



Merck KGaA

(incorporated in Germany as a corporation with general partners)

EUR 1,000,000,000 Subordinated Fixed to Reset Rate Notes due September 2080 with a First Optional Redemption Date in June 2026

ISIN XS2218405772, Common Code 221840577, WKN A289QM

Issue price: 100.00 per cent

Merck KGaA, incorporated in the Federal Republic of Germany, (the "**Issuer**" and, together with its consolidated subsidiaries, the "**Group**" or "**Merck**" or "**Merck Group**") will issue on or about September 9, 2020 (the "**Issue Date**") EUR 1,000,000,000 in aggregate principal amount of subordinated notes subject to interest rate reset at 5 year intervals commencing on the first reset date on September 9, 2026 (the "**Notes**") in the denomination of EUR 100,000 (the "**Specified Denomination**") each.

The Notes will be governed by the laws of the Federal Republic of Germany ("**Germany**").

The Notes shall bear interest on their principal amount (i) from and including the Issue Date to but excluding September 9, 2026 (the "**First Reset Date**") at a rate of 1.625 % per annum (the "**Fixed Interest Rate**"); (ii) from and including the First Reset Date to but excluding September 9, 2031 at the relevant 5 year swap rate for the relevant reset period plus a margin of 199.8 basis points per annum (the "**Initial Margin**"); (iii) from and including September 9, 2031 to but excluding September 9, 2046 at the relevant 5 year swap rate for the relevant reset period plus a first step-up margin (being equal to the Initial Margin plus 25 basis points per annum); and (iv) from and including September 9, 2046 to but excluding September 9, 2080 (the "**Maturity Date**") at the relevant 5 year swap rate for the relevant reset period plus a second step-up margin (being equal to the Initial Margin plus 100 basis points per annum).

During each interest period interest is scheduled to be paid annually in arrear on September 9 of each year (each an "**Interest Payment Date**"), commencing on September 9, 2021.

Upon the occurrence of a Change of Control Event (as defined in § 5(6) of the terms and conditions of the Notes (the "**Terms and Conditions**"), the interest rate payable on the Notes will be increased by an additional 500 basis points per annum above the otherwise applicable rate, if the Issuer does not redeem the Notes in whole (as set out in § 4(6) of the Terms and Conditions).

The Issuer is entitled to defer payments of interest on any Interest Payment Date ("**Deferred Interest Payments**") and may pay such Deferred Interest Payments voluntarily at any time, but only has to pay such Deferred Interest Payments under certain circumstances as set out in the Terms and Conditions.

Unless previously redeemed or purchased and cancelled, the Notes will be redeemed at par on the Maturity Date.

The Notes may be redeemed in whole but not in part at the option of the Issuer at an amount per Note equal to the Specified Denomination plus (i) interest accrued on the Note to but excluding the date of redemption but yet unpaid and (ii) any outstanding Deferred Interest Payments due and payable, with effect (x) as of any date during the period from and including June 9, 2026 (the "**First Optional Redemption Date**") to and including the First Reset Date and (y) on any Interest Payment Date thereafter.

The Issuer may also redeem the Notes in whole but not in part at any time following a Rating Agency Event or a Tax Event (each as defined in the Terms and Conditions), in each case, at an amount per Note (i) equal to 101% of the Specified Denomination if the redemption occurs prior to the First Optional Redemption Date or (ii) equal to the Specified Denomination if the redemption occurs on or after the First Optional Redemption Date, plus, in each case, (i) interest accrued on the Note to but excluding the date of redemption but yet unpaid and (ii) any outstanding Deferred Interest Payments due and payable on the Note. Additionally, the Issuer may redeem the Notes in whole but not in part at any time following a Gross-up Event and a Change of Control Event (each as defined in the Terms and Conditions) or if the Issuer has redeemed or repurchased and cancelled at least 75% of the originally issued aggregate principal amount of the Notes, in each case, at an amount per Note equal to the Specified Denomination plus (i) interest accrued to but excluding the date of redemption but yet unpaid and (ii) any outstanding Deferred Interest Payments.

The Notes will initially be represented by a temporary global note in bearer form (the "**Temporary Global Note**"). Interests in a Temporary Global Note will be exchangeable, in whole or in part, for interest in a permanent global note in bearer form (the "**Permanent Global Note**" and together with the Temporary Global Note, the "**Global Notes**") not earlier than 40 days after the Issue Date (the "**Exchange Date**"), upon certification as to non-U.S. beneficial ownership. The Global Notes will be deposited with a common depository for Clearstream Banking S.A and Euroclear Bank SA/NV (together, the "**Clearing System**").

This prospectus (the "**Prospectus**") constitutes a prospectus within the meaning of Article 6.3 of Regulation (EU) No 2017/1129 of the European Parliament and of the Council of 14 June 2017 (as amended, the "**Prospectus Regulation**"). This Prospectus will be published in electronic form together with all documents incorporated by reference on the website of the Luxembourg Stock Exchange (www.bourse.lu).

This Prospectus has been approved by the *Commission de Surveillance du Secteur Financier*, Luxembourg ("**CSSF**") in its capacity as competent authority under the Prospectus Regulation. The CSSF only approves this Prospectus as meeting the standards of completeness, comprehensibility and consistency imposed by the Prospectus Regulation. Such approval should neither be considered as an endorsement of the Issuer that is subject of this Prospectus nor of the quality of the securities that are the subject of this Prospectus. The CSSF gives no undertaking as to the economic and financial soundness of the transaction or the quality or solvency of the Issuer. Investors should make their own assessment as to the suitability of investing in the Notes.

This Prospectus will be valid until September 7, 2021 and may in this period be used for admission of the Notes to trading on a regulated market. In case of a significant new factor, material mistake or material inaccuracy relating to the information included in this Prospectus which may affect the assessment of the Notes, the Issuer will prepare and publish a supplement to this Prospectus without undue delay in accordance with Article 23 of the Prospectus Regulation. The obligation of the Issuer to supplement this Prospectus will cease to apply once the Notes have been admitted to trading on the regulated market of the Luxembourg Stock Exchange and at the latest upon expiry of the validity period of this Prospectus.

Application has been made to the Luxembourg Stock Exchange for the Notes to be listed on the official list of the Luxembourg Stock Exchange (the "**Official List**") and to be admitted to trading on the Luxembourg Stock Exchange's regulated market. The Luxembourg Stock Exchange's regulated market is a regulated market for the purposes of Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments (as amended, "**MiFID II**").

This Prospectus does not constitute an offer to sell, or the solicitation of an offer to buy, the Notes in any jurisdiction where such offer or solicitation is unlawful.

The Notes have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "**Securities Act**") and subject to certain exceptions, the Notes may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons.

The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("**EEA**") or the United Kingdom. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; or (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the "**Insurance Distribution Directive**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the "**PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the EEA or the United Kingdom has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA or the United Kingdom may be unlawful under the PRIIPs Regulation.

Following the First Reset Date, amounts payable under the Notes are calculated by reference to the annual swap rate for swap transactions denominated in Euro with a term of 5 years, which appears on the Reuters Screen Page ICESWAP2/EURFIXA and which is provided by ICE Benchmark Administration Limited ("**IBA**"). As at the date of this Prospectus, IBA appears on the register of administrators and benchmarks established and maintained by the European Securities and Markets Authority ("**ESMA**") pursuant to article 36 of the Benchmark Regulation (Regulation (EU) 2016/1011) (the "**Benchmark Regulation**").

Prospective purchasers of the Notes should ensure that they understand the nature of the Notes and the extent of their exposure to risks and that they consider the suitability of the Notes as an investment in the light of their own circumstances and financial condition. Investing in the Notes involves certain risks. Please review the section entitled "Risk Factors" beginning on page 6 of this Prospectus.

Joint Lead Managers

Barclays
Société Générale
Commerzbank

BNP PARIBAS
BayernLB
Helaba

UniCredit Bank

RESPONSIBILITY STATEMENT

The Issuer with its registered office in Germany accepts responsibility for the information contained in and incorporated into this Prospectus and hereby declares that the information contained in this Prospectus is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its import.

The Issuer further confirms that (i) this Prospectus contains all relevant information with respect to the Issuer, the Group and to the Notes which is material in the context of the issue and the offering of the Notes, including all relevant information which, according to the particular nature of the Issuer and of the Notes is necessary to enable investors and their investment advisers to make an informed assessment of the assets and liabilities, financial position, profits and losses, and prospects of the Issuer and the Group and of the rights attached to the Notes; (ii) the statements contained in this Prospectus relating to the Issuer, the Group and the Notes are in every material respect true and accurate and not misleading; (iii) there are no other facts in relation to the Issuer, the Group or the Notes the omission of which would, in the context of the issue and offering of the Notes, make any statement in this Prospectus misleading in any material respect; and (iv) reasonable enquiries have been made by the Issuer to ascertain such facts and to verify the accuracy of all such information and statements.

