Czech koruna	33.2	3%	31.7	3%
Swiss franc	22.0	2%	20.8	2%
Swedish krona	18.1	1%	18.5	2%
Turkish lira	13.0	1%	10.5	1%
South African rand	12.3	1%	15.8	1%
Brazilian real	7.6	1%	6.9	1%
Other currencies	99.3	8%	85.4	7%
TOTAL	**1,258.2**	**100%**	**1,188.8**	**100%**

19.3 Rate risk

19.3.1 Exposure to interest rate risks

As part of its interest rate risk management policy aimed at managing the risk of an increase in interest rates, bioMérieux SA hedges part of its debt.

The bond issue, after accounting for interest rate derivatives, is at a fixed rate until maturity in 2020. The expense in respect of the related premiums is being amortised over the term of the hedges.

The real estate lease financing agreement in the amount of €45 million set up in 2015 to finance Campus de l'Etoile is variable-rate and indexed. At December 31, 2019, there was no mechanism set up to back this financing.

Exposure to interest rate risk on other borrowings is not material and is not subject to hedging.

19.3.2 Hedging instruments

At December 31, 2019, the interest rate risk hedging portfolio comprised interest rate swaps with no sensitivity to rate risk since €150 million in fixed rate payer swaps established in April 2017 cancelled the impact of the variable rate payer swaps of €150 million until their maturity in 2020.

The market value of these rate swaps amounted to a €2.2 million.

19.4 Exchange rate and interest rate risk

19.4.1 Exposure to exchange rate and interest rate risk

In 2013, bioMérieux SA issued bonds in euros in connection with its US dollar-denominated acquisition of US-based BioFire by bioMérieux Inc., which closed in January 2014. In January 2014, bioMérieux SA granted a loan of US$470 million to bioMérieux Inc. These transactions generated a combined exchange rate risk and interest rate risk that needed to be hedged.

19.4.2 Hedging instruments

In order to mitigate the above-described exchange rate and interest rate risk, the Company set up a cross currency swap in January 2014.

Cross currency swaps in the amount of US$470 million have been exchanged. This nominal amount is payable in six-monthly instalments.

At December 2019, the outstanding nominal amount of cross currency swaps stood at US$67.1 million. The market value of these instruments amounted to a negative €10.9 million.

Note 20 Off-balance sheet commitments

20.1 Financial commitments

20.1.1 Commitments given

In millions of euros	12/31/2019	12/31/2018
Endorsements and guarantees	124.0[(a)]	200.6
Finance lease and rent commitments	38.3	37.8
TOTAL	**162.3**	**238.4**

(a) Of which related parties for €122.4 million.

In 2018, bioMérieux SA stood surety for the RMB655 million (€83 million) loan taken by bioMérieux Shanghai as part of the financing of the acquisition in 2018 of the majority of the shares making up the share capital of Suzhou Hybiome Biomedical Engineering Co. Ltd.

Finance lease *In millions of euros*		Royalties		Amotisation and depreciation	
	Gross	fiscal year	cumulative	fiscal year	cumulative
Land	2.3	0.2	0.6		
Buildings	42.1	3.7	12.1	2.5	8.0
TOTAL	**44.4**	**3.9**	**12.6**	**2.5**	**8.0**

Finance lease *In millions of euros*	Outstanding royalties				
	< 1 year	1-5 years	> 5 years	Total	Residual value
Land	0.2	0.8	0.7	1.7	
Buildings	3.7	14.6	13.7	31.9	
TOTAL	**3.9**	**15.4**	**14.4**	**33.7**	

20.1.2 Commitments received

In millions of euros	12/31/2019	12/31/2018
Credit facilities with a banking syndicate	500.0	500.0
TOTAL	**500.0**	**500.0**

20.2 Research & development commitments

At December 31, 2019, commitments given in respect of various research agreements amounted to €3 million.

bioMérieux SA participates in a research program coordinated by Institut Mérieux, together with bioMérieux, Transgène, Genosafe and the Genethon association. The aim of this program is to develop a new generation of diagnoses and therapies focusing on cancers, infectious diseases and genetic disorders. This program is known under the acronym "ADNA" (for "Advanced Diagnostics for New therapeutic Approaches"). The program receives financing from the French government's Industrial Innovation Agency (*Agence de l'Innovation Industrielle*), which merged with OSEO ANVAR in 2007, and was renamed Bpifrance in July 2013. The public financing agreement was approved by the European authorities on October 22, 2008. In this context, and in light of the supplemental agreements modifying the initial research program, bioMérieux SA had agreed to undertake research & development for an estimated amount of €67.5 million and updated to €54.5 million. The liquidating assessment was carried out in 2017. At December 31, 2019, the Company had no more undertakings to carry out research & development work. In return, bioMérieux SA received subsidies (€16.1 million) and repayable grants (€7.5 million). If the products resulting from this research are commercially successful, bioMérieux SA will have to pay back these grants according to a payment schedule based on the revenue generated from these products, and will also have to pay a share of profits until 2029 (3.4% of revenue earned on the relevant products).

bioMérieux SA entered into a ten-year partnership with BIOASTER, a Technological Research Institute in Lyon specialised in infectious diseases. In the period 2012-2015, its contribution to research activities resulted in new partnership agreements being put in place with BIOASTER for almost €4 million. bioMérieux's own employees are also involved in these partnership agreements. A new collaboration cycle was opened for the period between January 1, 2016 and end of July 2020 during which bioMérieux SA has made a commitment to BIOASTER in the same proportions.

20.3 Commitments relating to equity investments

bioMérieux SA has committed with Amorçage Technologique Investissement (ATI) to responding to new calls for funds up to an amount of €0.2 million.

bioMérieux SA has committed to paying the unpaid capital of bioMérieux Suhzou Biotech Co.Ltd. in January 2020 for 11.5 million Chinese yuan.

Note 21 Related parties

21.1 Affiliated companies: balance sheet items

In millions of euros	12/31/2019	12/31/2018
TOTAL NON-CURRENT FINANCIAL ASSETS	**847.9**	**826.3**
TOTAL RECEIVABLES	**254.5**	**253.4**
Total cash at bank and in hand[a]	**44.8**	**43.6**
Operating payables	81.7	84.4
Borrowings[b]	124.4	196.8
TOTAL PAYABLES	**206.1**	**281.2**

(a) Advances to subsidiaries for cash pooling.
(b) Advances from subsidiaries for cash pooling.

21.2 Affiliated companies: financial income and expenses

In millions of euros	12/31/2019 12 months	12/31/2018 12 months
Net impairment of investments	(4.0)	(8.7)
Financial expenses	(15.0)	(27.7)
Dividends received	42.4	25.3
Financial income	20.0	43.6
TOTAL	**43.4**	**32.5**

Financial income includes exchange gains following the revaluation of the cash pooling (€9.6 million), as well as interest on loans to subsidiaries and cash pooling (€6.6 million) of which €4.5 million for interest on the bioMérieux Inc. loan, €0.6 million for interest on the RAS loan, €0.4 million for interest on the South Africa loan, and €1.1 million for interest on cash pooling. Financial income also includes the net gains on transactions on equity investments for €2.2 million.

Financial expenses recorded foreign exchanges losses on cash pooling (€11.8 million), unrealised exchange losses on long-term loans (€0.2 million for the loan granted to RAS), as well as interest on cash pooling (€2.7 million).

21.3 Related party transactions

The Institut Mérieux, which held 58.9% of bioMérieux SA at December 31, 2019, performed research and services at bioMérieux SA for a total of €8.3 million for the year, from which €2.9 million were rebilled to bioMérieux Inc. and €2 million to BioFire. bioMérieux SA rebilled €0.9 million to Institut Mérieux for expenses paid on its behalf.

The Company rebilled €4.3 million worth of services and reagent sales to entities of the Mérieux NutriSciences Corporation Group, in which Institut Mérieux holds a majority interest. Unlike Group companies, Mérieux NutriSciences Corporation rebilled bioMérieux SA for €0.2 million in services.

Théra Conseil, which is 99.2%-owned by Institut Mérieux, billed bioMérieux SA €1.7 million for services in respect of 2019.

bioMérieux SA contributed €2 million to the Fondation Christophe and Rodolphe Mérieux for humanitarian projects.

bioMérieux SA paid the Fondation Mérieux €0.1 million for expenses incurred on its behalf.

bioMérieux SA paid €3.9 million to Mérieux Université (in which bioMérieux SA and Institut Mérieux each hold a 40% interest, and Mérieux NutriSciences Corporation holds a 20% interest) in respect of training fees, and rebilled €1.8 million in other services.

ABL Inc., indirectly wholly owned by Institut Mérieux, billed bioMérieux SA for raw materials supplies for €1 million and fees for €0.2 million. bioMérieux SA rebilled other ABL Group companies for instruments and reagents for €0.1 million. Conversely, €0.1 million was rebilled for research expenses.

The companies of the Pierre Fabre Group were billed €0.5 million for services and reagent sales.

BIOASTER billed bioMérieux SA €0.5 million for research expenses and fees. bioMérieux SA, in turn, rebilled BIOASTER €0.1 million for services.

bioMérieux SA made a €0.1 million donation to the Université de Lyon Foundation.

Lastly, Lumed billed research expenses for €0.6 million.

6.2.3 Analysis of the results and other financial information

6.2.3.1 Revenue and financial position

Sales

During the year ended December 31, 2019, the Company's sales amounted to €1,258 million compared to €1,189 million for the previous year, representing a year-on-year increase of 5.8%.

The growth in revenues was mainly attributable to the 11.2% increase in export sales (mainly to distributors), the 3.5% rise in sales to subsidiaries in a context of global Group growth, as well as to the 17% increase in other income. On the other hand, domestic sales decreased by 1.6% due to the decrease in sales volumes for the immunoassays ranges despite the growth in the molecular biology lines.

Gross operating income

Gross operating income came in at €164 million, *i.e.* 13% of sales. It increased by €10.1 million, up 6.6%, compared to the previous fiscal year, mainly due to the growth in business (6%) partially offset by the change in external expenses (16.9%).

Operating income

After depreciation, amortisation and provisions, operating income decreased by €0.7 million, dropping from €58.2 million in 2018 to €57.5 million at December 31, 2019.

The 23.3% increase in amortisation and provisions results mainly from provisions for the free share grants and retirement benefits, offset by the growth in gross operating income.

Net financial income

In 2019, net financial income came in at €36.8 million *versus* €12.6 million the previous year.

This change is primarily due to the €17.1 million increase in dividends received and the €5.6 million decrease in provisions for equity investments.

Recurring income

Net income before non-recurring items and tax totalled €94.2 million *versus* €70.8 million one year earlier.

Non-recurring income

Non-recurring income at December 31, 2019 was income of €26.4 million compared to €3.7 million at December 31, 2018, mainly due to income from the disposal of financial securities in 2019.

Income tax and tax credits

Income tax amounted to a net expense of €1.1 million, compared to income of €0.6 million at December 31, 2018.

The €23 million income tax expense (*versus* €20.1 million in 2018) was almost completely offset by tax credits, primarily the provisioned research tax credit of €19 million, compared to €17.9 million in 2018.

Net income

Net income for the fiscal year amounts to €119.6 million compared with €75.1 million the previous year, *i.e.* a year-on-year increase of €44.5 million. It representes 9.5% of sales, compared to 6.3% at December 31, 2018.

Investments

Investments in intangible assets represent €6.7 million and primarily concern developments of IT solutions.

Capital expenditure, amounting to €59.3 million, mainly concerned the equipment of the Craponne (R&D) and Marcy (manufacturing) sites.

Non-current financial assets (acquisitions/disposals) increased by €21.6 million in gross value, primarily because of the subscriptions and capital increases (including bioMérieux HK China for €64.2 million, and bioMérieux Suzhou Biotech Co. Ltd. for €20 million), partially offset by the €49.2 million repayment on the loan granted to bioMérieux Inc. and the disposal of Quanterix investment securities for €17.9 million.

6.2.3.2 Income appropriation and non-deductible expenses

Shareholders will be invited to appropriate distributable net income for the year ended December 31, 2019, totalling €200,129,054.79, consisting of €119,592,998.59 in net income and €80,536,056.20 in retained earnings, as follows:

- €60,000,000 to be transferred to the "General Reserve" account, increasing the balance from €795,000,000.28 to €855,000,000.28;
- €57,473.61 to be transferred to the "Special sponsorship reserve", increasing the balance from €935,618.97 to €993,092.58;
- €44,977,263.60 distributed in dividends, representing a dividend of €0.38 for each of the 118,361,220 shares comprising the share capital; to be paid on June 4, 2020;
- the balance of €95,094,317.58 will be paid to "Retained Earnings".

In accordance with the provisions of article L.225-210 of the French Commercial Code (*Code de commerce*), the Company will not receive any dividends on treasury shares held on the ex-dividend date. The corresponding dividend amount will be allocated to "Retained earnings".

Under current French tax legislation, the dividends distributed to individuals domiciled in France for tax purposes are taxed in two phases:

- at their payment, the gross amount is subject to a non-discharging levy (French acronym PNFL) of 12.8% for income tax (Article 117 *quater* of the French Tax Code (*Code général des impôts*)) and social security withholdings of 17.2%. Low-income taxpayers may request exemption from the PNFL;
- the following year, they are subject:
  - to tax at the flat rate of 12.8% (single flat-rate levy),
  - or, on option, to the progressive income tax scale. In this case, a 40% allowance (Article 158, 3 2° of the French Tax Code (*Code général des impôts*)) is applicable.

The PFNL of 12.8%, deducted during the payment year, is deducted in this case from income tax. The excess is refunded, if applicable.

The dividends paid for each of the past three years are presented in section 7.6.

Non-tax-deductible expenses

The 2019 financial statements include non-tax-deductible expenses as provided for in articles 223 *quater* and 223 *quinquies* of the French Tax Code (*Code général des impôts*) amounting to €502,224. These correspond to the non-deductible portion of rental payments and depreciation charges for vehicles leased and purchased by bioMérieux SA. Income tax at the base rate paid in this respect amounted to €167,408.