NOTICE

No person is authorised to give any information or to make any representation other than those contained in this Prospectus and, if given or made, such information or representation must not be relied upon as having been authorised by or on behalf of the Issuer or Barclays Bank PLC, BNP Paribas, Société Générale, Bayerische Landesbank, Commerzbank Aktiengesellschaft, Landesbank Hessen-Thüringen Girozentrale or UniCredit Bank AG (together, the "**Joint Lead Managers**").

This Prospectus should be read and understood in conjunction with any supplement hereto and with all documents incorporated herein or therein by reference.

The legally binding language of this Prospectus is English. Any part of this Prospectus in German language constitutes a translation, except for the Terms and Conditions in respect of which German is the legally binding language.

In this Prospectus, all references to "€", "EUR" or "Euro" are to the currency introduced at the start of the third stage of the European economic and monetary union, and as defined in Article 2 of Council Regulation (EC) No. 974/98 of 3 May 1998 on the introduction of the Euro, as amended. References to "billions" are to thousands of millions.

Each investor contemplating purchasing any Notes should make its own independent investigation of the financial condition and affairs, and its own appraisal of the creditworthiness, of the Issuer. This Prospectus does not constitute an offer of Notes or an invitation by or on behalf of the Issuer or the Joint Lead Managers to purchase any Notes. Neither this Prospectus nor any other information supplied in connection with the Notes should be considered as a recommendation by the Issuer or the Joint Lead Managers to a recipient hereof and thereof that such recipient should purchase any Notes.

This Prospectus reflects the status as at its date. The offering, sale and delivery of the Notes and the distribution of this Prospectus may not be taken as an implication that the information contained herein is accurate and complete subsequent to the date hereof or that there has been no adverse change in the financial condition of the Issuer since the date hereof.

No representation or warranty is made or implied by the Joint Lead Managers or any of their respective affiliates, and neither the Joint Lead Managers nor any of their respective affiliates make any representation or warranty as to the accuracy or completeness of the information contained in this Prospectus. To the extent permitted by the laws of any relevant jurisdiction, none of the Joint Lead Manager, any of its affiliates or any other person mentioned in this Prospectus, except for the Issuer, accepts responsibility for the accuracy and completeness of the information contained in this Prospectus or any other documents incorporated by reference and accordingly, and to the extent permitted by the laws of any relevant jurisdiction, none of these persons accept any responsibility for the accuracy and completeness of the

information contained in any of these documents. The Joint Lead Managers have not independently verified any such information and accept no responsibility for the accuracy thereof.

This Prospectus does not constitute, and may not be used for the purposes of, an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorised or to any person to whom it is unlawful to make such offer or solicitation.

The distribution of this Prospectus and the offering, sale and delivery of the Notes in certain jurisdictions may be restricted by law. Persons into whose possession this Prospectus comes are required to inform themselves about and to observe any such restrictions. For a description of the restrictions see the section "*Subscription and Sale of the Notes – Selling Restrictions*" below. In particular, the Notes have not been and will not be registered under the Securities Act and are subject to United States tax law requirements. Subject to certain exceptions, the Notes may not be offered, sold or delivered within the United States of America or to U.S. persons as defined in Regulation S under the Securities Act ("**Regulation S**").

The Notes issued pursuant to this Prospectus are complex financial instruments and are not a suitable or appropriate investment for all investors. In some jurisdictions, regulatory authorities have adopted or published laws, regulations or guidance with respect to the offer or sale of securities such as the Notes to retail investors.

For the avoidance of doubt the content of any website referred to in this Prospectus does not form part of this Prospectus and the information on such websites has not been scrutinized or approved by the CSSF as competent authority under the Prospectus Regulation.

MIFID II PRODUCT GOVERNANCE / TARGET MARKET: PROFESSIONAL INVESTORS AND ECPS ONLY

Solely for the purposes of each manufacturer's product approval process, the target market assessment in respect of the Notes has led to the conclusion that: (i) the target market for the Notes is eligible counterparties and professional clients only, each as defined in MiFID II; and (ii) all channels for distribution of the Notes to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a "**distributor**") should take into consideration the manufacturers' target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturers' target market assessment) and determining appropriate distribution channels.

PRIIPS REGULATION / PROSPECTUS REGULATION / PROHIBITION OF SALES TO EEA AND UK RETAIL INVESTORS

The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the EEA or the United Kingdom. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; or (ii) a customer within the meaning of the Insurance Distribution Directive, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently, no key information document required by the PRIIPs Regulation for offering or selling the Notes or otherwise making them available to retail investors in the EEA or the United Kingdom has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA or the United Kingdom may be unlawful under the PRIIPs Regulation.

Where acting as agent on behalf of a disclosed or undisclosed client when purchasing, or making or accepting an offer to purchase, any Notes (or any beneficial interests therein) from the Issuer and/or the Joint Lead Managers the foregoing representations, warranties, agreements and undertakings will be given by and be binding upon both the agent and its underlying client.

BENCHMARK REGULATION: STATEMENT ON REGISTRATION OF BENCHMARK ADMINISTRATOR

Following the First Reset Date, interest amounts payable under the Notes are calculated by reference to the annual swap rate for swap transactions denominated in Euro with a term of 5 years, which appears on the Reuters Screen Page

ICESWAP2/EURFIXA and which is provided by IBA. As at the date of this Prospectus, IBA appears on the register of administrators and benchmarks established and maintained by ESMA pursuant to article 36 of the Benchmark Regulation.

SINGAPORE SECURITIES AND FUTURES ACT PRODUCT CLASSIFICATION

In connection with Section 309B of the Securities and Futures Act (Chapter 289) of Singapore (the "SFA") and the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore (the "CMP Regulations 2018"), the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are 'prescribed capital markets products' (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

STABILISATION

IN CONNECTION WITH THE ISSUE OF THE NOTES, BNP PARIBAS (THE "STABILISING MANAGER") (OR ANY PERSON ACTING ON BEHALF OF ANY STABILISING MANAGER) MAY OVER-ALLOT NOTES OR EFFECT TRANSACTIONS WITH A VIEW TO SUPPORTING THE MARKET PRICE OF THE NOTES AT A LEVEL HIGHER THAN THAT WHICH MIGHT OTHERWISE PREVAIL. HOWEVER, STABILISATION MAY NOT NECESSARILY OCCUR. ANY STABILISATION ACTION MAY BEGIN ON OR AFTER THE DATE ON WHICH ADEQUATE PUBLIC DISCLOSURE OF THE TERMS OF THE OFFER OF THE NOTES IS MADE AND, IF BEGUN, MAY CEASE AT ANY TIME, BUT IT MUST END NO LATER THAN THE EARLIER OF 30 DAYS AFTER THE ISSUE DATE OF THE NOTES AND 60 DAYS AFTER THE DATE OF THE ALLOTMENT OF THE NOTES. ANY STABILISATION ACTION OR OVER-ALLOTMENT MUST BE CONDUCTED BY THE STABILISING MANAGER (OR ANY PERSON ACTING ON BEHALF OF THE STABILISING MANAGER) IN ACCORDANCE WITH ALL APPLICABLE LAWS AND RULES.

ALTERNATIVE PERFORMANCE MEASURES

Certain terms used in this Prospectus and financial measures presented in the documents incorporated by reference are not recognised financial measures under International Financial Reporting Standards as adopted by the European Union ("**IFRS**") ("**Alternative Performance Measures**") and may therefore not be considered as an alternative to the financial measures defined in the accounting standards in accordance with generally accepted accounting principles. The Issuer has provided these Alternative Performance Measures because it believes they provide investors with additional information to assess the operating performance and financial standing of Merck's business activities. The definition of the Alternative Performance Measures may vary from the definition of identically named alternative performance measures used by other companies. The Alternative Performance Measures for Merck presented by the Issuer should not be considered as an alternative to measures of operating performance or financial standing derived in accordance with IFRS. These Alternative Performance Measures have limitations as analytical tools and should not be considered in isolation or as substitutes for the analysis of the consolidated results or liabilities as reported under IFRS.

For further information, please refer to "*General Information on the Issuer and the Group – Selected Consolidated Financial Information*".

FORWARD-LOOKING STATEMENTS

This Prospectus contains certain forward-looking statements, including statements using the words "believes", "anticipates", "intends", "expects" or other similar terms. This applies in particular to statements under the caption "Description of the Issuer and the Group" and statements elsewhere in this Prospectus relating to, among other things, the future financial performance, plans and expectations regarding developments in the business of the Issuer and Group. These forward-looking statements are subject to a number of risks, uncertainties, assumptions and other factors that may cause the actual results, including the financial position and profitability of the Issuer or Group, to be materially different from or worse than those expressed or implied by these forward-looking statements. Neither the Issuer nor the Joint Lead Managers do assume any obligation to update such forward-looking statements and to adapt them to future events or developments.

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RISK FACTORS

Before deciding to purchase the Notes, investors should carefully review and consider the following risk factors and the other information contained in this Prospectus. Should one or more of the risks described below materialise, this may have a material adverse effect on the business, prospects, shareholders' equity, assets, financial position and results of operations (Vermögens-, Finanz- und Ertragslage) or general affairs of the Issuer or the Group. Moreover, if any of these risks occur, the market value of the Notes and the likelihood that the Issuer will be in a position to fulfil its payment obligations under the Notes may decrease, in which case the holders of the Notes could lose all or part of their investments. Factors which the Issuer believes may be material for the purpose of assessing the market risks associated with the Notes are also described below.

The Issuer believes that the factors described below represent the principal risks inherent in investing in the Notes, but the Issuer may be unable to pay interest, principal or other amounts on or in connection with the Notes for other unknown reasons than those described below. Additional risks of which the Issuer is not presently aware could also affect the business operations of Group and have a material adverse effect on the Issuer's business activities and financial condition and results of operations. Prospective investors should read the detailed information set out elsewhere in this Prospectus (including any documents incorporated by reference herein) and reach their own views prior to making any investment decision.

Words and expressions defined in the Terms and Conditions shall have the same meanings in this section.

The following risk factors are organized in categories depending on their respective nature. In each category the most material risk factors, based on the probability of their occurrence and the expected magnitude of their negative impact, are mentioned first.

Potential investors should, among other things, consider the following:

Risks relating to the Issuer and the Group

The risk factors in this section are categorized as follows:

- Political, Regulatory and Environmental Risks
- Market Risks
- Risks related to Research and Development
- Risks related to the Quality and Availability of Products
- Financial Risks
- Legal and Tax Risks
- Other Risks

Political, Regulatory and Environmental Risks

The Healthcare Business Sector is affected by rising pressure on healthcare costs worldwide.

The Healthcare Business Sector is strongly influenced by the structure of the public healthcare systems in the relevant countries and the resulting market structures. In particular, regulations that vary by country apply to the selection, price and dispensing of physician-prescribed drugs and to the reimbursement or payment of the cost of such drugs by the relevant health insurance funds, country-specific social security institutions and public health services. Market structures are also shaped by the relevant national regulations on drug pricing and market access. These market structures can force the Group to lower its prices for drugs or change sourcing strategies to market them efficiently. Furthermore, in some markets, major customers of pharmaceutical products (government agencies, health insurance companies or certain healthcare providers) have such market power that they can exert substantial price pressure on pharmaceutical producers

such as the Group. In many countries, healthcare regulations and regulatory mechanisms are subject to frequent changes, often at short notice.

In the assessment of the Group, there is a trend towards increasingly restrictive requirements in terms of drug pricing, reimbursement, and expansion high-rebate groups. An important example is the volume-based procurement initiative in the People's Republic of China.

In some cases, new regulations can substantially change the marketing conditions for drugs. For example, in the United States, policies are frequently proposed that could adversely impact the pricing or utilization of the Group's biopharmaceutical products provided to patients in government-administered healthcare programs.

Accordingly, investments made in reliance on an existing market structure could prove to be not cost effective or worthless and existing market positions could be at risk. In general, any measure aimed at decreasing the costs of drug provision applicable to pharmaceutical manufacturers in the countries in which the Group operates may reduce its sales and profitability. In addition, in Europe certain countries serve as reference points for the determination of prices in other countries, and increasingly also in other regions such as Latin America, the Middle East and Asia.

Any regulatory developments in these countries that adversely affect the market structure, or the price of the Group's products could have a negative impact on the Group's business, financial condition, results of operations and prospects.

The Group's ability to market pharmaceutical products is subject to strict regulations by government authorities.

The development, manufacture, marketing, import and advertising of drugs are subject to extensive and restricting government regulations. In almost all jurisdictions in which the Group operates, the market launch of new drugs or new dosages of drugs requires regulatory approval. The development and approval process is very cost-intensive and time-consuming. Moreover, the result of the process cannot always be predicted because it depends on the outcome of scientific studies on the one hand and possible statutory and regulatory measures on the other. In such cases, the Group weighs the additional costs against the expected benefits to decide whether it is commercially reasonable to further invest in the development of such drugs. Moreover, it can sometimes take several years to determine whether a drug is approvable. In addition, the required regulatory approvals for drugs may be delayed or denied or drugs may not be approved for all indications for which marketing authorization applications were submitted.

If the Group is not successful in obtaining regulatory approval or positive reimbursement decisions for the marketing of new drugs or existing drugs for new indications in time or at all, or if the Group were to encounter other regulatory hurdles, this could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

Even after approval, drugs are still the subject of regulatory or legal action if new facts concerning their safety and efficacy come to light. For example, subsequent to the European Medicines Agency's ("EMA") recommendation to suspend the marketing authorization for the psoriasis treatment Raptiva® (efalizumab) in the European Union (EU), Biopharma deliberately withdrew this product from all markets in and outside of Europe in 2009. The decision to suspend and withdraw the marketing authorizations was made because of safety concerns, including the occurrence of virologically confirmed cases of progressive multifocal leukoencephalopathy (PML) in patients. In addition, there is a risk that claims may be brought against the Group in connection with any suspension of marketing authorizations.

Regulatory measures can also relate to statutory requirements for product labelling. Changes in product labelling could influence decisions of doctors on whether or not to prescribe the relevant products. Moreover, regulatory action can have a considerable impact on the marketing of drugs by the Group or even force the Group to withdraw products from the market.

The move of the EMA from the United Kingdom to The Netherlands as consequence of Brexit could have a negative impact on the registration process in the EU in particular driven by time delays.

Any of the factors mentioned above could have a negative impact on the Group's business, financial condition, results of operations and prospects.

The increasingly stringent regulatory environment for the specialty chemical industry could have a negative effect on the Group's production costs and the product portfolio in its Life Science and Performance Materials Business Sectors.

In its chemicals business, the Group must adhere to a multitude of regulatory specifications regarding the manufacture, testing and marketing of many of its products. More stringent regulations worldwide can have a negative impact on the Group's production costs and product portfolio. Specifically, in the European Union, the Group is subject to the European Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals ("**REACH**"), which is designed to ensure a high level of protection for people and the environment. It demands comprehensive tests for chemical products. Test procedures required by REACH can be costly and time-intensive and may lead to a rise in production costs. Moreover, the use of chemicals in production could be restricted, which would make it impossible to continue manufacturing certain products. As the Group is constantly pursuing research and development in substance characterization, and in the possible substitution of critical substances, the occurrence of this risk is thought unlikely. Nevertheless, it could still have a negative impact on the Group's business, financial condition, results of operations and prospects.

A decline in the business or financial performance of the Group's customers, including general (macro-) economic and political conditions or cyclical factors affecting key customers' industries can result in a decline in demand for the Group's products.

The destabilization of political systems, the possible establishment of trade barriers, sanctions and foreign exchange policy changes can lead to declines in sales in certain countries and regions. Potential negative macroeconomic developments can also impact the business of the Group.

The Performance Materials Business Sector is exposed to the cyclical nature of the industries in which its key customers operate and volatilities of the markets. In general, weak business conditions for the Group's customers in key markets result in weak sales of the Group's products. Such developments are often amplified by the fact that the Group and its competitors cannot easily reduce existing production capacity and the corresponding costs or otherwise adapt the production processes.

The products of the Life Science Business Sector are used in manufacturing and research processes, making it important for the business to establish close collaboration with its customers starting in early stages of the manufacturing design process. Any decline in sales, economic difficulties or regulatory measures faced by a customer, or any voluntary or involuntary suspension or termination by a customer of its production of a product, could simultaneously affect the sales of the Life Science Business Sector as it may be forced to curtail or stop delivery of its products to that customer. In respect of the products of the Life Science Business Sector used for the research and development universities, hospitals and stand-alone research institutes, any reduction in private or public research and development budgets could negatively affect the Life Science Business Sector.

For many customers in the life science and specialty chemicals industries, the Group is presently the single source supplier for one or several critical components used in their production lines. However, increasingly customers are seeking to implement a second source of products, which may result in existing customers becoming able to choose another supplier to supply components that are presently supplied by the Group. This could result in a loss of future business opportunities or future sales for the Group.

A weak economy is also intensifying cost pressure on national healthcare systems and in turn on the pharmaceutical industry in various countries, and, as a result, is also increasing the frequency and scope of regulatory and governmental interventions in market structures. Also, certain individual products of the Group and product lines in the pharmaceutical sector are frequently not covered by health insurance, which results in consumers having to bear the cost of these products. The sales of these products are therefore more sensitive to economic cycles.

The United Kingdom's exit from the European Union ("**Brexit**") gives rise to risks for the Group's existing business in the United Kingdom (2019: sales of EUR 408 million, 1,431 employees and 3 production sites), including the devaluation of the pound sterling, a weakening of the United Kingdom's economy, taxation effects, regulatory changes, the creation

of trade barriers such as tariffs as well as operational risks due to, for example, delays in the supply chain that could have an impact on the Group's profitability.

All of the abovementioned factors could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

Risks related to the SARS-CoV-2 pandemic.