6.2.3.3 Five-year financial summary (article R.225-102 of the French Commercial Code (*Code de commerce*)

	Fiscal year 12/31/2019	Fiscal year 12/31/2018	Fiscal year 12/31/2017	Fiscal year 12/31/2016	Fiscal year 12/31/2015
I. Share capital at year-end					
Share capital *(in euros)*	12,029,370	12,029,370	12,029,370	12,029,370	12,029,370
Number of ordinary shares outstanding[(a)]	118,361,220	118,361,220	118,361,220	39,453,740	39,453,740
Number of preferred shares (without voting rights) outstanding	0	0	0	0	0
Maximum number of potential shares to be issued	0	0	0	0	0
By conversion of bonds	0	0	0	0	0
By exercise of subscription rights	0	0	0	0	0
II. Transactions and net income for the fiscal year *(in euros)*					
Sales	1,258,157,229	1,188,752,991	1,137,563,972	1,038,853,374	961,955,147
Income before tax, employee profit-sharing, depreciation, amortisation and provisions	164,775,272	135,210,344	167,690,845	81,341,294	150,431,236
Income tax[(b)]	1,139,111	(562,410)	(2,294,743)	(8,533,578)	(1,081,437)
Employee profit-sharing for the year				0	0
Income after tax, employee profit-sharing, depreciation, amortisation and provisions	119,592,999	75,140,870	109,199,429	69,111,739	75,654,871
Dividends paid[(c)]	44,977,264	41,426,427	40,242,815	39,453,740	39,453,740
Special dividend paid from the general reserve	0	0	0	0	0
III. Earnings per share *(in euros per share)*					
Income after tax and employee profit-sharing, but before depreciation, amortisation and provisions	1.38	1.15	1.44	2.28	3.83
Income after tax, employee profit-sharing, depreciation, amortisation and provisions	1.01	0.63	0.92	1.75	1.92
Dividend per share	0.38	0.35	0.34	1.00	1.00
IV. Employee data					
Average number of employees during the year[(d)]	3,674	3,649	3,554	3,427	3,326
Total annual payroll *(in euros)*	215,921,602	211,591,174	199,088,838	187,804,208	177,082,713
Total employee benefits paid during the year (social security, charities) *(in euros)*	93,736,765	101,882,387	88,884,116	84,651,059	80,796,671

(a) The number of shares was tripled in 2017 after the three-for-one split decided by the Ordinary and/or Extraordinary Shareholders' Meetings of June 2017.
(b) The negative amounts correspond to tax income.
(c) Subject to the non-payment of dividends on treasury shares held on the ex-dividend date.
(d) Excluding interns and international work experience volunteers (VIE), data changed from that previously published in order to homogenise the headcount.

6.2.3.4 Information on payment periods

Trade payables at December 31, 2019 by due date

In accordance with article D.441.4 of the French Commercial Code (*Code de commerce*), invoices received and not paid at December 31, 2019 that are in arrears are broken down as follows:

SUPPLIER INVOICES (NON-GROUP)

	Invoices received that have not been settled on the balance sheet date and are in arrears					
	0 day (Indicative)	1 to 30 days	31 to 60 days	61 to 90 days	More than 91 days	Total (More than 1 days)
(A) Late payment ranges						
Number of invoices concerned	201	105	137	81	389	712
Total amount of invoices concerned (inclusive of tax)	1,304,039	645,733	930,932	533,395	1,278,065	3,388,124
Percentage of the total amount of purchases for the year	0.27%	0.13%	0.19%	0.11%	0.26%	0.69%
(B) Invoices excluded from (A) relating to disputed debts or unrecognised debts						
Number of invoices excluded						
Total amount of invoices excluded (inclusive of tax)						
(C) Reference payment period used (contractual or legal period - article L.441-6 or article L.443-1 of the French Commercial Code (*Code de commerce*)						
Payment schedules used in calculating late payments	Contractual period: 0 to 45 days from the end of the month, according to the contract					

SUPPLIER INVOICES (NON-GROUP AND GROUP)

	Invoices received that have not been settled on the balance sheet date and are in arrears					
	0 day (Indicative)	1 to 30 days	31 to 60 days	61 to 90 days	More than 91 days	Total (More than 1 days)
(A) Late payment ranges						
Number of invoices concerned	201	115	156	84	419	774
Total amount of invoices concerned (inclusive of tax)	1,304,039	1,306,669	2,116,764	1,261,514	3,788,510	8,473,457
Percentage of the total amount of purchases for the year	0.15%	0.16%	0.26%	0.16%	0.48%	1.05%
(B) Invoices excluded from (A) relating to disputed debts or unrecognised debts						
Number of invoices excluded						
Total amount of invoices excluded (inclusive of tax)						
(C) Reference payment period used (contractual or legal period - article L.441-6 or article L.443-1 of the French Commercial Code (*Code de commerce*)						
Payment schedules used in calculating late payments	Contractual period: 0 to 60 days from the end of the month, according to the contract for suppliers					

Trade receivables at December 31, 2019 by due date

In accordance with article D.441.4 of the French Commercial Code (*Code de commerce*), invoices issued and not paid at December 31, 2019 that are in arrears are broken down as follows:

CLIENT INVOICES (NON-GROUP)

	Invoices issued that have not been settled on the balance sheet date and are in arrears					
	0 day (Indicative)	1 to 30 days	31 to 60 days	61 to 90 days	More than 91 days	Total (more than 1 days)
(A) Late payment ranges						
Number of invoices concerned	3,417	2,175	1,947	886	3,791	8,799
Total amount of invoices concerned (inclusive of tax)	9,169,822	6,090,369	6,233,389	3,018,961	5,876,747	21,219,466
Percentage of revenue for the fiscal year	2.44%	1.62%	1.66%	0.80%	1.56%	5.64%
(B) Invoices excluded from (A) relating to disputed or unrecognised receivables						
Number of invoices excluded				1,140		
Total amount of invoices excluded (inclusive of tax)				12,551,506		
(C) Reference payment periods used						
Payment schedules used in calculating late payments	Contractual periods:		France: between 30 days from the end of the month and 60 clear days Export: between 30 clear days and 120 clear days			

CLIENT INVOICES (NON-GROUP AND GROUP)

	Invoices issued that have not been settled on the balance sheet date and are in arrears					
	0 day (Indicative)	1 to 30 days	31 to 60 days	61 to 90 days	More than 91 days	Total (more than 1 days)
(A) Late payment ranges						
Number of invoices concerned	3,421	2,518	2,014	916	3,974	9,422
Total amount of invoices concerned (inclusive of tax)	9,008,565	13,574,072	7,445,012	3,279,093	9,005,796	33,303,973
Percentage of revenue for the fiscal year	0.72%	1.08%	0.59%	0.26%	0.72%	2.65%
(B) Invoices excluded from (A) relating to disputed or unrecognised receivables						
Number of invoices excluded				1,140		
Total amount of invoices excluded (inclusive of tax)				12,551,506		
(C) Reference payment period used (contractual or legal period - article L.441-6 or article L.443-1 of the French Commercial Code (*Code de commerce*)						
Payment schedules used in calculating late payments	Contractual periods:		France: between 30 days from the end of the month and 60 clear days Export: between 30 clear days and 120 clear days			

6.2.4 Report of the Statutory Auditors on the annual financial statements

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. The Statutory Auditors' report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the opinion on the financial statements and includes an explanatory paragraph discussing the Auditors'assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the financial statements taken as a whole and not to provide separate assurance on individual account captions or on information taken outside of the financial statements. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

At the bioMérieux Annual General Meeting,

Opinion

In performing the duty entrusted to us by your Annual General Meetings, we conducted an audit of the annual financial statements of bioMérieux for the financial year ended December 31, 2019, as appended to this report.

We certify that with regard to French accounting rules and principles, the annual financial statements are reliable and faithfully reflect the operating results of the financial year just elapsed, as well as the financial position and assets of the Company at the close of the said financial year.

The opinion expressed above is consistent with the contents of our report to the Audit Committee.

Basis for opinion

Audit Standard

We conducted our audit according to generally accepted professional standards in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Our responsibilities by virtue of these standards are stated in the section "Statutory Auditors' responsibilities relating to the audit of the annual financial statements" of this report.

Independence

We have conducted our audit in compliance with the rules of independence that apply to us, from the period between January 1, 2019 to the date of issue of our report, and, in particular, we have not provided any services prohibited by Article 5, Paragraph 1, of EU Regulation No. 537/2014 or by the Statutory Auditors' Professional Code of Ethics.

Justification for our assessments – Key points of the audit

Pursuant to the provisions of Articles L.823-9 and R.823-7 of the French Commercial Code relating to the justification of our assessments, we draw your attention to the key points of the audit relating to risks of material misstatements which, according to our professional judgement, were the most significant for the audit of the annual financial statements for the financial year, plus the answers provided to control these risks.

Our assessments on these matters are part of the audit approach of the annual financial statements taken as a whole and the formation of our opinion expressed above. We do not express an opinion on the elements of these annual financial statements taken separately.

Assessment of equity investments

Risk identified	Our response
Equity investments were recorded in the balance sheet in the net amount of €681 million at December 31, 2019, and represented 34% of the Group's balance sheet. They are recognised at their acquisition cost and impaired whenever their value in use falls below their acquisition cost. As stated in Note 3.3.1 of the notes to the annual financial statements, the value in use is estimated by the management either: • by taking into account the net carrying amount of the subsidiary on the reporting date that may be adjusted if necessary to reflect the value of any unrecognised; identifiable assets (particularly real estate or technologies); • or given the specific nature of certain investments, based on discounted future cash flows or on observable market financial inputs. The estimation of the value in use of these securities requires that the management exercise its judgement in selecting the elements to be considered depending on the investments concerned (cash flow, discount rate, etc.). In this connection, and given the uncertainties inherent in some elements, such as the probability of forecasts being achieved, we have considered that the assessment of equity investments is a key audit matter.	We analysed the assessment method used and the figures on which it is based. For assessments based on historic elements, where appropriate adjusted to reflect the value of any unrecognised identifiable assets, our work consisted primarily in examining the consistency of the net assets used with the accounts of the entities that have been audited or subjected to analytical procedures, and in checking whether adjustments made, if any, were supported by meaningful documentation. For assessments based on provisional data, our work consisted primarily in: • obtaining the cash flow and operating forecasts for the activities of the entities concerned and in assessing their consistency with the forecast data presented by senior management as part of the budgeting process; • analysing the consistency of the assumptions used with the economic climate; • assessing the discount rate used for the discounting of cash flows.

Specific verification

In accordance with the professional standards applicable in France, we have also undertaken the specific verifications required by law and by regulations.

Information given in the management report and in the other documents: sent to shareholders about the Company's financial position and annual financial statements

We have no matters to report as to the fair presentation and the consistency with the annual financial statements of the information given in the management report of the Board of Directors, and in the documents addressed to the shareholders with respect to the financial position and the annual financial statements.

We hereby certify the fairness and the consistency with the annual financial statements of the information regarding payment periods described in Article D. 441-4 of the French Commercial Code.

Report on corporate governance

We certify that the Board of Directors' report on corporate governance contains the information required by Articles L.225-37-3 and L.225-37-4 of the French Commercial Code.

Concerning the information disclosed in accordance with the requirements of Article L.225 37-3 of the French Commercial Code, relating to compensation and benefits received by corporate officers and any other commitments made in their favour, we have verified its consistency with the financial statements, or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your Company from companies controlled by it and included in the scope of consolidation. Based on this work, we attest to the accuracy and fair presentation of this information.

Concerning the information on the elements that your Company considered likely to have an impact in the event of a public tender or exchange offer, provided pursuant to the provisions of Article L.225-37-5 of the French Commercial Code, we verified their compliance with the documents from which they were created and that were forwarded to us. On the basis of these verifications, we have no observation to make with regard this information.

Other Information

As required by law, we are satisfied that the various disclosures about the identity of those who hold equity and voting rights have been communicated to you in the management report.

Information from other legal and regulatory obligations

Appointment of Statutory Auditors

We were appointed Statutory Auditors of bioMérieux by your General Meeting of May 30, 2017 for GRANT THORNTON and May 30, 2012 for ERNST & YOUNG et Autres.

At December 31, 2019, GRANT THORNTON was in the third continuous year of its audit engagement, while ERNST & YOUNG et Autres was in the eighth year.

Responsibilities of senior management and the persons constituting corporate governance for the annual financial statements

Senior management is responsible for the preparation of annual financial statements that present a true view in compliance with French accounting rules and principles, together with the implementation of the internal control that it deems relevant to the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

When preparing the annual financial statements, senior management is responsible for assessing the Company's ability to continue as a going concern, to present in these financial statements, if necessary, information concerning the continuity of the Company's operations and to apply the accounting policy of going concern, unless there are plans to unwind the Company or discontinue the business.

The Audit Committee is responsible for monitoring the financial reporting preparation process and the effectiveness of internal control and risk management systems and, if necessary, the Internal Audit Department with respect to procedures relating to preparation and treatment of financial and accounting information.

The annual financial statements have been approved by the Board of Directors.

Responsibilities of the Statutory Auditors relating to the audit of the annual financial statements

Audit objective and procedure

It is our duty to draw up a report on the annual financial statements. Our objective is to obtain reasonable assurance that the annual financial statements, taken as a whole, are free from material misstatement. Reasonable assurance corresponds to a high level of assurance, without however guaranteeing that an audit conducted in accordance with professional standards will systematically detect any material misstatement. Misstatements may arise from fraud or result from errors and are considered as material when it can be reasonably expected that, taken singly or together, they can influence the economic decisions that users of the financial statements take based thereon.

As stated in Article L.823-10-1 of the French Commercial Code, our engagement to certify the financial statements does not consist in guaranteeing the viability or quality of management of your Company.

Within the framework of an audit conducted in compliance with professional standards applicable in France, the statutory Auditor exercises his professional judgement throughout the audit. Furthermore:

- the statutory auditor identifies and assesses the risks whereby the annual financial statements may contain material misstatements, whether from fraud or errors; defines and implements audit procedures in view of those risks; and collects the elements they consider sufficient and appropriate on which to base their opinion. The risk of not detecting a material misstatement arising from fraud is higher than the risk of a material misstatement resulting from error, because fraud may imply collusion, falsification, voluntary omissions, false declarations or the circumvention of internal control;
- the statutory auditor reviews the relevant internal control for the audit in order to define the appropriate audit procedures for the circumstances and not to express an opinion on the effectiveness of internal control;
- he assesses the appropriateness of the accounting methods used and the reasonable nature of the accounting estimates made by the management, as well as information concerning these methods provided in the annual financial statements;

- he assesses the appropriateness of the application by the management of the going concern concept and, according to the elements collected, whether or not there is a material uncertainty linked to events or circumstances likely to compromise the Company's ability to continue as a going concern. This assessment is based on the information collected until the date of his report. It is however pointed out that subsequent circumstances or events could jeopardise continuity as a going concern. If he concludes that there is a material uncertainty, the statutory auditor draws the attention of the readers of the report to the information provided in the annual financial statements about such uncertainty, or if this information is not provided or is not relevant, he issues a certification with reservations or a refusal to certify;
- they assess the overall presentation of the annual financial statements and whether these reflect underlying operations and events, so as to give a true view.

Report to the Audit Committee

We submit a report to the Audit Committee that presents, in particular, the scope of the audit and the work schedule implemented as well as the conclusions of our audit. Our audit also informs the Audit Committee of any material weaknesses of internal control that we have identified with respect to the procedures relating to the preparation and treatment of accounting and financial information.

The points mentioned in the report to the Audit Committee include the risks of material misstatements that we consider to have been the most important for the audit of the annual financial statements of the financial year, which therefore constitute the key points of the audit, which it is our duty to describe in this report.

We also submit to the Audit Committee the declaration provided in Article 6 of EU Regulation No. 537-2014 confirming our independence, as defined in the rules applicable in France, as set out in Articles L. 822-10 to L. 822-14 of the French Commercial Code and in the Statutory Auditors' Professional Code of Ethics. If necessary, we will meet the Audit Committee to discuss the risks that threaten our independence and the safeguard measures applied.

Lyon, February 28, 2020

The Statutory Auditors

GRANT THORNTON

French member of Grant Thornton International

Françoise Mechin

ERNST & YOUNG et Autres

Nicolas Perlier

7

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7.1 General information on the Company

The Company's name is bioMérieux.

No trade name has been registered. In this Registration Document, bioMérieux is referred to as the "Company", "bioMérieux", or the "Group".

bioMérieux is a French joint stock company (*société anonyme*) with a Board of Directors, governed by the French Commercial Code (*Code de commerce*) and all other applicable laws and regulations, registered with the Lyon Trade and Companies Register under number 673 620 399. The Company has been established in France since its incorporation.

The Company's registered office is located in Marcy l'Étoile (69280), France.

The Company was incorporated on December 13, 1967 for a period of 50 years from its registration with the Trade and Companies Registry, unless this period is extended or the Company is dissolved before the end of the period. The Ordinary and/or Extraordinary Shareholders' Meeting of April 16, 2004 resolved to extend the Company's duration (Article 5 of the bylaws) to 99 years, expiring April 15, 2103.

The Company's financial year opens on 1 January and closes on 31 December of each year.

Its APE Industry Code is 2059 Z.

The Company can be reached at +33 (0) 4 78 87 20 00, and its website is www.biomerieux.com (the information appearing on the website is not part of the prospectus, unless that information is incorporated by reference into the prospectus).

7.2 Articles of incorporation and bylaws

7.2.1 Corporate purpose

Article 2 of the bylaws stipulates that the Company's purpose, in France and elsewhere, is to:

- manufacture, produce, process, package, distribute, buy, sell, import and export any products and devices and any techniques and know-how used in particular for diagnostics, prevention and treatment, notably in the field of healthcare;
- carry out all studies and research and develop, acquire, grant, keep, control, use, improve, including through the use of licenses and sub-licences, all trademarks, brand names, patents, techniques, inventions, improvements, formulas, designs, processes, etc. in any way related to the abovementioned products or to the manufacturing and trading of such products;
- participate, either directly or indirectly, in all business and manufacturing transactions related in any way whatsoever to the abovementioned purposes or likely to promote them, either through the creation of new companies, the contribution, subscription or purchase of securities or Company rights, through mergers, alliances, joint holdings, or by any other means;
- perform all transactions in its line of business, either alone and on its own behalf or on behalf of a third party, on commission, as a broker, for a fee, on a cost basis, as representative or proxy for any entity or in any other capacity;
- provide all services relating to the organisation of bioMérieux's systems including laboratory automation, the purchase and assembly of equipment and specialised software; propose training courses for all healthcare professionals working within the key fields of industrial and medical biology;
- generally, perform all business, manufacturing, financial or other transactions directly or indirectly related to the above purposes or to any similar purposes, including the development of ways to expand, promote, advertise, trade or transport raw materials, semi-finished or finished products, as well as the ability to purchase, acquire, hold, transfer, lease, mortgage or dispose of goods, whether movable or immovable, tangible or intangible, related to the above purposes or likely to develop them.

7.2.2 Rights and privileges attached to shares

7.2.2.1 Appropriation of income

Article 10 of the bylaws stipulates that each share entitles its holder to a proportionate share of income corresponding to the percentage of capital it represents.

Article 22 specifies that the income for the year, less any accumulated losses, is subject to a deduction of (i) at least five per cent allocated to the legal reserve, a deduction which ceases to be mandatory once the reserve represents one tenth of the share capital but becomes mandatory again if the legal reserve falls to below one tenth of the share capital for any reason, and (ii) any amount to be set aside as reserves as required by law.

The balance, plus any retained earnings, represents distributable net income that the Shareholders' Meeting may, on recommendation of the Board of Directors, distribute in whole or in part as dividends, or allocate to reserve accounts, capital amortisation or retained earnings.

The Shareholders' Meeting may allow shareholders the option to receive all or part of dividends or interim dividends distributed in either cash or shares, in accordance with the law. The Shareholders' Meeting may decide to use the reserves at its disposal to pay a dividend on shares. If this occurs, the relevant resolution must expressly state from which accounts funds are to be withdrawn.

In addition, the Shareholders' Meeting may resolve to use income or reserves, other than the legal reserve, to pay off some or all of the shares and to repay them up to their par value.

Article 23 of the bylaws specifies that the terms of payment of dividends are set by the Annual General Meeting or, failing that, by the Board of Directors. Dividends must be paid no more than nine months after the year-end, unless otherwise authorised by a court. The Board of Directors may, subject to the provisions of the law, distribute one or more interim dividends prior to the approval of the financial statements for the year.

7.2.2.2 Voting rights

Voting rights attached to shares are proportionate to the fraction of capital represented and each share entitles its holder to at least one vote (Article 20 of the bylaws).

All paid-up shares which have been held in registered form by the same shareholder for five years or more, based on the proportion of share capital they represent and irrespective of their class, carry double voting rights. The double voting right was approved by the Annual General Meeting in 1999. This policy aims to favour long-term shareholders who share the Company's long-term vision and its strategy. Shares converted to bearer form or whose ownership changes, subject to the exceptions provided by law, automatically lose their double voting rights. Registered shares are not stripped of voting rights and the five-year period continues to run in the event of transfers following an inheritance, the liquidation of community property between spouses and inter vivos gifts made to a spouse or relatives entitled to inherit.

The Company's merger or demerger would not affect double voting rights, which may be exercised within the successor entity(ies) if their bylaws so permit.

In the event of a capital increase through the capitalisation of reserves, profit or paid-in capital, new shares allocated in respect of existing shares carrying double voting rights will also have double voting rights from the date of issue.

7.2.2.3 Form of shares and identification of the shareholders

Fully paid-up shares may be held in registered or bearer form, at the shareholders' discretion, subject to applicable laws and regulations. Shares must be held in registered form until they are fully paid up (Article 8 of the bylaws).

The Company may apply statutory and regulatory provisions relating to the identification of holders of securities granting immediate or future voting rights at Shareholders' Meetings.

7.3 Share capital and shareholding

7.3.1 History and amount of the issued capital

The Company's share capital has not been modified in the last three years.

The number of shares issued is 118,361,220 (all shares are of the same class). On September 19, 2017, bioMérieux carried out a 1 for 3 stock split, dividing the par value per share by 3, following a decision by the Board of Directors dated August 29, authorised by the Ordinary and/or Extraordinary Shareholders' Meeting held on May 30 of the same year, which endorsed this decision (18th resolution). The number of shares accordingly rose from 39,453,740 to 118,361,220.

The issued capital amounts to €12,029,370, fully paid up. The Annual General Meeting of March 19, 2001 eliminated reference to par value in the Company's bylaws.

On the date of filing of this URD:

- there are no securities which do not represent share capital;
- the Company has not been informed of any pledging of shares;
- there are no other securities granting access to the Company's share capital;
- there are no options on the share capital of any Group member.

7.3.2 History of the ownership structure

The table below shows the Company's ownership structure on the dates indicated.

	Situation at 02/29/2020				Situation at 12/31/2018				Situation at 12/31/2017			
Share-holders[a]	Number of shares	% of capital	Number of theoretical voting rights[f]	% of voting rights	Number of shares	% of capital	Number of theoretical voting rights[f]	% of voting rights	Number of shares	% of capital	Number of theoretical voting rights[f]	% of voting rights
Institut Mérieux[b]	69,720,270	58.90	139,440,540	70.65	69,720,270	58.90	139,440,540	70.84	69,720,270	58.90	139,440,540	70.82
GIMD[c]	6,040,410	5.10	12,080,820	6.12	6,040,410	5.10	12,080,820	6.14	6,040,410	5.10	12,080,820	6.14
Sofina SA	2,506,857	2.12	5,013,714	2.54	2,506,857	2.12	5,013,714	2.55	2,506,857	2.12	4,686,669	2.38
Employees[d]	756,124	0.64	1,250,974	0.63	555,220	0.47	1,050,070	0.53	553,720	0.47	1,048,570	0.53
Treasury stock[e]	62,039	0.05	0	0.00	569,443	0.48	0	0.00	234,074	0.20	0	0.00
Public	39,275,520	33.19	39,568,990	20.05	38,969,020	32.92	39,266,751	19.95	39,305,889	33.21	39,627,939	20.13
TOTAL	**118,361,220**	**100**	**197,355,038**	**100**	**118,361,220**	**100**	**196,851,895**	**100**	**118,361,220**	**100**	**196,884,538**	**100**

(a) Only the shareholders representing more than 5% of the capital are named in this table, except for Sofina SA, whose CEO Harold Boël is a director of the Company. All other shareholders are included under Public.
(b) Institut Mérieux is the holding company of the Mérieux family.
(c) Groupe Industriel Marcel Dassault.
(d) This line includes employee share ownership through the OPUS CLASSIC Corporate mutual fund ("FCPE").
(e) Since July 2, 2018, shares have been held pursuant to the liquidity agreement with ODDO BHF.
(f) Theoretical voting rights are identical to actual voting rights.

Employee share ownership has not changed materially since December 31, 2017. Differences between the number of shares and the number of voting rights reflect the existence of double voting rights. As of the date of this Registration Document, all shares held by Institut Mérieux, GIMD and Sofina SA have double voting rights.

On September 19, 2017, bioMérieux carried out a 1 for 3 stock split, dividing the par value per share by 3 (see Section 7.3.1).

To the Company's best knowledge, no other shareholder directly or indirectly holds, alone or in concert, more than 5% of the Company's share capital or voting rights.

7.3.3 Control of the issuer by Institut Mérieux

Institut Mérieux, which is the holding company owned by the Mérieux family through Compagnie Mérieux Alliance, held 58.90% of the share capital and 70.67% of the voting rights of the Company at December 31, 2019. Institut Mérieux is therefore able to adopt all the resolutions submitted for the approval of shareholders at Shareholders' Meetings.

Despite Institut Mérieux's position as the majority shareholder, the Company, which is managed by a Board of Directors, five of whose nine members are independent and which has assessed its own performance to be satisfactory (see section 4.2.6.5), considers that there is no risk that control would be exercised in an abusive manner.

To the best of the Company's knowledge, there are no shareholders' agreements, parties acting in concert and/or other joint actions, nor any other agreement whose implementation could result in a change of control of the Company.

7.3.4 Employee share ownership

As of the last day of the financial year (December 31, 2019), the employees held 1,302,489 shares or 1.10% of the capital, including the shares held in an OPUS Classic Corporate Mutual Fund (FCPE).

In 2019, the Company proposed a new shareholding plan to its employees (MyShare) through which, upon authorisation by the Board of Directors, it offered the possibility of buying bioMérieux shares with a discount and an employer contribution (See Section 3.5.3.1).

In the United States, a bioMérieux Inc. phantom share plan was implemented in 2015 and renewed in 2016 and 2017. The employees are not shareholders of the Company as such, but the plan makes it possible to link their individual contributions more closely to the Company's performance. BioFire also launched a similar plan in 2016 and 2017. No new plans have been established since 2018.

7.3.5 Treasury shares – Description of the share buyback program

7.3.5.1 Information on the conduct of the share buyback program

The Ordinary and/or Extraordinary Shareholders' Meetings of May 17, 2018 and May 23, 2019 authorised the Board of Directors to buy back shares of the Company in accordance with articles L.225-209 *et seq*. of the French Commercial Code.

At December 31, 2019, the Company held 59,116 shares, *i.e.* 0.05% of the share capital.

Summary of transactions in treasury shares between January 1, 2019 and December 31, 2019

Pursuant to the authorisations given by the Ordinary and/or Extraordinary Shareholders' Meetings of May 17, 2018 and May 23, 2019:

- Under the liquidity agreement consistent with the AMAFI Code of Ethics, approved by the AMF and entered into between the Company and ODDO BHF, it performed the following transactions in its capacity as investment services provider.

Shares purchased	486,240
Average purchase price	€72.42
Shares sold	491,699
Average selling price	€72.29
Fees and commissions	0
Number of treasury shares held at December 31, 2019	21,697
Value of shares held at the end of the year based on their average purchase price	€1,571,259
Carrying amount at December 31, 2019	€1,728,986
Nominal value of shares	/
Purpose of transactions	Regulation of prices
Percentage of treasury shares held at year-end	0.02%

The shares purchased by ODDO BHF were acquired exclusively to maintain a liquid market in the Company's shares through market-making transactions carried out by an independent investment services provider under a liquidity agreement that complies with the AMAFI Code of Ethics approved by the AMF.

- Under an agency contract concluded with Natixis with the aim of returning the shares upon exercise of the rights related to the free allocation of shares to employees and officers of the Company or Companies of the Group, as well as under the MyShare shareholder plan (see 3.5.3.1), in accordance with the authorisations given by the Annual General Meeting.

Shares purchased	320,000
Average purchase price	€79.60
Shares sold	0
Average selling price	/
Number of treasury shares held at December 31, 2019	37,419
Value of shares held at the end of the year based on their average purchase price	€2,978,623
Carrying amount at December 31, 2019	€2,157,037
Nominal value of shares	/
Purpose of transactions	Delivery of shares to the employee share ownership plan MyShare
Percentage of treasury shares held at year-end	0.03%

Use of derivatives

The Company did not use derivatives as part of this share buyback program and there were no open positions to buy or sell derivatives at the date this URD was filed.