The outbreak of SARS-CoV-2 first identified in December 2019 and its associated disease ("**Covid-19**"), together with any measures aimed at mitigating a further expansion thereof, such as restrictions on travel, imposition of quarantines, prolonged closures of workplaces, or curfews or other social distancing measures, may have a material adverse effect on the global economy and international financial markets in general and on the markets in which the Group operates in particular. The implications depend on a number of factors, such as the duration and spread of the outbreak as well as the timing, suitability and effectiveness of measures imposed by authorities, the availability of resources, including human, material, infrastructure and financial (e.g., governmental stimulus packages and/or measures introduced by central banks) required to implement effective responses to the respective situation at the international, national and regional level as well as the level of civil compliance with such measures. There is no certainty that such measures, or a combination thereof, are effective means to combat the outbreak and the implications resulting therefrom, which may result in an increase of credit risk, liquidity risk and operational risk for the Group and, ultimately, have material adverse effects on the operating results of the Group and its business and financial situation.

A number of factors that are important for the Group to successfully conduct its business could be materially affected by the spread of Covid-19. The social distancing measures implemented by countries around the world to slow the spread of Covid-19 could result in a severe global recession and financial crisis. As economic activity is drastically reduced for several months, many businesses could be forced to close, leading to a dramatic increase in unemployment and corporate and bank defaults. As businesses and unemployed workers no longer have the income to pay their outstanding debts, the number of defaults could significantly increase. Such developments could have a number of effects on the Group's business, including the following:

- Increased pressure on healthcare costs worldwide
- Decline in demand for the Group's product, across all sectors
- Increased risks related to research and development
- Increased risk of business interruptions at production facilities
- Increased risk of lack of availability of good quality materials or services that are required for business activities

The risks outlined above could each have a significant negative impact on the business of the Group. Moreover, such impact would be greater if the various risks took effect simultaneously.

The Group is subject to a variety of statutory environmental regulations and could therefore be exposed to the risk of liability due to non-compliance or past pollution.

All of the Group's businesses worldwide are subject to a number of continually changing, developing and increasingly complex environmental and health protection requirements and regulations with regard to the handling of chemicals and hazardous substances. These regulations relate to the emission of pollutants, waste water and garbage disposal, and the investigation and elimination of soil and groundwater pollution. In the past, these requirements have resulted in the need to invest in equipping and retrofitting the Group's plants. The Group assumes that investments will be required for this purpose in the future as well. This would apply in particular if the regulations to be observed by the Group were to be considerably tightened. The Group can neither influence this risk, nor predict its effects. Any increase in the expenses required to meet such obligations could materially adversely affect the Group's business, financial condition, results of operations and prospects.

As of June 30, 2020, the Group operated 98 production facilities in a number of countries. Some of these locations have been used for industrial purposes for a long time. There can be no assurance that substances hazardous to the environment have not leaked into the air, groundwater or soil of the production facilities or neighbouring properties in the past or that

these substances do not otherwise pose a hazard to the environment and that the Group will not be held responsible for remediation. This applies regardless of whether the Group caused the pollution and also applies, depending on local laws, in principle to properties formerly owned by the Group that have been sold. Despite a contractual exclusion or limitation of liability in respect of the buyer, there can be no assurance that the Group will not be held responsible under public or private law as the former owner or user for environmental pollution that may become known in the future. The Group has provisions in place for the remediation of already identified soil and groundwater contamination. Even if the Group has defined standards for environment friendly operations and checks compliance on a regular basis, there can be no assurance for the future that the Group will not release substances in the course of its business activities that pollute the environment and that a company of the Group will not be held responsible for remediation.

The costs of the remediation of pollution that the Group would be liable for could materially adversely affect the Group's business, financial condition, results of operations and prospects. In addition, upon realization of these risks, the Group's public image or the Group's relationships with customers could suffer.

Market Risks

Increased competition in all business sectors could have an adverse effect on the Group's sales and adversely affect its future growth potential.

The Group must compete with numerous firms in each of the pharmaceutical, specialty chemicals and life science industries. Some of these competitors have greater financial, marketing or research and development resources at their disposal. Growing competitive pressure could have a material adverse effect on sales and prices of the Group's products and services.

The Healthcare Business Sector both the Group's biopharmaceutical products as well as its classic pharmaceutical business could be exposed in the future to increased competitive pressure from products that are currently in clinical development or that have recently been launched. In particular biological products from the Healthcare Business Sector could come under greater competitive pressure from biosimilars. Specific regulatory directives apply to the development and approval of competing biosimilars that use the reference data of already approved biological products. Existing frameworks in both the EU and the United States enable biosimilars to enter the markets as soon as the exclusive rights of the original products expire. The products Rebif®, Erbitux® and Gonal-f® as well as the Group's general medicine products could be affected in particular.

The Life Science Business Sector directly competes with two of its significant distributors. If these distributors stop selling the products of the Life Science Business Sector or materially changed the terms of the underlying distribution agreements, the sales and earnings of the Life Science Business Sector could be adversely affected in the short term.

The liquid crystals business, which contributes a substantial part of the Performance Materials Business Sector's sales, is facing a situation of increasing competition. Thus, it cannot be ruled out that this will reduce the Group's market share and margins attainable in the liquid crystal business. It is also possible that competitors will gain some of the Group's business as a result of developments within their own portfolio. In addition, while patent protection exists for several products and technologies, the protection of some key patents in liquid crystal technology has already expired.

In the Performance Materials Business Sector, growing competition for high-volume commodity products for simpler applications has already led to increased price pressure, which will continue to grow in the future with respect to this business sector's other product ranges.

Increased competition, whether due to the aforementioned or other factors, could have a material adverse effect on the market position of the Group and therefore the volume of products it sells, as well as attainable prices and realizable margins.

The Healthcare Business Sector generates a significant part of its sales with four products.

In the fiscal year 2019, the Healthcare Business Sector generated EUR 1,273 million (19% of its net sales) from the sale of Rebif®, EUR 877 million (13% of its net sales) from the sale of Glucophage®, EUR 871 million (13% of its net sales)

from the sale of Erbitux®, and EUR 743 million (11% of its net sales) from the sale of Gonal-f®. In the year ended December 31, 2019, the Healthcare Business Sector generated 42% of the Group's net sales. Due to this concentration, the successful marketing or launch of comparable products by competitors or the results of clinical comparative efficacy trials involving competing products already approved could have a material adverse effect on the Healthcare Business Sector's sales and earnings and therefore the Group's business, financial condition, results of operations and prospects.

Furthermore, it is possible that Rebif® is not sufficiently protected. Apart from a formulation patent expiring in 2022 in the US, Rebif® is currently protected by a covenant not to sue in the United States pursuant to an agreement entered into by Merck with competing patent claimants. This covenant not to sue, instead of a true licensing agreement, covers the "Sugano" patents in the United States. The last of the currently granted Sugano patents expires in the US in June 2033. This US patent is the most important property right relating to interferon beta, which is the active ingredient of Rebif®. In the event of infringement of this US patent, for example by biosimilars manufacturers, the Group, through Merck Serono SA, a subsidiary of Merck, does not have the enforcement right to take court action against such infringement due to provisions of the agreement referred to above. In Europe, data exclusivity in respect of Rebif® has expired. The only protection still available in Europe is in respect of a HSA-free Rebif® formulation through a formulation patent which extends protection until 2024 and another granted patent which has been in-licensed from a third party.

Risks related to Research and Development

Due to the uncertainties associated with the process of developing new drugs, the Group may be unable to successfully develop new drugs and other pharmaceutical products and launch them in a timely manner.

The Group's success in the pharmaceutical industry in part relies on launching newly developed drugs in a timely manner. Whether a drug can be introduced to the market cannot be predicted in advance. Drugs that were considered very promising in Phase I studies may prove to be unsuitable for regulatory approval in Phase II and Phase III clinical trials. This might also be the case for drugs which are already approved in other indications but cannot meet primary endpoints in subsequent studies targeting different indications and patient populations. For example in December 2018, Merck and Pfizer Inc. announced that data from a planned interim analysis of the Phase III JAVELIN Ovarian 100 study of avelumab did not support the study's initial hypothesis, and therefore the alliance made the decision to terminate the trial in alignment with the independent Data Monitoring Committee.

Reasons for negative trial outcomes may include ineffectiveness in certain indications, previously unknown side effects appearing in later phases, risk-benefit analyses that can produce a negative result, or changes in the competitive environment that can make continuing development commercially impractical.

Due to the uncertainties associated with the process of developing new drugs, no assurance can be given that the Group will be able to successfully develop and launch new drugs and other pharmaceutical products in a timely manner. The aforementioned factors also influence the development and approval process of new indications for drugs that have already been approved, the approval of drugs or drug delivery devices that have been approved in certain geographies in additional geographies that require regional-specific registration studies.

Should the Group be unable to successfully develop new drugs and other pharmaceutical products or to launch them in a timely manner this could have a negative impact on the Group's business, financial condition, results of operations and prospects.

The Group might not be able to adapt to technological changes and changing customer preferences or to continue to develop and successfully launch innovative products.

The Group operates in the pharmaceutical, life science and specialty chemical industries. All three are characterized by fierce competition and intense research and development activity as well as associated rapid technological change and constant changes in customer preferences. As part of its strategy, the Group also focuses on products that require above-average research and development spending. The Group's success therefore depends on its continued ability to cost-effectively develop innovative products, launch these products on the market and therefore to address current technological developments in a timely manner. The Group competes with numerous companies, which include small

niche suppliers as well as large international corporations. New developments and adaptations may cause technical problems or delays in their implementation, can fail entirely or be rejected by the market.