7.3.5.2 Description of the new share buyback program

Pursuant to Article 241-2 of the AMF General Regulations, this paragraph is a description of the buyback program to be put to the Ordinary and/or Extraordinary Shareholders' Meeting of May 19, 2020 for approval.

Buy-back program objectives

Under the share buyback program, purchases will be made based on the following objectives: (i) maintaining a buoyant secondary market or a liquid market in the bioMérieux shares through an independent investment service provider, operating under a liquidity agreement that complies with the decisions of the French Financial Markets Authority (AMF); (ii) ensuring the hedging of stock option plans and/or share grant or purchase plans (or similar) for Group employees and/or corporate officers as well as of any granting of shares under the Group's Employee Savings Plan (or similar plan), Company profit-sharing schemes and/or any other granting of shares to Group employees and/or corporate officers; (iii) reducing the Company's share capital by cancelling shares within legal limits; (iv) hold shares purchased and swapped again at a later date or expansion investments or be paid out as part of any external expansion operations; and (v) implementing any market practice that is accepted or is to be accepted by market authorities.

Summary of the main features of the buy-back program

- Relevant securities: ordinary shares;
- Maximum stake proposed to the Ordinary and/or Extraordinary Shareholders' Meeting of May 19, 2020: 10% of the number of shares making up the Company's share capital (at any time, as this percentage applies to a share capital adjusted according to the transactions affecting it);
- Maximum buyback percentage of shares purchased by the Company to be held and subsequently delivered as payment or in exchange as part of a merger, spin-off or contribution: 5%;
- Maximum unit purchase price: the unit purchase price must not exceed €200 per share (excluding acquisition costs);
- Total cost of program: the maximum theoretical cost of implementing this program is €2,367,224,400 (maximum theoretical amount not taking into account the shares owned by the Company). However, the Board could adjust the aforementioned purchase price in the event of a change in the share's par value, of an increase in capital through the capitalisation of reserves and granting of free shares, of share splits or consolidation, of capital redemption or reduction, of the distribution of reserves or other assets, or of any other transactions affecting equity, in order to take into account the incidence of such transactions on the share value.

Breakdown per objective of shares held by the Company as of February 29, 2020

At February 29, 2020, the Company's share capital is made up of 118,361,220 shares. On this date, the Company held 59,116 shares, *i.e.* 0.05% of the share capital:

- of which 21,697 shares under the liquidity contract concluded with ODDO BHF. The shares purchased by ODDO BHF were acquired exclusively to maintain a liquid market in the Company's shares through market-making transactions carried out by an independent investment service provider under a liquidity agreement that complies with the AMAFI Code of Ethics approved by the AMF;
- of which 37,419 shares under an agency agreement entered into with Natixis with the sole objective of delivering shares upon the exercise of rights in connection with free share grants to employees of the Company or companies within the Group.

The purchase, sale and transfer of the aforementioned securities was carried out to meet two of the program's objectives approved by the Annual Shareholders' Meetings of May 17, 2018 and May 23, 2019, *i.e.* maintaining a liquid market in the Company's shares through market-making transactions carried out by an independent investment service provider under a liquidity agreement that complies with the AMAFI Code of Ethics, approved by the AMF and delivering shares upon the exercise of rights in connection with free share grants to employees of the Company or companies within the Group. The Company has not cancelled any shares in the last 24 months and acquired no shares prior to April 16, 2014, date on which the new share buyback program under the new regulation from the European Market Abuse Directive entered into force.

The Company has not used derivatives as part of this share buyback program and there have been no open positions to buy or sell derivatives at the date this buyback program description was published.

Term of program

In compliance with the provisions of Article L.225-209 of the French Commercial Code and the draft motion to be put to the Annual General Meeting on May 19, 2020, this buy-back program may be implemented over an eighteen-month period from the Annual Shareholders' Meeting on May 19, 2020, until November 19, 2021.

7.3.6 Other securities

In addition to the shares issued by the Company as stated in section 7.3.1 and the free share grants (see section 7.4), the Company carried out a bond issue, placing €300 million in seven-year bonds (maturing on October 14, 2020) with institutional investors. The bonds pay interest at an annual rate of 2.875%.

The bonds were listed on Euronext Paris in October 2013 but have not and will not be registered under the US Securities Act of 1933, as amended (the Securities Act). The bonds are being offered outside the United States, in accordance with the regulations of the Securities Act, and may not be offered, sold or delivered within the United States or to, or for the account of, US persons.

This bond issue enabled bioMérieux to (i) lengthen the average maturity of its debt under favourable financial conditions, (ii) diversify its sources of financing in addition to its existing syndicated lines of credit, and (iii) contribute to funding the acquisition of the US company BioFire.

7.3.7 Authorised unissued share capital

TABLE SUMMARISING VALID AUTHORISATIONS

Relevant securities	Date and duration of the authorisation Expiration	Maximum nominal amount of capital increase (in millions of euros)	Uses of the authorisations (in millions of euros)
Authorisation by the Board to reduce the share capital by cancelling treasury shares	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	10% of the share capital per 24-month period	
Delegation of authority to increase the share capital with the shareholders' pre-emptive subscription rights. *Capital increase through the issuance of equities or securities (17th resolution)*	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	4,210 (capital increases)[(a)] 1,000 (issues of securities representing receivables)[(b)]	N/A
Delegation of authority to the Board to increase the share capital without the shareholders' pre-emptive subscription rights. *Capital increase by issuing equities and securities (18th resolution)*	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	4,210 (capital increases) [(a)] 1,000 (issues of securities representing receivables) [(b)]	N/A
Delegation of authority to the Board to increase the capital by issuing ordinary shares and/or securities giving access to the capital of the Company or giving the right to the awarding of debt securities, without pre-emptive subscription rights, as part of an offer referred to in Article L.411-2 II of the French Monetary and Financial Code (19th resolution)	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	20% of the capital per year[(a)] 1,000 issues of securities representing receivables)[(b)]	N/A
Delegation of authority to the Board to increase the number of shares in the event of a capital increase (21st resolution)	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	15% of the initial issue within the limit of the ceilings[(a)(b)]	N/A
Delegation of authority to the Board to increase the capital as part of in-kind contributions granted to the Company, without the pre-emptive subscription rights *Capital increase by issuing equities or securities (22nd resolution)*	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	10% of the capital (on the day of implementation of the delegation) [(a)]	N/A
Delegation of authority to the Board to increase the capital by incorporating additional paid-in capital, reserves, profits or other items (23rd resolution)	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	4,210[(a)] as of the Shareholders' Meeting of May 23, 2019	N/A
Delegation of authority to the Board to increase the capital without pre-emptive subscription rights as part of the issue by subsidiaries or by the parent company of securities giving access to the Company's securities (24th resolution)	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	4,210 (capital increases)[(a)] 1,000 (issues of securities representing receivables)[(b)]	N/A
Delegation of authority to the Board to increase the capital for employees participating in the employee savings plan *(PEE)* *Issues reserved for employees (17th resolution)*	Shareholders' Meeting of May 23, 2019 26 months July 22, 2021	3%[(a)] of the capital on the date of the AGM of May 23, 2019	N/A
Delegation of authority to the Board to grant share purchase and/or subscription options (16th resolution)	Shareholders' Meeting of May 17, 2018 38 months July 17, 2021	0.95% of the capital existing on the day of the assignment	N/A
Grant of shares (existing or to be issued) (15th resolution)	Shareholders' Meeting of May 17, 2018 38 months July 17, 2021	0.95% of the capital (on the day of the Meeting)	379,874 shares[(c)] (0.32% of the capital)

(a) Maximum nominal amount of €4,210,280 for capital increases and of €1 billion for issues of debt securities. This percentage/amount must be offset against the total authorised capital increase of €4,210,280 (nominal amount).
(b) This amount must be offset against the aggregate capital increase through the issue of debt securities of €1 billion (nominal amount).
(c) Board of Directors' meetings of September 4 and December 20, 2018, and February 26 and September 3, 2019.

7.3.8 bioMérieux shares in 2019

7.3.8.1 bioMérieux equity market

bioMérieux shares have been traded publicly since July 6, 2004 in the CAC Mid 60®, SBF 120®, CAC Mid & Small®, CAC All-tradable® and CAC All-Share® French market indices. In addition, bioMérieux has been included in new indices since 2017, specifically MSCI France Index and STOXX® Europe 600. The Company's shares are listed on compartment "A" of the Eurolist market and are eligible for deferred settlement service (*Service de Règlement Différé* – SRD).

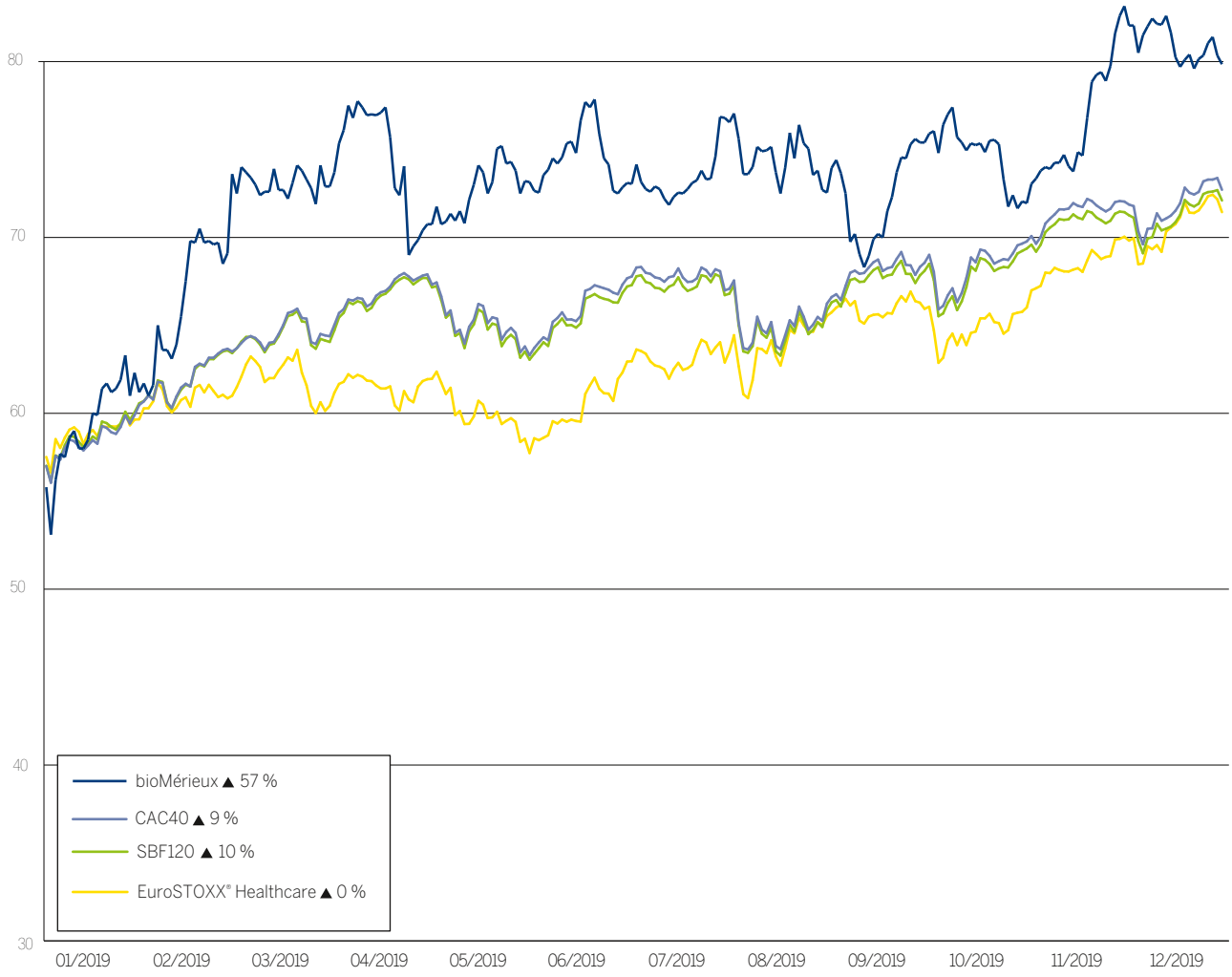
bioMérieux's social, Corporate and environmental commitment has been recognised for a number of years by non-financial rating agencies (see section 3.2.2).

At December 31, 2019, the closing price for the bioMérieux share was €79.35 (€57.50 at December 31, 2018), and the Company's market capitalisation was €9.4 billion. In 2019, 23,879,941 of the Company's shares were traded on Euronext compared with 30,711,238 in 2018.

During 2019, the average liquidity of the bioMérieux share was as follows (source: Thomson Reuters Eikon):

- average closing price: €72.95;
- average daily trading volume: 94,387 shares;
- average trading day: approximately €6.9 million.

7.3.8.2 Change in bioMérieux share price in euros during 2019 compared to benchmark indices



	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Low	53.10	61.00	71.90	69.00	70.75	72.50	71.85	72.50	68.30	71.65	73.75	79.35
High	63.30	73.60	74.10	77.75	75.20	77.85	76.85	77.05	75.90	77.40	83.15	82.60
Closing	61.70	72.50	73.70	70.75	73.15	72.85	76.55	73.95	75.90	73.35	82.05	79.35

Source: Thomson Reuters Eikon, data extracted on 01/10/2020.

7.3.8.3 bioMérieux historical share price performance

Period	High *(in euros)*	Low *(in euros)*	Closing *(in euros)*
2014	29.14	24.53	28.58
2015	36.77	28.10	36.63
2016	47.45	32.67	47.30
2017	74.80	47.52	74.69
2018	83.15	53.10	57.50

Source: Thomson Reuters Eikon, price recalculated after stock split.

7.4 Special report on free share grants and stock options

This report was prepared in accordance with the provisions of articles L.225-184 and L.225-197-4 of the French Commercial Code.

The Company does not currently have any stock option plans. No stock options were granted to corporate officers or employees by the Company or Group companies in 2019. At the date of this report, no stock options are exercisable.

The Board of Directors granted 266,189 free shares in 2019 under share grant plans set up by the Board – after consulting with the Human Resources, Appointment and Compensation Committee – pursuant to the authority granted to it by the Ordinary and Extraordinary Shareholders' Meetings of May 17, 2018.

Accordingly, the Company did not grant any free shares to corporate officers for their positions within the Company or in a controlled company within the meaning of Article L.233-16 of the French Commercial Code (*Code de commerce*).