If competitors were to develop their current products and technologies more quickly than the Group or launch alternative products or technologies that are more cost-effective, of higher quality or are for other reasons more attractive than the Group's products, this could adversely affect demand for the Group's products.

Risks related to the Quality and Availability of Products

The Group faces the risk of a temporary ban on products/production facilities or of non-registration of products due to non-compliance with quality standards.

The Group is required to comply with the highest standards of quality in the manufacture of its products (Good Manufacturing Practice or official pharmacopoeia). In this regard, the Group is subject to the supervision of the regulatory authorities. If the Group fails to comply with the requisite quality standards, conditions imposed by national regulatory authorities could result in a temporary ban on products/production facilities and possibly affect new registrations with the respective authority.

Depending on the product concerned and the severity of the potential breach of quality standards, this could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

Unforeseen business interruptions at individual production facilities can lead to production bottlenecks and sales shortfalls at the Group.

Although the Group applies stringent technology and safety standards to the construction, operation and maintenance of its production plants, and chemical processes are performed in multi-purpose plants, as is common in the industry, the risk of business disruptions and interruptions cannot be ruled out. These may occur due to external factors that cannot be influenced by the Group (e.g. natural catastrophe or terrorism) or for other reasons, such as fire, explosions or the release of poisonous substances or substances hazardous to health.

In all of these cases there is a risk that people, third-party property or the environment could be harmed. The Group has purchased insurance policies to cover such risks in amounts it has deemed appropriate (e.g. property damage, third-party liability and business interruption insurance). However, no assurance can be given that this insurance coverage is sufficient. Furthermore, risks of production outages and the related supply bottlenecks can be triggered by technical problems in production facilities.

Any business interruption that is not compensated for by corresponding insurance benefits or safety stock would result in a loss of sales. These events can also adversely affect the Group's reputation as well as business, financial condition, results of operations and prospects.

The lack of availability of good quality materials or services that the Group requires for its business activities can adversely affect the Group's results.

The Group depends on the availability of certain materials and services for its production processes. In addition, the Group also partly uses external contract manufacturers to manufacture products. In both cases, the Group places considerable demands on suppliers and contract manufacturers with regard to the quality of the materials supplied and services performed. If such suppliers and contract manufacturers were unavailable temporarily or permanently, were no longer able or willing to supply or manufacture products for other reasons or were unable to meet the Group's quality standards, the Group could be unable to replace these shortfalls at short notice. The same could apply in case of shortfalls within the internal supply chain.

This could then lead to a situation in which the Group could no longer manufacture individual products, at least temporarily, or the amount needed, which in turn could materially adversely affect the Group's business, financial condition, results of operations and prospects.

The Group could be subject to contractual claims and product liability claims from product defects that could lead to substantial expenses and liabilities.

Companies in the chemical and pharmaceutical industries are subject in particular to the risk of lawsuits alleging negligence, product liability, violations of warranty obligations and other contractual or statutory claims relating to product defects. Such lawsuits may include claims based on personal injury or death alleged to be caused by a product of the Group, in particular pharmaceutical products. These lawsuits often involve claims for substantial amounts of damages, including compensation for consequential damage and substantial costs for legal representation. In addition, chemical or pharmaceutical products (drugs and other healthcare products) may be the subject of recalls or patent infringement suits. For this reason, there can be no assurance that extensive claims will not be asserted against the Group in the future or that large-scale product recall measures will not be necessary. As many of the Group's products are further integrated into customer production processes, the Group may increasingly become exposed to contractual claims or product liability claims. Some countries in which the Group operates have a special legal framework for pharmaceutical products that could increase the risk of product liability claims being asserted and/or the ultimate costs of defending against such claims. In addition, the Group could incur high expenses based on product liability claims, other violations of duties of care or contractual provisions, recall measures or penalties imposed for these reasons by public authorities. These events can also adversely affect the Group's reputation and therefore reduce market acceptance of the Group's products. All of the foregoing factors could adversely affect the Group's business, financial condition, results of operations and prospects.

The product portfolios of the Group's Performance Materials and the Life Science business sectors include some substances that are classified as hazardous to health and the environment. On January 20, 2009, the Globally Harmonised System of Classification and Labelling of Chemicals ("**GHS**") entered into force. Today the labelling of substances according to the GHS is mandatory in the European Union for pure substances as well as for mixtures and the Group classifies its products according to EU-GHS and provides GHS-labelled products. In addition to obvious changes regarding the labelling elements (e.g. new hazard pictograms and the signal word) GHS lowers some classification thresholds (e.g. for acute toxicity). As a consequence, the wording of the hazard communication under GHS already has changed fundamentally. Although all chemical products in the Group portfolio remain physically the same, their labels display more often and more severe hazards under GHS. Such a classification leads to an increased perception by third parties that the Group's products are hazardous to health and the environment and may deter some customers from buying these products. In addition, even with an up-to-date hazard communication in place, the possibility that the environment, the health or even the life of humans is affected cannot be ruled out, particularly in case of improper use of a product, or due to unknown product characteristics. Such consequences can also occur due to contamination during the production process. The foregoing risks could expose the Group to unanticipated product liability or similar claims.

The Group faces risks due to product-related crime and espionage.

As a manufacturer and supplier of high-quality pharmaceuticals and chemicals, the Group – like other companies in the chemical and pharmaceutical industries – faces certain risks due to crime. These include, among others, theft, diversion, misuse and counterfeiting of products (including attempts at these crimes). The professionalism and complexity of product-related crime has increased significantly in recent years. In relevant cases, the Group works closely and trustfully with the competent law enforcement authorities on global level as well as in the countries concerned. To combat product-related crime, the Group established a cross-functional network covering all business segments ("**Merck Anti-Counterfeiting Operational Network**"), which provides a reliable interface to authorities, associations and peer industry. This group has been successful in uncovering a number of illicit underground production facilities over the past years and is also influencing business activities and decision-making processes.

At the Group, the protection against the unwanted loss of information ("**Data Theft**") in all possible forms is managed under the headlines "cyber-security" and "anti-espionage". Above all, particular focus is given to the protection of trade secrets, sensitive, strategic and competitive business information as well as to general data protection schemes. Nevertheless, the risk of a loss of information due to espionage is classified as possible despite the measures taken and could materially adversely affect the Group's business, financial condition, results of operations and prospects.

Financial Risks

Default risks, in particular financial counterparties and customers defaulting on their receivables can adversely affect the Group's sales, profits and cash flows.

Counterparty risk arise from the potential default by a partner in connection with financial investments, loans, and financing commitments as well as receivables in operating business.

While the Group has extensive measures in place to monitor and manage counterparty risks from financial transactions as well as operational counterparty risks, there can be no guarantee that these measures will be effective and sufficient. Defaults by isolated trading partners, even those with outstanding credit ratings, cannot be entirely ruled out, which could have a potentially critical negative effect on the Merck.

Defaults may materially adversely affect the Group's business, financial condition, results of operations and prospects.

Changes in fair values of tangible and intangible assets can adversely affect the Group's profits.

The values of individual items in the balance sheet are exposed to the risk of changing market and business conditions and thus also to changes in fair values.

This applies in particular to the high level of intangible assets including goodwill, which mainly derive from the purchase price allocations made in connection with past acquisitions, such as the acquisitions of Versum Materials, Inc. ("**Versum**") and Intermolecular, Inc. ("**Intermolecular**") in 2019.

Necessary impairments could have a significant negative non-cash impact on earnings, could affect the accounting ratios and could materially adversely affect the Group's business, financial condition, results of operations and prospects.

Changes in exchange rates and interest rates can adversely affect the Group's sales, profits and cash flows.

The Group operates worldwide and therefore also generates a substantial portion of its sales, earnings and expenses in currencies other than the euro. The foreign currencies involved include the U.S. dollar, the Swiss franc, the Japanese yen, the Chinese renminbi, the Taiwan dollar and the Korean won in particular. Changes in the exchange rates of the relevant currencies versus the euro can have two different effects. First, because income and expenses in the relevant currencies seldom match up in the same period, unfavourable developments in exchange rates of these foreign currencies versus the euro can lead to a difference between the actual value of the product or service provided and the consideration received (transaction effect) due to cross-border deliveries of goods and performance of services. A negative difference has a direct effect on the Group's financial position and results of operations.

Second, the Group's financial position and results of operations are affected by the translation of the financial statements of the consolidated subsidiaries prepared in the respective local currencies into euro, the Group's reporting currency in the course of consolidation of financial information (translation effect).

All these effects could adversely affect the Group's business, financial condition, results of operations and prospects.

The Group maintains a number of pension plans that, under certain circumstances, may not be covered by sufficient provisions or financed with sufficient assets in the future.

The Group offers access to certain pension plans to its employees in various countries, the structure of which depends on the legal, business and financial circumstances in the respective countries. The Group's pension obligations comprise both defined benefit and defined contribution plans and include both liabilities arising from current pensions, as well as entitlements to pensions to be paid in the future. The amount of liabilities is based on certain actuarial assumptions, which include among others discount factors, life expectancy, projected pension increases, future developments of wages and salaries, and the expected return on plan assets. If actual developments, particularly with regard to discount rates, differ from these assumptions, this could lead to a substantial increase in pension liabilities on the balance sheet and therefore to higher additions to provisions for pensions. If pension assets do not perform as expected, the Group will have to increase the amount of these provisions.

Legal and Tax Risks

The Group is subject to risks arising from legal disputes.

The Group's business can be adversely affected by the detrimental outcome of legal disputes and investigations by government agencies, the outcome of which is not certain. Litigation risks include in particular risks in the areas of product liability, competition and antitrust law, pharmaceutical law, patent law, trademark law, data protection law, tax law, and environmental protection.

As of the date of this Prospectus, the Group is involved in several legal disputes and investigations in the United States, the European Union, Japan, France, the United Kingdom and Brazil, all of which could materially adversely affect the Group's business, reputation, financial condition and results of operations. For further information on these disputes, please see "*Description of the Issuer and the Group — Governmental, Legal or Administrative Proceedings*".

The Group has set up provisions for risks arising from several of the aforementioned legal disputes in an amount deemed appropriate by the Group. The amount of these provisions, however, may be insufficient to cover all damages or costs and expenses arising from these legal disputes. In addition, the Group could be found liable for damages in cases for which no provisions have been booked.

All of these cases and described risks, individually or in aggregate, could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

The Group may not be successful in protecting its intellectual property and knowhow sufficiently. Moreover, there can be no assurance that all of the Group's patents are valid or that the Group has sufficient legal protection against infringement and circumvention.

The Group has a large number of patents and other intellectual property rights at its disposal that are important for its business success. The patent application process, patent maintenance and enforcement are time-consuming and expensive. There can be no assurance that the Group will be granted the necessary patents based on currently pending and future application processes. Even if patents raise a presumption of their validity under law, their approval alone does not necessarily ensure that they are valid or that any patent claims can be asserted successfully in the required or desired scope.

The Group could find it necessary to enforce and protect patents, licenses and other intellectual property rights by taking legal action. Such processes can be time-consuming and expensive. Moreover, there can be no assurance that all of the Group's patents are valid or that the Group has sufficient legal protection against infringement and circumvention. In this case, the Group could lose such legal disputes, which could limit, prevent or at least substantially delay the further marketing or launch of products.

The Group also depends on the existence and protection of its trademark rights, which comprise the names of many of its key products and are registered in the countries in which the Group sells the majority of its products. A trademark is the exclusive right to use a registered mark and prevent third parties using such trademark by appropriate means including court actions. Effective trademark protection, therefore, requires extensive controls and subsequent research. If the Group does not identify the illegal use of its trademarks early enough or at all, or if the Group is unsuccessful in taking court action to protect its trademark rights, this could adversely affect the reputation and image of the Group at the customer level or could adversely affect its ability to effectively protect its trademarks.

The Group could infringe the intellectual property rights of third parties or could have to rely on fee-based use of third-party intellectual property.

There is a risk that the Group could infringe on third-party patents or other industrial property rights, because the Group's competitors apply for patents and receive patent protection for a significant number of inventions. If this were to occur, the Group could be prevented from using the relevant technologies in the countries in which the industrial property rights were granted. This holds true regardless of whether the Group had used these technologies before in other countries in a permitted way and itself had not applied for a patent, possibly due to reasons of confidentiality.

In all of these cases, the Group could be denied the opportunity to manufacture or market products, and the Group would then be forced, if applicable, to acquire licenses or change manufacturing processes. Moreover, the Group could be liable for damages for patent infringement or infringement of other intellectual property. In addition, the Group's competitors could prohibit the Group from producing or selling such products in countries in which the respective competitor holds higher priority patent protection. The Group could also be forced to rely on obtaining access to third-party technologies by acquiring licenses, which would result in corresponding expenses. However, there can be no assurance that the Group will be able to obtain all licenses required for the success of its business on reasonable terms and conditions in the future. In addition, there can be no assurance that licenses acquired were granted in the required scope.

Any of the above described circumstances could materially adversely affect the Group's business, financial condition, results of operations and prospects.

Due to a complex group structure and the geographic reach of the Group's business activities, the Group could incur greater tax liabilities / expenses than expected and be affected by the levy of additional customs duties, contributions or other fees.

The companies of the Group operate in many countries that have complex tax systems. Due to the nature of operating activities performed by the Group, the tax issues the Group faces are complex. In the future, this could lead to disputes with tax authorities and could further lead to an increase in tax liabilities /expenses for the Group, even for past periods. The Group has corporate structures in place which may be scrutinized by authorities and could potentially lead to increased tax liabilities / expenses for the past or future periods in Germany or other countries. All these effects and in addition, the introduction of new customs duties, levies or other fees or increases in existing ones, could adversely affect the Group's business, financial condition, results of operations and prospects.

Other Risks

The Group is exposed to risks relating to acquisitions and divestments.

Acquisitions, business alliances and in-licensing have been and will be an important opportunity to diversify into new product areas and markets or to complement the Group's existing portfolio. Carrying out acquisitions involves risks. For instance, any acquisition carries the risk that the price paid is considered too high by the market, that the acquisition proves to be less successful than anticipated, that the acquired company or business does not develop as expected by the market, and that sales and earnings targets pursued by way of the acquisition are not met. In addition, any acquisition is subject to potential tax risks or the risk that the Group will not be able to integrate the acquired company into the Group as planned or only at a higher cost than originally planned, or that any intended synergy effects cannot be realized to the extent planned or cannot be realized at all. Furthermore, acquisitions may involve the risk that liabilities related to the acquired business or company are assumed which may not be recoverable from the respective seller.

With respect to the acquisition of Versum in 2019 remaining risks still apply. These are risks regarding the ability of the Group to achieve the cost savings and synergies contemplated by the transaction within the expected timeframe and regarding the ability of the Group to promptly and effectively integrate the business of Versum and the Group as well as potential tax risks.

The Group continues to examine possibilities to expand its business through acquisitions and in-licensing in the pharmaceutical, specialty chemical and life science industries. The Group could thus grow further through additional acquisitions or in-licensing. Additionally, no guarantee can be given that additional suitable acquisition targets or license partners can be found or that further acquisitions that are identified as strategically important can be realized.

Divestments on the other hand can lead to disruptions during the disposal process and liability vis-à-vis the buyer or additional expenses, for instance through indemnity clauses and guarantee commitments or long-term supply contracts. Furthermore, the achieved selling price could be perceived as too low by the markets.

If any of the aforementioned risks materialize, this could materially adversely affect the Group's business, financial condition, results of operations, cash flows and prospects.

Possible confusion with MSD (Merck Sharp & Dohme) by customers could adversely affect the Group's business.

One of Group's competitors, US-based MSD (Merck Sharp & Dohme), operates under a similar name in the US and Canada. Yet there is no affiliation between the two companies. However, the use of "Merck" as a name and trademark is regulated by an agreement between Merck and MSD. In the US and Canada, MSD holds the rights to use "Merck" as a name and trademark, while Merck operates under the name and trademark EMD Serono, MilliporeSigma and EMD Performance Materials. Merck holds the rights to its name and trademark in the rest of the world, including key sales markets in Europe and Asia. Despite these regional distinctions, there is a risk that customers may confuse the two brands and therefore attribute products, and possible quality problems at MSD to the Group. Moreover, negative press about MSD could, for example, damage the reputation of the Group.

Risks relating to the Notes

The risk factors in this section are categorized as follows:

- Risk associated with the Characteristics of the Notes
- Risks related to Interest Payments
- Risks associated with the Solvency of the Issuer

Risks associated with the Characteristics of the Notes

Risk related to Subordination

The Issuer's obligations under the Notes are unsecured deeply subordinated obligations of the Issuer ranking junior to all unsubordinated obligations and to all subordinated obligations within the meaning of section 39 paragraph 1 of the German Insolvency Code (*Insolvenzordnung*) and at least *pari passu* amongst themselves and with all present unsecured obligations of the Issuer which rank junior to all unsubordinated obligations and to all subordinated obligations under section 39 paragraph 1 of the German Insolvency Code, except for any subordinated obligations required to be preferred by mandatory provisions of law or as expressly provided for by the terms of the relevant instrument. The obligations of the Issuer under the Notes are senior only to the claims of the Issuer's general partners (*persönlich haftende Gesellschafter*) and limited partnership shareholders (*Kommanditaktionäre*) arising out of their respective participation in the equity of the Issuer.