The table below sets forth the free shares granted at the end of the 2019 financial year:

Grant date	Number of shares granted	Share price *(in euros)*
February 26, 2019	129,060	69.10
September 3, 2019	137,129	73.65

The table below shows the number of free shares granted and not fully vested at the end of 2019:

Grant date	Share price (in euros)	Company employing the beneficiary	Number of shares granted	Beneficiary category
February 26, 2019		Invisible Sentinel	22,300	10 Global Leaders
TOTAL INVISIBLE SENTINEL PLAN	**69.10**		**22,300**	**10 Global Leaders**
February 26, 2019		BioFire Diagnostic LLC	7,970	1 employee
		bioMérieux Inc.	19,250	2 employees
		bioMérieux SA	53,290	9 employees
			80,510	**12 Global Leaders**
February 26, 2019		BioFire Diagnostic LLC	26,250	7 Global Leaders
TOTAL PLAN BIOFIRE 2019	**69.10**		**26,250**	**7 Global Leaders**
September 3, 2019		Applied Math NV	351	1 employee
		Astute Medical Inc.	2,602	5 employees
		BioFire Diagnostics LLC	19,684	83 employees
		bioMérieux Algeria	218	1 employee
		bioMérieux Argentina	470	2 employees

Grant date	Share price (in euros)	Company employing the beneficiary	Number of shares granted	Beneficiary category
		bioMérieux Australia P/L	797	2 employees
		bioMérieux Belgium	1,509	3 employees
		bioMérieux Brasil SA (Brazil)	1,570	6 employees
		bioMérieux Canada Inc.	579	1 employee
		bioMérieux Chile Spa	218	1 employee
		bioMérieux China limited	579	1 employee
		bioMérieux Colombia SAS	119	1 employee
		bioMérieux Diagnostik AS	218	1 employee
		bioMérieux Dubaï	218	1 employee
		bioMérieux Germany GmbH	470	2 employees
		bioMérieux Greece Hellas SA	218	1 employee
		bioMérieux Inc.	35,562	95 employees
		bioMérieux India	2,006	9 employees
		bioMérieux Italy Spa	1,672	3 employees
		bioMérieux Japan Ltd	930	2 employees
		bioMérieux Korea Co.	569	2 employees
		bioMérieux Malaysia	65	1 employee
		bioMérieux Mexico SA de CV	579	1 employee
		bioMérieux Polska Sp Zoo	351	1 employee
		bioMérieux SA	52,048	94 employees
		bioMérieux Saudi Arabia	218	1 employee
		bioMérieux Singapore	3,321	8 employees
		bioMérieux South Africa	337	2 employees
		bioMérieux Spain SA	2,445	7 employees
		bioMérieux SSC Europe Sp Zoo	579	1 employee
		bioMérieux UK Ltd	351	1 employee
		bioMérieux China Ltd – TW Branch	218	1 employee
		bioMérieux Shanghai	5,711	14 employees
		bioMérieux Chile SA	119	2 employees
		Suzhou Hybiome Biomedical Co., Ltd	208	1 employee
TOTAL PLAN GL/CTP 2019	**73.65**		**137,129**	**358 Global Leaders**
GRAND TOTAL			**266,189**	**387 GLOBAL LEADERS**

Vesting period

In the 2019 free share grant plan, a three- or four-year vesting period applies from the date of the decision to grant the shares before the beneficiary becomes the owner of the shares granted.

Eligibility and performance conditions

During the financial year, the Board of Directors decided, at the recommendation of the Human Resources, Appointment and Compensation Committee, to grant free shares that are fully vested, (i) subject to a continuous employment condition and (ii) subject to continuous employment and performance conditions.

Delivery of shares

At the end of the vesting period and provided that the vesting conditions and criteria set by the Board of Directors are met, the Company will transfer to the beneficiary the number of free shares granted by the Board of Directors.

Lock-up period

Share grant plans for 2019 have no lock-up period.

Beneficiaries' rights

If the shares are not transferable, like any other shareholder, the beneficiaries of vested shares are entitled to exercise all other rights attached to such shares during the lock-up period, including:

- pre-emptive subscription rights;
- right to information;
- right to attend Shareholders' Meetings;
- voting rights;
- right to dividends and, if applicable, distributed reserves.

History of free share grants (Table 10)

The table below summarises, at December 31, 2019, all the terms and conditions of the free share grants and the performance share grants, subject to the fulfilment of the presence conditions and, for certain grants, the performance criteria laid down by the Company's Board of Directors:

Date of Annual General Meeting	Name of plan	Date of Board meeting	Total number of free shares granted	Number of beneficiaries	Of which to corporate officers	Acquisition date of the shares	End date of the lock-up period	Cumulative number of forfeited or lapsed shares	Free shares granted during the year	Free shares remaining at the end of the year
May 17, 2018	Invisible Sentinel Plan	February 26, 2019	22,300	10	0	February 26, 2022	February 26, 2022	0	0	22,300
May 17, 2018	2019 EXCOM Plan	February 26, 2019	80,510	12	0	February 26, 2022	February 26, 2022	9,930	0	70,580
May 17, 2018	2019 BioFire Plan	February 26, 2019	26,250	7	0	February 26, 2022	February 26, 2022	0	0	26,250
May 17, 2018	2019 Global Leader/CTP Plan	September 3, 2019	137,129	358	0	September 3, 2022	September 3, 2022	569	0	136,560
May 17, 2018	2018 Global Leader (C) Plan	December 20, 2018	8,412	39	0	December 20, 2021	December 20, 2021	0	0	8,412
May 17, 2018	2018 Global Leader (B) Plan	September 4, 2018	105,273	212	0	September 4, 2021	September 4, 2021	4,275	0	100,998
May 17, 2018	2018 Global Leader (A) Plan	May 17, 2018	15,000	1	0	May 17, 2022	May 17, 2022	0	0	15,000
May 17, 2018	2018 EXCOM Plan	May 17, 2018	20,000	1	0	May 17, 2022	May 17, 2022	0	0	20,000
May 26, 2016	2018 Global Leader BFX Plan	February 27, 2018	21,000	7	0	February 27, 2021	February 27, 2021	0	0	21,000
May 26, 2016	OPUS International Plan	December 15, 2017	7,716	417	0	December 15, 2021	December 15, 2021	889	0	6,827
May 26, 2016	Global Leader Plan	December 15, 2017	600	1	0	December 15, 2020	December 15, 2020	600	0	0
May 26, 2016	2017 Global Leader[(a)] Plan	February 28, 2017	9,300	2	0	February 28, 2021	February 28, 2021	0	0	9,300
May 26, 2016	2017 Global Leader[(b)] Plan	February 28, 2017	1,500	1	0	February 28, 2021	February 28, 2020	0	0	1,500
May 26, 2016	2017 Global Leader Plan	February 28, 2017	15,000	1	0	February 28, 2020	February 28, 2021	0	0	15,000
May 26, 2016	2017 Global Leader Plan	February 28, 2017	6,000	1	0	February 28, 2020	February 28, 2020	0	0	6,000
May 26, 2016	2016 Global Leader Plan	December 15, 2016	75,000[(a)]	9	0	December 15, 2019	December 15, 2019	1,431	73,569	0
May 26, 2016	2016 Global Leader Plan	May 26, 2016	264,600[(b)]	55	0	May 26, 2019	May 26, 2019	23,400	23,400	0
May 26, 2016	Corporate officers' Plan	May 26, 2016	60,000[(a)]	1	1	May 26, 2019	At the end of his/her term	0	60,000	0
May 28, 2015	2015 Global Leader Plan	March 1, 2016	2,700	3	0	March 1, 2020	March 1, 2020	1,800	0	900
May 28, 2015	2015 Global Leader Plan	December 17, 2015	3,600	3	0	December 17, 2019	December 17, 2019	0	3,600	0
May 28, 2015	Expatriates' Plan	August 28, 2015	49,500	26	0	August 28, 2019	August 28, 2019	2,400	47 100	0

(a) Free shares granted subject to performance criteria.
(b) Free shares granted subject to performance criteria except for 24,200 shares subject solely to continuous employment criteria.
(c) Additional two-year period for French beneficiaries.

Performance share grants to employees during 2019

In 2019, the 10 non-corporate officer employees who were granted the most performance shares received a total of 61,360 shares.

7.5 Other information on the shareholders

7.5.1 Dialogue with shareholders

bioMérieux endeavours to maintain and strengthen the trust of its shareholders by informing them of the life of the Company, regularly, transparently and accessibly. Shareholders may find informational documents such as the annual report and financial publications within the "shareholder area" on the bioMérieux finance website (https://www.biomerieux-finance.com).

Above and beyond formal dialogue in the form of votes in the Annual General Meeting, the Company holds numerous meetings with international institutional investors, attesting to its desire for interaction. These meetings allow shareholders or investors interested in the Company to interact with the management and to ask in-depth questions about its business, its strategy, its performance or its prospects (risks and opportunities).

The Investor Relations department holds around 250 to 300 meetings with investors every year, chiefly in Europe and the United States, which comprise a large majority of its shareholders.

7.5.2 Shares and stock options held by administrative, management and supervisory bodies

N/A.

7.5.3 Other information on the shareholders

7.5.3.1 Crossing of thresholds

Obligations of the shareholders

Shareholders have a legal obligation to notify the Company and the French financial markets authority (*Autorité des marchés financiers* - AMF) by letter when a legal threshold is crossed, specifying in particular their fractional ownership of the Company's shares and voting rights, within the legal deadline.

Furthermore, Article 10 of the Company's bylaws requires individuals or legal entities, acting alone or in concert, who directly or indirectly own (within the meaning of articles L.233-7 *et seq*. of the French Commercial Code) 1% of the Company's capital or voting rights, and thereafter for each additional 1%, to report to the Company by registered letter with acknowledgement of receipt, within five trading days of the date the threshold was crossed, the total number of shares and voting rights held, as well as the number of securities carrying immediate or future entitlement to shares and the potential voting rights attached thereto.

The same obligation applies whenever ownership of shares or voting rights falls below each of the aforementioned thresholds.

In the event of failure to comply with these requirements, the shares in excess of the relevant threshold will be stripped of voting rights for all Annual General Meetings held within the two-year period from the date when the omission is remedied, at the request of one or more shareholders holding at least 5% of the Company's capital or voting rights, as evidenced in the minutes of the General Meeting.

Intermediaries acting as holders of securities for non-resident shareholders, pursuant to article L.228-1 of the French Commercial Code, are required to report increases or decreases if their aggregate holdings exceed or fall below the above thresholds, without prejudice to the reporting obligations of the securities' holders.

Crossing of thresholds reported to the Company in fiscal year 2019

AXA Investment Managers reported:

- on March 28, 2019, that it had fallen below the disclosure threshold of 1% of the capital.

Candriam Luxembourg reported:

- on September 12, 2019 that it had exceeded the disclosure threshold of 1% of the capital.

Jupiter Asset Management Limited reported:

- on November 14, 2019 that it had fallen below the disclosure threshold of 4% of the capital;
- on December 9, 2019 that it had fallen below the disclosure threshold of 2% of voting rights.

BlackRock Investment Management reported:

- on June 11, 2019 that it had exceeded the disclosure threshold of 2% of the capital;
- on June 21, 2019 that it had fallen below the disclosure threshold of 2% of the capital;
- on June 25, 2019 that it had exceeded the disclosure threshold of 2% of the capital;
- on June 27, 2019 that it had fallen below the disclosure threshold of 2% of the capital.

Crossing of thresholds reported to the Company in 2020 until the publication date of the URD

The Amundi Company reported:

- on February 25, 2020, that it had exceeded the disclosure threshold of 1% of the capital;

The GIMD Company reported:

- on March 4, 2020, that it had fallen below the disclosure threshold of 5% of the capital and 6% of the voting rights.

Jupiter Asset Management Limited reported:

- on March 9, 2020, that it had fallen below the disclosure threshold of 3% of the capital.

7.5.3.2 Trading in the Company's shares by senior executives or by their close relations

The Company has been informed that the following securities transactions were carried out by senior executives in 2019 and reported in accordance with the procedures set forth by the French financial markets authority (AMF):

- **number of shares sold: 33,267.**
  - Stefan Willemsen, Executive Vice President AMERICAS, sold 8,000 shares on March 4, 2019 for an amount of €588,110.
  - Stefan Willemsen, Executive Vice President AMERICAS, sold 10,267 shares on November 28, 2019 for an amount of €845,250.
  - Pierre Boulud, Executive Vice President ASPAC, sold 15,000 shares on December 17, 2019 for an amount of €1,200,000.
- **number of shares purchased: 221,626.65**
  - François Lacoste, Executive Vice President Clinical Unit purchased 15,000 shares on May 27, 2019 (delivery of shares awarded free of charge).
  - Yasha Mitrotti, Executive Vice President EMEA, purchased 15,000 shares on May 27, 2019 (delivery of shares awarded free of charge).
  - Stefan Willemsen, Executive Vice President AMERICAS, purchased 21,000 shares on May 27, 2019 (delivery of shares awarded free of charge).
  - Nicolas Cartier, Executive Vice President Industry Unit, purchased 21,000 shares on May 27, 2019 (delivery of shares awarded free of charge).
  - Mark Miller, Executive Vice President Medical Affairs, purchased 13,500 shares on May 27, 2019 (delivery of shares awarded free of charge).
  - Michel Baguenault, General Secretary, purchased 18,000 shares on May 27, 2019 (delivery of shares awarded free of charge).
  - Pierre Charbonnier, Executive Vice President Global Quality, Manufacturing & Supply Chain, purchased 16,500 shares on May 27, 2019 (delivery of shares awarded free of charge).
  - Randy Rasmussen, Executive Vice President Molecular biology, purchased 22,500 shares on May 27, 2019 (delivery of shares awarded free of charge).
  - Jean-Luc Bélingard, Director, purchased 60,000 shares on May 27 2019 (delivery of shares awarded free of charge).
  - Pierre Boulud, Executive Vice President ASPAC, purchased 15,000 shares on December 16, 2019 (delivery of shares awarded free of charge).
  - Michel Baguenault, General Secretary, purchased 552.34 shares on December 16, 2019 for an amount of €28,843 (shares purchased under MyShare, a worldwide employee share ownership plan).
  - François Lacoste, Executive Vice President Clinical Unit, purchased 556.65 shares on December 16, 2019 for an amount of €29,068 (shares purchased under MyShare, a worldwide employee ownership plan).
  - Valérie Leyldé, Executive Vice President Human Resources, purchased 556.65 shares on December 16, 2019 for an amount of €29,068 (shares purchased under MyShare, a worldwide employee share ownership plan).
  - Guillaume Bouhours, Chief Financial Officer, Executive Vice President Purchasing & Information Systems, purchased 556.65 shares on December 16, 2019 for an amount of €29,068 (shares purchased under MyShare, a worldwide employee share ownership plan).
  - Pierre Boulud, Executive Vice President ASPAC, purchased 466.71 shares on December 16, 2019 for an amount of €24,371 (shares purchased under MyShare, a worldwide employee share ownership plan).
  - Yasha Mitrotti, Executive Vice President EMEA, purchased 559 shares on December 16, 2019 for an amount of €29,191 (shares purchased under MyShare, a worldwide employee share ownership plan).
  - Stefan Willemsen, Executive Vice President AMERICAS, purchased 559 shares on December 16, 2019 for an amount of €29,191 (shares purchased under MyShare, a worldwide employee share ownership plan).
  - Frédéric Besème, a director representing employees, purchased 319.65 shares on December 16, 2019, for an amount of €16,692 (shares purchased under MyShare, a worldwide employee share ownership plan).
- **number of shares subscribed: N/A;**
- **number of shares exchanged: N/A.**