In the event of winding-up, dissolution, liquidation of the Issuer the obligations of the Issuer under the Notes, and in case of the insolvency of the Issuer or composition or other proceedings for the avoidance of insolvency of the Issuer, the rights of the Holders towards the Issuer under the Notes are subordinated to the claims of all holders of unsubordinated obligations and subordinated obligations within the meaning of section 39 paragraph 1 of the German Insolvency Code, so that in any such case payments in respect of the Notes will not be made until all claims against the Issuer under obligations which rank senior to obligations of the Issuer under the Notes have been satisfied in full (i.e. not only with a quota). In a liquidation, dissolution, insolvency, composition or other proceeding for the avoidance of insolvency of, or against, the Issuer, it is very likely that the holders of the Notes (the "**Holders**" and each a "**Holder**") may recover proportionately less than the holders of unsubordinated obligations of the Issuer or may recover nothing at all. Holders will have limited ability to influence the outcome of any insolvency proceedings or a restructuring outside insolvency. In particular, in insolvency proceedings over the assets of the Issuer, holders of subordinated debt, such as the Notes, will not have any right to vote in the assembly of creditors (*Gläubigerversammlung*) pursuant to the German Insolvency Code.

Investors should take into consideration that unsubordinated liabilities may also arise out of events that are not reflected on the Issuer's balance sheet, including, without limitation, the issuance of guarantees or other payment undertakings. Claims of beneficiaries under such guarantees or other payment undertakings will, in winding-up or insolvency proceedings of the Issuer, become unsubordinated liabilities and will therefore be paid in full before payments are made to Holders.

In an insolvency over the assets of the Issuer, claims against the Issuer under the Notes would be treated as deeply subordinated insolvency claims (*nachrangige Insolvenzforderungen*). According to section 174 paragraph 3 of the German Insolvency Code, deeply subordinated insolvency claims must not be registered with the insolvency court unless the insolvency court handling the case has granted special permission allowing these deeply subordinated insolvency claims to be filed which is not the rule, but the exception. The Holders would not participate in any creditors' committee (*Gläubigerausschuss*) pursuant to German Insolvency Code and would have very limited rights within the creditors' assembly (*Gläubigerversammlung*) pursuant to German Insolvency Code. They may be invited to participate in the creditors' assembly but would not be entitled to vote within such meetings (section 77 paragraph 1 of the German Insolvency Code).

In case of insolvency plan proceedings (*Insolvenzplanverfahren*) the Holders generally would have no voting right on the adoption of an insolvency plan presented by the Issuer, the relevant insolvency administrator or custodian (sections 237 and 246 of the German Insolvency Code). In addition, their claims would be waived after the adoption of the insolvency plan, unless the insolvency plan makes an exception to this general rule (section 225 paragraph 1 German Insolvency Code).

The Holders' only remedy against the Issuer is the institution of legal proceedings to enforce payment or to file an application for insolvency proceedings.

The only remedy against the Issuer available to the Holders for recovery of amounts which have become due in respect of the Notes will be the institution of legal proceedings to enforce payment of the amounts or to file an application for the institution of insolvency proceedings. On an insolvency or liquidation of the Issuer, any Holder may only declare its Notes due and payable and may claim the amounts due and payable under the Notes, after the Issuer has discharged or secured in full (i.e. not only with a quota) all claims that rank senior to the Notes.

Risk related to the Nature of the Notes as Long-Term Securities and potential Early Redemption

The Issuer will redeem the Notes on September 9, 2080, unless they have been previously redeemed or repurchased and cancelled. While pursuant to the Terms and Conditions the Issuer may call and redeem the Notes early at certain points in time or in certain circumstances, it is under no obligation to redeem the Notes at any time before their Maturity Date.

The Issuer may, at its option, call and redeem the Notes at any time from and including June 9, 2026 to (and including) September 9, 2026 and on any Interest Payment Date thereafter.

In addition, the Issuer may, at its option, call and redeem each the Notes at any time after the occurrence of a Gross-up Event, a Change of Control Event, a Rating Agency Event, a Tax Event (all as defined and described in the Terms and Conditions), or if 75 per cent. or more in principal amount of the Notes initially issued have been redeemed or purchased. In the event that the Issuer exercises the option to call and redeem the Notes, the holders of such Notes might suffer a lower than expected yield and might not be able to reinvest the funds on the same terms.

The redemption at the option of the Issuer may affect the market value of the affected Notes. During any period when the Issuer may, or may be perceived to be able to, elect to call and redeem the Notes, the market value of the Notes generally will not rise substantially above the price at which they can be redeemed. Certain market expectations may exist among investors in the Notes with regard to the Issuer making use of its option to call the Notes for redemption prior to their scheduled maturity. Should the Issuer's actions diverge from such expectations, the market value of the Notes may be adversely affected.

The Holders have no right to require the redemption of the Notes. The Holders should be aware that the Terms and Conditions of the Notes do not contain any event of default provisions. There will also not be any cross default under the Notes.

There is also no guarantee that an active public market in the Notes will develop. Application has been made to the Luxembourg Stock Exchange for the Notes to be admitted to trading on the Regulated Market of the Luxembourg Stock Exchange, which is a regulated market for the purposes of Directive 2014/65/EU, and to be listed on the Official List of the Luxembourg Stock Exchange. There can, however, be no assurance regarding the future development of a liquid

secondary market for the Notes or the ability of Holders to sell their Notes or the price at which Holders may be able to sell their Notes. If such a market were to develop, the Notes could trade at prices that may be higher or lower than the initial offering price depending on many factors, including prevailing interest rates, Merck's operating results, the market for similar securities and other factors, including general economic conditions, performance and prospects, as well as recommendations of securities analysts. The liquidity of, and the trading market for, the Notes may also be adversely affected by declines in the market for debt securities generally. Such a decline may affect any liquidity and trading of the Notes independent of Merck's financial performance and prospects. In an illiquid market, an investor might not be able to sell the Notes at any time at fair market prices. The possibility to sell the Notes might additionally be restricted by country specific reasons. A buyer of a Note must therefore be prepared to retain the Notes until final redemption, or, if one does develop, that it will be maintained. In an illiquid market, an investor might not be able to sell his Notes at all or at any time at fair market prices.

Prospective investors should be aware that they may be required to bear the financial risk of an investment in the Notes for a long period and may not recover their investment before the end of this period.

The Holders have no voting rights

The Notes are non-voting with respect to general meetings of the Issuer. Consequently, the Holders cannot influence any decisions by the Issuer to defer interest payments or to optionally settle such Deferred Interest Payments or any other decisions concerning the capital structure or any other matters relating to the Issuer.

There is no limitation on issuing further debt ranking senior to, or pari passu with, the Notes.

There is no restriction on the amount of debt which the Issuer may issue ranking senior or equal to the obligations under or in connection with the Notes. Such issuance of further debt would reduce the amount recoverable by the Holders upon insolvency or liquidation of the Issuer or may increase the likelihood that the Issuer is required or permitted to defer payments of interest under the Notes. Holders will not be protected under the terms of the Notes in the event of a highly leveraged transaction, a reorganization or a restructuring, merger or similar transaction that may adversely affect Holders.

Risks in connection with the Application of the German Act on Issues of Debt Securities (Gesetz über Schuldverschreibungen aus Gesamtemissionen, "SchVG")

Since the Terms and Conditions of the Notes provide for meetings of noteholders or the taking of votes without a meeting, the Terms and Conditions of the Notes may be amended by majority resolution of the holders of the Notes and a holder is subject to the risk of being outvoted by a majority resolution of the Holders. The rules pertaining to resolutions of noteholders are set out in the SchVG and are largely mandatory. Pursuant to the SchVG the relevant majority for holders' resolutions is generally based on votes cast, rather than on the aggregate principal amount of the Notes outstanding, therefore, any such resolution may effectively be passed with the consent of less than a majority of the aggregate principal amount of the Notes outstanding. As such majority resolution is binding on all Holders, certain rights of a noteholder against the Issuer under the Terms and Conditions of the Notes may be amended or reduced or even cancelled.

Since the Terms and Conditions of the Notes provide that the Holders are entitled to appoint a Holders' Representative by a majority resolution of such Holders, it is possible that a noteholder may be deprived of its individual right to pursue and enforce its rights under the Terms and Conditions of the Notes against the Issuer, such right passing to the Holders' Representative who is then exclusively responsible to claim and enforce the rights of all the noteholders of the Notes.

Risks related to Interest Payments

Risk resulting from the Issuer's Right to Defer Interest Payments

The Issuer may elect in its discretion to defer the payment of interest by giving not less than seven Business Days' prior notice to the Holders. Such interest will not be due and payable (*fällig*) on that Interest Payment Date.

Holders will not receive any additional interest or compensation for the optional deferral of payment. In particular, the resulting Deferred Interest Payments will not bear interest themselves. Any failure to pay interest as a result of an optional

deferral will not constitute a default of the Issuer or any other breach of obligations under the Notes or for any other purpose. While the deferral of interest payments continues, the Issuer is not prohibited from making payments on any instrument ranking senior to the Notes.

Any deferral of interest payments or the perception that the Issuer will need to exercise its optional deferral right will likely have an adverse effect on the market price of the Notes. In addition, as a result of the interest deferral provision of the Notes, the market price of the Notes may be more volatile than the market prices of other debt securities on which interest accrues that are not subject to such deferrals and may be more sensitive generally to adverse changes in the Issuer's financial condition.

Risk related to Fixed Interest Rate Notes

The Notes bear interest at a fixed rate to but excluding their First Reset Date.