7.6 Provisions delaying a change of control

The following factors contribute to delaying, if needed, a change of control:

- ownership structure: bioMérieux is a controlled company (see sections 7.3.2 and 7.3.3);
- existence of double voting rights (see section 7.2.2.2);
- bylaw restrictions on the exercise of voting rights and share transfers: crossing of thresholds (see section 7.5.3.1);
- in addition, no restrictions on the exercise of voting rights and share transfers or clauses to agreements have been brought to the Company's attention;
- control mechanisms within the framework of an employee share ownership plan: a mutual fund, OPUS Classic, has been set up in connection with the share capital increase reserved for bioMérieux employees subsequent to the initial public offering of its shares;
- powers granted to the Board of Directors to buy back shares: the Annual General Meeting of May 23, 2019 granted the Board of Directors the necessary powers to launch a share buyback program (see section 7.3.5);
- authorisations and powers granted by the Annual General Meeting to the Board of Directors regarding the issuance of shares (see section 7.3.7);
- change-of-control clauses: some of the agreements to which the Company is party may be amended or terminated in the event of a change of control.

PRINCIPAL AGREEMENTS INCLUDING A CHANGE-OF-CONTROL CLAUSE

Nature of agreement	Contracting party	Purpose
Loan agreement	Eight banks	Undrawn syndicated loan of €500 million, which was the subject of an addendum in January 2019 extending its maturity to January 2024 (initially a five (5) year loan with two (2) options to extend by one year, both of which have been exercised).
Bonds	Public	Bond issue of €300 million, maturing in October 2020
Real estate lease financing agreements	Two financial institutions	Financing of the extension of the Marcy l'Étoile site for €45 million for a period of 12 years
Licence agreement	Roche Diagnostics	NT-proBNP
Licence agreement	Paul Sabatier University/Pr. Serre	Filaggrin
Licence agreement	Wellcome Trust Limited	B-Raf genetic mutations associated with cancer

bioMérieux is not aware of any other factors likely to have an impact in the event of a public offer of its securities.

7.7 Dividend policy

The distribution policy is decided in light of the yearly analysis of the Company's profits, its financial position and other factors that the Board of Directors considers relevant.

Dividends that remain unclaimed five years after their payment date are time-barred and remitted to the French government.

At the Annual General Meeting to be held on May 19, 2020, the Board of Directors will recommend a dividend of €0.38 per share, representing a total of €45.0 million to be paid on June 4, 2020.

The table below presents the dividends paid by the Company for each of the past three years.

Year ended	Dividends distributed *(in euros)**	Dividend per share *(in euros)**
12/31/2018	41,426,427	0.35
12/31/2017	40,242,815	0.34
12/31/2016	39,453,740	1.00

* *The Company did not receive any dividends on treasury shares held on the ex-dividend date. The corresponding dividend amount was allocated to "retained earnings". Individuals domiciled in France for tax purposes benefit from a tax deduction on the annual dividend in accordance with paragraph 2 of Article 158.3 of the French Tax Code (Code général des impôts).*

7.8 Main related-party transactions

7.8.1 Procedures for evaluating current agreements and related-party agreements

Pursuant to Article L.225-39 of the French Commercial Code, the Company has instituted a procedure for evaluating the current agreements and the related-party agreements described in an internal charter.

This charter, approved by the Board of Directors on December 12, 2019, was prepared in concert with the Institut Mérieux and the group's other companies. Its purpose is (i) to define the criteria selected by bioMérieux to qualify an agreement as a related-party agreement to distinguish it from agreements on current operations concluded under normal conditions, (ii) to break down, if appropriate, the authorisation procedure required by law, and (iii) to define the internal control methodology for agreements. The charter is established to prevent conflicts of interest and to respect the transparency of any agreements considered related-party agreements.

The Board of Directors has delegated to the Audit Committee the annual review of the charter and current agreements. The Audit Committee will be required to report on it.

This charter is published on the bioMérieux website.

7.8.2 Description of the principal related parties

- Institut Mérieux commits its experience in biology to serving medicine and public health across the globe. In order to fight infectious diseases and cancers, it conceives of and develops new global and interdisciplinary approaches in the fields of diagnostics, immunotherapy, food safety and nutrition. In addition to the R&D programs in place within each of its companies, Institut Mérieux has pioneered a unique system through which it aims to support and accelerate scientific innovation.

  For several years now, Institut Mérieux and its companies have sought to develop international partnerships with public and private academic research institutions and the hospital community. An example of this strategy is the joint unit founded by Institut Mérieux and Fudan University Shanghai Cancer Center whose research focuses on tumour and immune markers.

  Additionally, Institut Mérieux actively supports biological research in France and promotes such research around the world. Institut Mérieux is a founding member of LyonBioPôle, a global competitiveness cluster in the field of biology, and BIOASTER, a technology research institute whose work focuses on infectious diseases. It carries out interdisciplinary R&D activities at the crossroads of fundamental research and manufacturing. Collaborative projects are carried out in the four key areas of microbiology, health and infectious diseases: vaccines, antibiotics, diagnostics and microbiota. Every such project has access to top academic researchers, a team of highly qualified scientists and engineers and cutting-edge technological equipment and infrastructure.

  As part of its innovation policy, Institut Mérieux has set up the Mérieux Research Grants program with the aim of supporting doctors and scientists around the world whose projects have the potential to lead to conceptual or technological breakthroughs. This ambitious program of calls for projects is designed to give Institut Mérieux companies access to ground-breaking scientific, clinical and technological knowledge upon which new approaches in diagnostics, therapy and nutrition will be developed. The purpose of these research agreements is to finance particularly innovative projects, in both public and private laboratories, in the strategic fields in which Institut Mérieux operates. Following a rigorous selection process, the winning applicants receive financing for two years. In the event that their projects are successful, Institut Mérieux has the right of first refusal for entering into a partnership. Since the creation of the Mérieux Research Grants program in 2009, more than 100 grants have been awarded in almost 20 countries, creating an international community of highly qualified scientists and physicians from Europe, the United States, Latin America, the Middle East and Asia.

  Lastly, in an effort to provide global responses to the major public health challenges, Institut Mérieux has launched interdisciplinary research programs that harness the specific and complementary expertise of its companies, leveraging some of the work carried out by Mérieux Research Grant researchers as well as partnerships with international research networks. These programs concern five strategic areas: neglected infectious diseases (particularly tuberculosis), antibiotic resistance and hospital-associated infections, host response analysis with regard to infectious diseases and cancer, the relationship between microbiota and health, and technological developments in diagnostics:

- the Fondation Christophe et Rodolphe Mérieux, under the aegis of the Institut de France, is the reference shareholder of Institut Mérieux, holding one third of its shares (see section 3.4.2);
- an independent family foundation created in 1967 and recognised as a public utility, the Fondation Mérieux fights infectious diseases in developing countries (see section 3.4.2);
- Mérieux NutriSciences is dedicated to preventing food-related health risks and, more widely, those as a result of using everyday products. Involved in food safety and nutrition for more than 45 years, initially through the company Silliker, Mérieux NutriSciences has expanded its expertise to all industrial sectors whose activity affects the health of consumers: water and environment, pharmaceutical and medical products, cosmetics, consumer goods and agrochemicals. Across the world, Mérieux NutriSciences teams offer companies analysis, audit and consultancy services throughout the value chain. In addition, through being part of Institut Mérieux, Mérieux NutriSciences brings a scientific and medical dimension to all of its activities, and is developing a new approach to research in the field of nutrition, putting the consumer and the patient at the heart of its activities. Through the company Biofortis, Mérieux NutriSciences teams support health and nutrition industry companies in their R&D programs, by providing scientific proof of their products' effectiveness. In particular, Biofortis has a microbiome analysis platform for conducting its research in the area of gastrointestinal health.

7.8.3 Service agreements between these persons

None of the members of the administrative, management or supervisory bodies has a service agreement with the Company or one of its subsidiaries providing for the payment of benefits. There are service agreements between bioMérieux and certain Group companies that have executive officers in common, as described below.

7.8.4 Description of transactions

The Statutory Auditors' report on related-party agreements for the year ended 2018 is presented in section 7.7.4 of the 2018 Registration Document, and the description of transactions with related parties are presented in section 6.1.2 (Note 30) and in section 6.2.2 (Note 21.3) of the 2018 Registration Document filed with the French financial markets authority (Autorité des marchés financiers - AMF) on March 14, 2019.

For 2019, transactions with related parties are described in this Registration Document in section 6.1.2 (Note 30) and section 6.2.2 (Note 21.3).

In 2019, unlike in previous years, no agreement outside the scope of related-party agreements as defined in Articles L. 225-38 et seq. of the French Commercial Code remained in force. The Statutory Auditors' special report on related-party agreements for the financial year 2019 is presented below.

No new agreement was authorised in 2019. The special report of the Statutory Auditors, subject to approval by the Annual General Meeting of May 19, 2020, includes the Company's related-party agreements that remained in force during the year.

These agreements had been justified by the Board of Directors as indicated below:

- Service agreement signed on April 23, 2015 with the Institut Mérieux and riders. The purpose of this addendum is to change (i) the list of services provided, by adding the internal audit (according to the tasks actually carried out on behalf of bioMérieux) and risk and compliance functions, which will henceforth be performed by the Institut Mérieux and re-billed to bioMérieux from January 1, 2019, and (ii) the rules for re-billing services provided by Institut Mérieux in its capacity as the Group's lead holding company.

  The margins that apply are modified in accordance with the OECD's rules, by applying an 8% margin to all expenses incurred by Institut Mérieux except for (a) expenses incurred by Institut Mérieux, with the exception of (a) expenses incurred by Institut Mérieux at the request of another entity, for practical and administrative reasons (pass-through costs), which will continue to be billed at cost price, and (b) expenses incurred by Institut Mérieux in order to carry out specific services that are purely administrative, benefit a Group entity, and will be re-billed, applying a 5% margin. Furthermore, for the sake of transparency and in order to allow bioMérieux to define its own re-billing rules for its subsidiaries, Institut Mérieux bills bioMérieux for all of the defined services to be paid for by bioMérieux and its subsidiaries, according to the applicable allocation criteria, so that bioMérieux can re-bill its subsidiaries directly, without a mark-up. Accordingly, in the 2019 financial year, Institut Mérieux billed €8,683,000 to bioMérieux (€6,367,520 in 2018), which re-billed €2,936,701 of this sum to bioMérieux Inc. (€2,640,110 in 2018) and €1,960,817 to BioFire Diagnostics (€1,066,310 in 2018). The reason for this amendment is the Company's desire to harmonise re-billing rules with Institut Mérieux with those that it has in place with its own subsidiaries, while continuing to comply with applicable international rules, particularly those of the OECD. It should also be noted that Institut Mérieux wishes to strengthen its Group Audit Department, including internal audit, risk management and compliance activities. This is in order to pursue the objective of consistency in the risk management and safeguarding processes in Institut Mérieux and its controlled companies, in order to meet all the legal and regulatory obligations that are incumbent upon it.

  This new organisation allows bioMérieux to cease the administrative management of the employees on this team, who are henceforth employees of Institut Mérieux and who are billed to bioMérieux for time spent solely on the missions carried out for it. Since 2019, the cost for bioMérieux is equivalent overall, on a like-for-like basis, given the simplification, for bioMérieux, of the management of the employees of this department. This change does not involve any change for the bioMérieux Audit Committee or its engagements. The Audit Committee continues to approve the auditing plan and monitor its implementation, receive audit reports, and generally hear the views of the head of internal auditing, who is invited to every session of the Audit Committee.
- A new agreement on managing employee mobility in the Mérieux Group, previously known as the Agreement on Allocation of Employment Contract Severance Payments, provides that severance payments for employment contracts and/or retirements of employees who have worked for Group companies, whose seniority was made retroactive without compensation, be divided equitably between the parties. This division is made prorata based on compensation paid by each Mérieux Group company that benefited from the employees' services, except for compensation that constituted the basis for a previous severance payment. Renewal of this agreement is justified by the Company's interest in dividing severance payments under its employees' employment contracts among each of the Mérieux Group companies (including the Fondation Mérieux, if applicable) for which such employees also worked, based on common rules and conditions. This agreement was extended to Fondation Mérieux, an entity outside of Mérieux Group, by an addendum;
- A contract assigning an employee of Silliker Group Corporation France (Mérieux NutriSciences) to bioMérieux. The reason for this agreement is the Company's interest in adopting, with Mérieux NutriSciences, a shared commercial approach to key strategic customers, in order to improve the effectiveness of the two companies' respective product and service offerings.

- The addendum to the sponsorship agreement with the Fondation Mérieux is in line with the Company's general sponsorship policy and is designed to allow the Company to support the humanitarian activities and goals of the foundations over the long term, in the field of public health, which is the Company's area of operation.
- The sponsorship agreement with the Fondation Christophe and Rodolphe Mérieux, the Company's reference shareholder, whose budget rose in 2017 from €1,325,000 to €2,000,000 is in line with the Company's general sponsorship policy and is designed for the long-term support of the humanitarian activities and goals of the foundations in the field of public health, which is the Company's area of operation.
- The addendum to the service agreement with the Fondation Mérieux enables the Company to share with the Fondation the skills and resources necessary for meeting some of the Fondation's needs so that it can carry out its public interest missions, financed by the Company through sponsorship agreements.

At its December 2019 meeting, the Board of Directors carried out an annual review of the related-party agreements and confirmed, following discussion, that the previously-authorised agreements and addenda still met the criteria on which basis it had granted prior authorisation, and that these authorisations therefore remained in force.

The Board of Directors has decided to withdraw the supplementary pension contributions (Article 83) for Alexandre Mérieux from the area of related-party agreements, pursuant to Order No 2019-1234 and its Enforcement Decree No 2019-1235.

7.8.5 Statutory Auditors' special report on related-party agreements

This is a free translation into English of the Statutory Auditors' special report issued in French and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

At the bioMérieux Annual General Meeting,

In our capacity as Statutory Auditors of bioMérieux, we hereby present our report on related-party agreements to you.

It is our responsibility to report to you, based on the information provided to us, the principal features, terms and conditions of the agreements and commitments that have been disclosed to us or that we may have identified as part of our engagement, without commenting on their relevance or substance or identifying any undisclosed agreements or commitments. Under Article R. 225-31 of the French Commercial Code, it is your responsibility to determine whether the agreements are appropriate and should be approved.

Where applicable, it is our responsibility to provide you with the information required by Article R. 225-31 of the French Commercial Code in relation to the implementation during the past year of agreements already approved by the General Meeting.

We performed the procedures that we deemed necessary in accordance with professional standards applicable in France. These procedures consisted in verifying that the information provided to us is consistent with the underlying documents.

Agreements submitted for the approval of the General Meeting

We hereby inform you that we have received no notice of any agreement authorised or concluded during the previous financial year, to be submitted for approval by the General Meeting pursuant to Article L.225-38 of the French Commercial Code.

Agreements already approved by the General Meeting

Pursuant to Article R. 225-30 of the French Commercial Code, we were informed of the following agreements approved by the Annual General Meeting in prior years, which remained in place during the previous financial year.

With the Fondation Mérieux

People concerned

Alexandre Mérieux (Chairman and Chief Executive Officer).

1) Rider to the sponsorship agreement of March 8, 2011

Nature and purpose

The Fondation Mérieux's sponsorship agreement dated March 8, 2011, approved by the Board of Directors on December 18, 2014, took effect on January 1st, 2015 for an indefinite length of time.

Terms and conditions

Your Company donates cash and assigns some of its employees to initiatives carried out on behalf of the Fondation Mérieux as part of your corporate sponsorship strategy. The total amount represented by these donations and by the employees made available is determined and voted on each year by the Board of Directors.

Amounts in the financial year

In the year ended December 31, 2019, your Company reported total liabilities of €409,210.24 in relation to donations to Fondation Mérieux.

2) Rider to the service agreement dated January 1, 2011

Nature and purpose

The agreement covering services provided to Fondation Mérieux by your Company, approved by the Board of Directors on December 18, 2014, took effect on January 1, 2015 for an indefinite length of time.

Terms and conditions

Your Company provides the Fondation Mérieux with human resources by assigning some of its employees to carry out Fondation work in biology, and by supplying administrative support and IT staff. These services are compensated in accordance with the regulation applicable to intragroup transfer prices, with an 8% margin added for the reimbursement of service costs, excluding biology services (categorised as research and development under the terms of the regulation on transfer prices), and a 10% margin added for the reimbursement of biology service costs.

Amounts in the financial year

In the year ended December 31, 2019, your Company reported profits of €32,459.26.

With the Fondation Christophe and Rodolphe Mérieux

People concerned

Alexandre Mérieux (Chairman and Chief Executive Officer).

Nature and purpose

On December 15, 2016, the Board of Directors approved an increase in the annual sponsorship budget for the Fondation Christophe and Rodolphe Mérieux, from €1,325,000 to €2,000,000, as from January 1, 2017.

Terms and conditions

Your Company makes donations to the Fondation Christophe and Rodolphe Mérieux as part of its corporate sponsorship strategy. The total amount represented by these donations and voted on each year by the Board of Directors.

Amounts in the financial year

In the year ended December 31, 2019, your Company reported total liabilities of €2,000,000 in relation to donations to the Fondation Christophe and Rodolphe Mérieux.

With the companies of the Mérieux Group: Institut Mérieux, Mérieux NutriSciences, Transgène, ABL, Thera, Mérieux Développement, Fondation Mérieux

People concerned

Alexandre Mérieux (Chairman and Chief Executive Officer), Jean-Luc Bélingard (director), Philippe Archinard (director) and Harold Boël (independent director).

Nature and purpose

An agreement on managing the mobility of employees within the Mérieux Group, approved by the Board of Directors on December 18, 2014, took effect on January 1, 2017 for an indefinite length of time.

Terms and conditions

This agreement provides that severance payments for employment contracts and/or the retirement of employees who have worked for Group companies, whose seniority was made retroactive without compensation, be divided equitably between the parties. This division is on a prorata basis, according to compensation paid by each Mérieux Group company having benefited from the employees' services, except for compensation that constituted the basis for a previous severance payment.

Amounts in the financial year

For the year ended December 31, 2019, your company recorded income totalling €54,791.66 for Mérieux NutriSciences and an expense totalling €99,587.38, of which €88,752.38 for Institut Mérieux and €10,835 for Mérieux Université.

With Silliker Group Corporation France (Mérieux NutriSciences), a member company of the Mérieux Group

People concerned

Alexandre Mérieux (Chairman and Chief Executive Officer) and Harold Boël (independent director).

Nature and purpose

The contract assigning an employee of Silliker Group Corporation France (Mérieux NutriSciences) to your Company was authorised by the Board of Directors' meeting on February 27, 2018, and took effect on June 1, 2018, for a period of one year.

Terms and conditions

This contract provides for an employee of Silliker Group Corporation France (Mérieux NutriSciences) to be made available for 50% of their working time, to be re-billed at actual cost.

Amounts in the financial year

In the financial year ending December 31, 2019, your Company reported total liabilities of €209,656.75.

With Institut Mérieux, the parent company

People concerned

Institut Mérieux and Alexandre Mérieux (Chairman and Chief Executive Officer) and Jean-Luc Bélingard (director).

Nature and purpose

Addendum to the service agreement provided by Institut Mérieux authorised by the Board meeting of December 20, 2018.

Terms and conditions

The purpose of this addendum is to change:

the list of services provided, by adding the Internal Audit (according to the tasks actually carried out on behalf of your company), Risk, and Compliance functions, which will henceforth be performed by the Institut Mérieux and re-billed to bioMérieux as from January 1, 2019;

the rules for re-billing services provided by Institut Mérieux in its capacity as the Group's lead holding company. The margins that apply are amended in accordance with OECD rules, by applying an 8% margin to all of the expenses incurred by Institut Mérieux, except for:

expenses incurred by Institut Mérieux, at the request of another entity, for practical and administrative reasons (pass-through costs), which will continue to be billed at cost price;

and expenses incurred by Institut Mérieux in order to carry out specific services that are purely administrative, benefiting a Group entity, and will be re-billed applying a 5% margin.

For the sake of transparency and in order to allow bioMérieux to define its own re-billing rules for its subsidiaries, Institut Mérieux bills your company for all of the services set out in the contract above, to be paid for by your company and its subsidiaries, according to the applicable allocation criteria, so that your company can re-bill its subsidiaries directly, without a mark-up.

Amounts in the financial year

In the year ended December 31, 2019, your company recorded liabilities of €8,928,000 and earnings of €4,897,518, of which €1,960,817 from BioFire Diagnostics and €2,936,701 from bioMérieux Inc.

Lyon, February 28, 2020

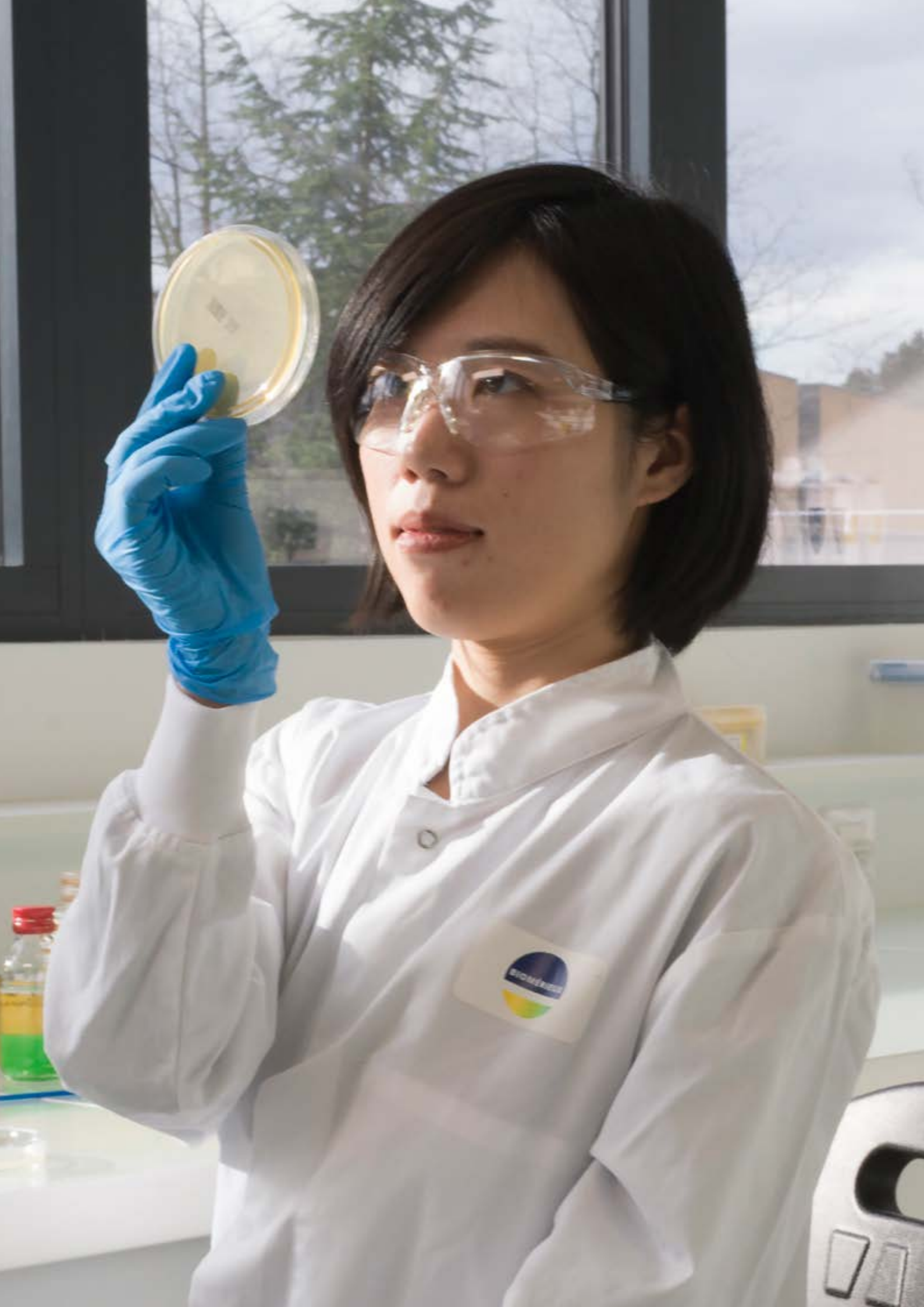
The Statutory Auditors

GRANT THORNTON
French member of Grant Thornton International
Françoise Mechin

ERNST & YOUNG et Autres
Nicolas Perlier

7.9 Material contracts

The Company has not entered into any material contracts over the last two years other than those entered into in the ordinary course of business.



8

ADDITIONAL INFORMATION

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8.1 Persons responsible for the Universal Registration Document

8.1.1 Name and function of persons responsible

Alexandre Mérieux, Chairman and Chief Executive Officer of bioMérieux.

8.1.2 Statement of the persons responsible

"I hereby certify that having taken all reasonable care to ensure that such is the case, the information contained in this Universal Registration Document is, to the best of my knowledge, in accordance with the facts and contains no omission likely to affect its import.

I declare that, to the best of my knowledge, the annual financial statements have been prepared in accordance with applicable accounting standards and give a true and fair view of the assets, liabilities, financial position and results of the Company and all of the companies included in the consolidation, and that the management report included in this Universal Registration Document according to the concordance table detailed in section 8.5 presents a true picture of the development of the business, results and financial position of the Company and all companies included in the consolidation and that it describes the main risks and uncertainties to which they are exposed".

Marcy l'Étoile, March 19, 2020

Chairman and Chief Executive Officer

Alexandre Mérieux

8.1.3 Name and function of person responsible for financial information

Guillaume Bouhours, Chief Financial Officer, Executive Vice President, Purchasing & Information Systems.

bioMérieux

69280 Marcy l'Étoile

Phone: +33 (0)4 78 87 20 00

www.biomerieux-finance.com

www.biomerieux.com

8.2 Responsible for auditing the financial statements

Cabinet Ernst & Young et Autres

Tour Oxygène -10 boulevard Vivier Merle 69003 Lyon

The Company was appointed by the Annual General Meeting of May 30, 2012, then renewed by the Annual General Meeting of May 17, 2018 for a term expiring at the end of the Annual General Meeting called to approve the financial statements for the financial year ending December 31, 2023.

Ernst & Young et Autres is a registered audit firm, member of *Compagnie régionale des Commissaires aux comptes de Versailles*.

Ernst & Young et Autres is represented by Nicolas Perlier.

Cabinet Grant Thornton

44 quai Charles-de-Gaulle 69006 Lyon

Auditex was appointed deputy Statutory Auditor by the Annual General Meeting of May 30, 2017 for a term expiring at the end of the Annual General Meeting called to approve the financial statements for the financial year ending December 31, 2022.

Grant Thornton is a registered audit firm, member of *Compagnie régionale des Commissaires aux comptes de Versailles*.

Grant Thornton is represented by Françoise Méchin.

8.3 Documents available to the public

In accordance with Article 19 of Regulation (EU) 2017/1129 of the European Parliament and the Council of June 14, 2017, the following information is referenced in this Universal Registration Document:

For financial year 2018:

- the consolidated financial statements and the corresponding Statutory Auditors' report appear in sections 6.1.1 and 6.1.2 (pages 150 to 211) and in section 6.1.3 (page 212) respectively;
- the annual financial statements and the corresponding Statutory Auditors' report appear in sections 6.2.1 and 6.2.2 (pages 215 to 243) and in section 6.2.4 (page 248) respectively;
- financial information appears in section 5.2 (pages 141 to 144);
- capital expenditure (or capex) appears in section 5.5 (page 145),

of the Registration Document of financial year 2018 filed with the AMF on March 14, 2019, under No. D19-0150.

For financial year 2017:

- the consolidated financial statements and the corresponding Statutory Auditors' report appear in sections 6.1.1 and 6.1.2 (pages 144 to 199) and in section 6.1.3 (page 200) respectively;
- the annual financial statements and the corresponding Statutory Auditors' report appear in sections 6.2.1 and 6.2.2 (pages 203 to 235) and in section 6.2.4 (page 240) respectively;
- financial information appears in section 5.2 (pages 133 to 138);
- capital expenditure (or capex) appears in section 5.5 (page 140),

of the Registration Document of financial year 2017 filed with the AMF on March 14, 2018, under No. D18-0129.

Other information in these documents is irrelevant to investors or is covered by another section in the 2019 URD.

During the period of validity of this URD, the Company's articles of incorporation and bylaws, as well as the minutes of Shareholders' Meetings, the Company's historical financial information, the Statutory Auditors' reports and all other Company documents may be consulted at the Company's registered office in Marcy l'Étoile, France.

In accordance with AMF recommendation No. 2014-15, the Company press releases and annual reports including historical financial information on the Company are available on the Company's website and kept on file for the required length of time.

More generally, and in accordance with Article 221-3 of the AMF's General Regulation, all of the regulatory information within the meaning of Article 221-1 of the aforementioned regulation, as well as the Company's updated bylaws (in French only), are available on the Company's website www.biomerieux-finance.com.

MAIN SOCIAL MEDIA PAGES

	Facebook	https://www.facebook.com/biomerieux
	Twitter	https://twitter.com/biomerieux
	YouTube	https://www.youtube.com/user/bioMerieuxTV https://www.youtube.com/user/biomerieuxdiagnostic https://www.youtube.com/user/biomerieuxindustry
	LinkedIn	https://www.linkedin.com/company/biomerieux
	Instagram	https://www.instagram.com/company/biomerieux

8.4 Provisional investor calendar 2020

Date	Event
April 16, 2020	First-quarter 2020 revenues (before start of trading)
May 19, 2020	Annual General Meeting
September 2, 2020	Second-quarter 2020 revenues and first-half 2020 results (before start of trading)
October 20, 2020	Third-quarter 2020 revenues (before start of trading)

The Company reserves the right to modify this calendar at any time.

8.5 Concordance tables

CONCORDANCE TABLE FOR THE UNIVERSAL REGISTRATION DOCUMENT, ENABLING IDENTIFICATION OF THE INFORMATION SPECIFIED BY APPENDICES I AND II TO DELEGATED REGULATION (EU) 2019/980 OF MARCH 14, 2019 (SUPPLEMENTING REGULATION (EU) 2017/1129 OF JUNE 14, 2017)

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11.3. Profit forecasts or estimates calculated on a comparable basis to historical financial information and to the accounting methods of the issuer	N/A	
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THE FOLLOWING CONCORDANCE TABLE ENABLES IDENTIFICATION OF THE MAIN INFORMATION STIPULATED BY THE FINANCIAL REPORT INDICATED IN ARTICLE 451-1-2 OF THE FRENCH MONETARY AND FINANCIAL CODE AND ARTICLE 222-3 OF THE AMF GENERAL REGULATIONS

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THE CONCORDANCE TABLE BELOW INCLUDES ALL THE INFORMATION FROM THE MANAGEMENT REPORT REQUIRED BY ARTICLES L.225-100 ET SEQ., L.232-1, II, L.233-26 AND R.225-102 OF THE FRENCH COMMERCIAL CODE

Themes	Section(s)	Page(s)
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Total amounts provisioned or recognised by the issuer or its subsidiaries for the payment of pensions, retirement or other benefits	4.3.5	147

8.6 Glossaries

8.6.1 Scientific terms

Nucleic acid: Nucleic acid is a naturally-occurring molecule found in most cells. It has the ability to hold and transmit coded hereditary instructions allowing for an organism's development. There are two types of nucleic acids: DNA and RNA.

Amplification: a technique, usually using enzymes, for multiplying nucleic acids in order to increase the sensitivity of detection methods.

Antibiotic susceptibility test: an analysis to determine the sensitivity of a bacterium to antibiotics.

Antibiotic: a substance of natural or synthetic origin capable of stopping the multiplication of bacteria.

Antibody: a complex protein molecule produced by the immune system to detect and neutralise disease-causing organisms, in particular viruses.

Antigen: a macromolecule recognised by an antibody or cells from an organism's immune system that triggers an immune response.

DNA: the acronym of "deoxyribonucleic acid". These nucleotides consist of a sugar (deoxyribose), a phosphate group and one of the following nitrogen-containing bases: adenine (A), cytosine (C), guanine (G) or thymine (T), and serve as a medium for genetic information.

ANSM (*Agence nationale de sécurité du médicament et des produits de santé*): French regulatory agency that carries out assessments, provides expertise, and makes decisions regarding the safety of drugs and healthcare products.

ANVISA (*Agência Nacional de Vigilância Sanitária*): Brazilian agency responsible for regulating food and medical products.

RNA: the acronym of "ribonucleic acid". A polymer similar to DNA which, like DNA, mainly has a role as a vector of genetic information. The sugar in RNA is a ribose.

Bacterium: a unicellular microorganism lacking chlorophyll and visible only under a microscope. Bacteria do not belong to either the plant or the animal kingdom.

Multi-resistant bacteria: bacteria are said to be multi-resistant to antibiotics when they are sensitive only to a small number of the antibiotics customarily used in therapy, as a consequence of the accumulation of natural and acquired resistances.

Biochemistry: an area of science which studies the correlation between the structure of natural molecules and the consequences on their activity.

Molecular biology: technology that analyses genetic sequences of DNA or RNA that are characteristic of a bacterium, virus, protein or cell.

Chromogen: a substance that produces colouring under certain conditions. Related to an enzyme substrate and incorporated in a culture medium, it is used to reveal a particular enzyme metabolism and thereby assists in identifying the cultured bacterium.

Consumable: a single-use accessory, generally employed in an analysis instrument.

Contaminant: a substance present where it should not be.

Cytomegalovirus: a virus responsible for infections, usually undetected. It becomes pathogenic especially in patients with weak immune defences. The virus is a member of the herpes virus family, which includes *inter alia* herpes simplex virus (HSV) or herpes virus hominis (HVH), cytomegalovirus (CMV), varicella-zoster virus (VZV) and Epstein-Barr virus (EBV).

Cytometry: the counting of cells.

Flow cytometry: technique of passing a stream of cells, particles or molecules at high speed within a stream of liquid through a laser beam. The light re-emitted (by diffusion or fluorescence) enables the population to be classified and sorted according to several criteria.

***In Vitro* Diagnosis:** tests performed outside the human body using diagnostic tools.

Enzyme: a protein macromolecule which speeds up a biochemical reaction.

Pulmonary embolism: obstruction of one of the branches of the pulmonary artery or of the pulmonary artery itself by a blood clot.

Enterobacteria: a family of aerobic or anaerobic (requiring or not requiring oxygen to live and reproduce) bacilli (bacteria), revealed by Gram-negative staining.

Enterococcus: oval-shaped bacterium of the group D of the Streptococcus family, usually resident in the intestine of healthy humans.

Extraction: term applied to the steps which extract nucleic acids from the cells that contain them and process them so they can be used in molecular biology techniques such as amplification.

FDA (Food and Drug Administration): American agency responsible for regulating food and medical products.

Fungal: that which relates to fungi.

Genotyping: determination of all the genes contained in the cells of an organism.

Gram staining: staining which reveals the properties of the bacterial wall so that they can be used to distinguish and classify bacteria. The main distinction is between Gram-positive and Gram-negative bacteria.

Blood culture: an essential blood test in infectious disease. It is carried out by taking a sample of venous blood which is then cultured to reveal the presence or absence of germs.

Histology: the study of tissue in order to research tissue composition, structure and renewal and cellular exchanges within themselves.

Immunoassays: detection of pathology markers using an antigen-antibody reaction.

Quality indicator: term used in food processing to define the microorganisms responsible for visual or taste alterations (*e.g.* mould or bacterial contamination). Quality indicator counts are used to assess product hygiene.

ID/AST: a bacterial identification and antibiotic susceptibility test.

IVD: abbreviation for *in vitro* diagnostics.

Laboratory P1, P2, P3 and P4: classification of laboratories based on biohazard level, Level 1 representing a minimum risk and Level 4 representing a high risk of transmission and mortality.

***Listeria*:** a genus of bacteria which can cause listeriosis, an infectious disease which is potentially serious in new-born babies, pregnant women or individuals with low resistance.

Marker: a reagent used to detect the substance to which it is bound. A biological marker (biomarker) is a substance that is assayed to help diagnose a pathology.

Methicillin: a semi-synthetic penicillin used primarily against non-resistant *Staphylococcus aureus*.

Microbiology: the study of microorganisms, including *inter alia* viruses, bacteria and fungi.

Microorganism: a living organism of microscopic size.

Culture media: a simple or compound nutrient composition in liquid or solid form, used to maintain or increase the development of a microbial species under appropriate biological conditions.

MRSA: methicillin-resistant *Staphylococcus aureus* bacterium.

Multiplex: the ability to transmit multiple data on a single physical medium.

Mycobacteria: rod-shaped bacillus-type bacteria. Certain species of mycobacteria are pathogens: *M. leprae* responsible for leprosy; *M. tuberculosis*, responsible for tuberculosis.

NMPA (National Medical Income Administration): CFDA (China Food and Drug Administration): Chinese agency responsible for regulating food and medical products.

Healthcare-associated infection: a disease contracted in a hospital or other healthcare establishment by a patient who did not have this disease on admission.

WHO (World Health Organization): executive authority in healthcare for international projects within the UN system.

Oncology or cancerology: the medical speciality of the study, diagnosis and treatment of cancers.

Test panel: a set of predetermined medical tests used in the diagnosis and treatment of medical conditions.

Parasite: an organism that feeds off, lives or reproduces itself by establishing a lasting interaction with another organism (the host).

Disease-causing organism: biological agent responsible for infectious disease. Infectious agents can be viruses, bacteria or parasites.

PCR (polymerase chain reaction): the polymerase chain reaction is a molecular biology method for *in vitro* genetic amplification that duplicates a large quantity (with a multiplication factor nearing one billion) of a known DNA or RNA sequence from a small initial quantity. This method is particularly appropriate for the detection of viruses.

POC (point-of-care) - POCT (point-of-care testing): services offered "at the bedside", including in particular the analysis of the diagnosis.

Procalcitonin: a marker used to assist in the early detection of bacterial infections.

Protein: a basic constituent of all living cells. A biological macromolecule is composed of one or more amino acid chains linked by peptide bonds.

***Salmonella*:** a genus of enterobacteria called *Salmonella*. They cause two types of illness: gastrointestinal diseases through foodborne illnesses (salmonellosis) and typhoid and paratyphoid fevers.

Sepsis: an excessive reaction of an organism's immune system and coagulation system to an infection. This reaction is characterised by systemic inflammation and by blood coagulation problems, which can rapidly lead to organ failure (severe sepsis) and, in many cases, death.

Septicaemia: serious systemic infection of the organism by pathogenic germs, indicated by the presence of microorganisms in the blood.

DNA sequencing: method used to determine the order of the nucleotide bases in a molecule of DNA.

Mass spectrometry: a technique used to identify and determine the chemical structure of multiple molecules simultaneously, analysing the mass and charge of their ions.

Staphylococcus: a genus of Gram-positive bacteria, usually observed in clusters resembling bunches of grapes.

Substrate: a molecule used as a starting product which binds to the active site of an enzyme and is converted into one or more products.

Syndrome: a set of clinical signs and symptoms a patient is likely to display when suffering from certain medical conditions.

Acute coronary syndrome: decreased blood flow in the coronary arteries resulting in reduced circulation rate and inadequate oxygenation of the myocardial muscle.

Theranostics: a diagnostic test that allows clinicians to take the most suitable therapeutic decision for each patient, thereby favouring more personalised treatment.

Venous thrombosis: the formation of a blood clot in a vein. It usually occurs in a vein of the lower limbs, in the leg or hip, rarely in the upper limbs.

Typing: a method which can help in the assessment of the compatibility between two individuals, their organs, tissues or blood. A technique used to characterise bacteria.

Virus: a rudimentary infectious microorganism, containing a single type of nucleic acid encaged in a protein capsid, which uses the materials of the cell that it parasitises to synthesise its own constituents. It reproduces using just its own genetic material.

8.6.2 Alternative performance indicators and financial terms

Net debt: sum of cash and cash equivalents with a maturity of less than three months, less committed debt and bank overdrafts and other uncommitted debt borrowings. APM

Earning Before Interest, Taxes, Depreciation and Amortization (EBITDA): contributive operating income before non-recurring items, depreciation and amortization. APM

Currency impact: currency effects are established by converting actual numbers at the average rates of year y-1. In practice, those rates are either average rates communicated by the ECB, or hedged rates if hedging instruments have been set up.

ETP/FTE: Equivalent Full time/Full Time Employee. APM

Free cash flow generation (Free Cash Flow): the cash flow from operations plus cash flows from investment excluding net cash from acquisitions and disposals of subsidiaries. APM

Contributive operating income before non-recurring items: operating income before non-recurring items related to the acquisition and integration of BioFire and before accounting entries relating to the Company's purchase price allocation. APM

Contributive operating income: operating income before "material extraordinary and non-recurring items", which are included in "other non-recurring income and expenses from operations."

Changes in scope of consolidation:

The effects of changes in scope of consolidation are determined:

- for acquisitions during the period, deducting from sales during the period the sum of sales completed in that period by entities acquired as from their inclusion in the scope of consolidation;
- for acquisitions in the preceding period, deducting from sales during the period the sum of sales completed in the months during which the acquired entities were not consolidated in the preceding period;
- for disposals in the period, adding to the sales in the period the sum of sales completed by the entities disposed of in the preceding period, during the months in which these entities are no longer consolidated in the current period;
- for disposals in the preceding period, adding to the sales in the period the sales completed during the preceding period by the entities disposed of.

NOTES

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bioMérieux S.A. • 69280 Marcy l'Étoile • France • Tel.: + 33 (0)4 78 87 20 00 • Fax: +33 (0)4 78 87 20 90
www.biomerieux.com