A holder of a fixed interest rate note is exposed to the risk that the price of such note may fall because of changes in the market interest rate. While the nominal interest rate of a fixed interest rate note is fixed during the life of such note or during a certain period of time, the current interest rate on the capital market (market interest rate) typically changes on a daily basis. As the market interest rate changes, the price of such note typically changes in the opposite direction. If the market interest rate increases, the price of such note typically falls, until the yield of such note is approximately equal to the market interest rate. If the market interest rate falls, the price of a fixed interest rate note typically increases, until the yield of such note is approximately equal to the market interest rate. Holders should be aware that movements of the market interest rate can adversely affect the market price of the Notes and can lead to losses for the Holders if they sell their Notes.

In addition, the credit spread of the Issuer, on which the initial fixed interest rate and the margins applicable with regard to the determination of the interest rate for each Reset Period was based, may change. A credit spread is the margin payable by the Issuer to the holders of the Notes as a premium for the assumed credit risk of the Issuer. Credit spreads are offered and sold as premiums on current risk-free interest rates or as discounts on the price.

Factors influencing the credit spread include, among other things, the creditworthiness and rating of the Issuer, probability of default, recovery rate, remaining term to maturity of obligations under any collateralisation or guarantee and declarations as to any preferred payment or subordination. The liquidity situation, the general level of interest rates, overall economic developments, and the currency, in which the relevant obligation is denominated may also have a positive or negative effect.

Risk related to the Reset of the Interest Rate linked to the 5-year Mid Swap Rate

From and including the First Reset Date to but excluding the Maturity Date, the Notes bear interest at a rate which will be determined on each relevant reset date at the 5-year mid swap rate for the relevant Reset Period plus a margin.

Investors should be aware that the performance of the 5-year mid swap rate and the interest income on the Notes cannot be anticipated and neither the current nor the historical level of the 5-year mid swap rate is an indication of the future development of the 5-year mid swap rate. Due to varying interest income, investors are not able to determine a definite yield of the Notes at the time they purchase them, so that their return on investment cannot be compared with that of investments having longer fixed interest periods. In addition, after interest payment dates, investors are exposed to the reinvestment risk if market interest rates decline. That is, investors may reinvest the interest income paid to them only at the relevant lower interest rates then prevailing.

Furthermore, during each Reset Period, it cannot be ruled out that the price of the Notes may fall as a result of changes in the current interest rate on the capital market (market interest rate), as the market interest rate fluctuates. During each of these periods, the investor is exposed to the risk described in the section "*Risk related to Fixed Interest Rate Notes*".

Risk related to the Reform of Interest Rate "Benchmarks" and possible Replacement of Benchmarks

Following their First Reset Date, interest amounts payable under the Notes are calculated by reference to the annual swap rate for swap transactions denominated in Euro with a term of 5 years, which appears on the Reuters Screen Page ICESWAP2/EURFIXA.

This swap-rate, the Euro Interbank Offered Rate ("**EURIBOR**") underlying the floating leg of this swap rate and other interest rates or other types of rates and indices which are deemed "benchmarks" (each a "**Benchmark**" and together, the "**Benchmarks**") have become the subject of regulatory scrutiny and recent national and international regulatory guidance and proposals for reform. Some of these reforms are already effective whilst others are still to be implemented. These reforms may cause such Benchmarks to perform differently than in the past, or to disappear entirely, or have other consequences which cannot be predicted. Therefore, because the Notes bear the specific risk that they might be impacted by any changes or reforms to the Benchmark, any such consequence could have a material adverse effect on the Notes.

International proposals for reform of Benchmarks include the European Council's regulation (EU) 2016/1011 of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014 (the "**Benchmark Regulation**").

Given that the Notes provide for the specific feature that the interest amount will be calculated by reference to a Benchmark under certain circumstances, the Benchmark Regulation could have a material impact on the Notes, including in any of the following circumstances:

- a rate or index which is a Benchmark may only be used if its administrator obtains authorisation or is registered and in case of an administrator which is based in a non-EU jurisdiction, if the administrator's legal benchmark system is considered equivalent (Article 30 Benchmark Regulation), the administrator is recognised (Article 32 Benchmark Regulation) or the relevant Benchmark is endorsed (Article 33 Benchmark Regulation) (subject to applicable transitional provisions). If this is not the case, Notes linked to such Benchmarks could be impacted; and
- the methodology or other terms of the Benchmark could be changed in order to comply with the terms of the Benchmark Regulation, and such changes could have the effect of reducing or increasing the rate or level or affecting the volatility of the published rate or level, and could have an impact on the Notes, including determination of the rate by the Issuer, the Calculation Agent or an independent adviser, as the case may be.

In addition to the aforementioned Benchmark Regulation, there are numerous other proposals, initiatives and investigations which may impact Benchmarks.

Following the implementation of any such potential reforms, the manner of administration of Benchmarks may change, with the result that they may perform differently than in the past, or Benchmarks could be eliminated entirely, or there could be other consequences which cannot be predicted.

Any changes to a Benchmark as a result of the Benchmark Regulation or other initiatives, could have a material adverse effect on the costs of administering or otherwise participating in the setting of a Benchmark and complying with any such regulations or requirements. Investors should be aware that any changes to a relevant Benchmark may have a material adverse effect on the value of the Notes.

Under the Terms and Conditions of the Notes, certain benchmark replacement provisions will apply if a Benchmark (or any component part thereof) used as a reference for the calculation of interest amounts payable under the Notes were to be discontinued or otherwise became unavailable.

If a Benchmark (or any component part thereof) used to calculate interest amounts payable under the Notes for any interest period has ceased to be calculated or administered, the Issuer shall endeavour to appoint an Independent Adviser, which must be an independent financial institution of international repute or other independent financial adviser experienced in the international capital markets. Such Independent Adviser will be tasked with determining whether an officially

recognised successor rate to the discontinued Benchmark exists. If that is not the case, the Independent Adviser will attempt to find an alternative rate which, possibly after application of adjustments or spreads, can replace the discontinued Benchmark. Such adjustments or spreads are intended to be applied in order to produce an industry-accepted replacement benchmark rate. However, the relevant adjustments or spreads may not be successful in doing so and the Notes may still perform differently than if the original Benchmark had continued to be used.

If the Independent Adviser determines a successor rate or alternative rate (the "**New Benchmark Rate**"), such rate (after application of adjustments or spreads, if any) will replace the previous Benchmark for purposes of determining the relevant rate of interest. Such determination will be binding for the Issuer, the Calculation Agent, the Paying Agents and the Holders. Any amendments pursuant to these fall-back provisions will apply with effect from the respective effective date specified in the Terms and Conditions of the Notes.

If the Issuer fails to appoint an Independent Adviser or if the adviser fails to determine a New Benchmark Rate following a discontinuation of a relevant Benchmark, the reference rate applicable to the immediately following reset period shall be the original benchmark rate determined on the last preceding interest determination date, provided, however, that, in case of the first reset period, the reference rate shall be -0.373% *per annum*.

The replacement of a Benchmark could have adverse effects on the economic return of the Holder compared to the applicable original benchmark rate.

Risks associated with the Solvency of the Issuer

Risk of a Partial or Total Failure of the Issuer to make Interest and/or Redemption Payments

Any person who purchases the Notes is relying on the creditworthiness of the Issuer and has no rights against any other person. Holders are subject to the risk of a partial or total failure of the Issuer to make interest and/or redemption payments that the Issuer is obliged to make under the Notes. A materialisation of the credit risk (for example, because of the materialisation of any of the risks regarding the Issuer and/or the Group) may result in partial or total failure of the Issuer to make interest and/or redemption payments under the Notes.

Risk of a potential Decrease in the Market Value of the Notes

If the likelihood that the Issuer will be in a position to perform all obligations under the Notes in full when they fall due decreases, for example, because of the materialisation of any of the risks regarding the Issuer and/or the Group, the market value of the Notes will suffer. In addition, even if the likelihood that the Issuer will be in position to perform all obligations under the Notes when they fall due actually has not decreased, market participants could nevertheless have a different perception or deviating opinion. Market participants may in particular be of such opinion if market participants' assessment of the creditworthiness of corporate debtors in general or debtors operating in the industries sector adversely change. If any of these risks occurs, third parties would only be willing to purchase Notes for a lower price than before the materialisation of mentioned risk. Under these circumstances, the market value of the Notes is likely to decrease.

The Ratings assigned to the Issuer or the Notes may not reflect all risks and are subject to change at all times.

The rating assigned to the Issuer or the Notes may not adequately reflect all risks of the investment in Notes. Equally, ratings may be suspended, downgraded or withdrawn. Such suspension, downgrading or withdrawal may have an adverse effect on the market value and trading price of the Notes. The ratings may not reflect the potential impact of all risks related to structure, market, additional factors discussed in this Prospectus, and other factors that may affect the value of the Notes. The relevant rating agency may also change its methodologies for rating securities with features similar to the Notes in the future. If the rating agency were to change its practices for rating such securities in the future and the ratings of the Notes were to be subsequently lowered, this may have a negative impact on the trading price of the Notes. In addition, any change in the "equity credit" assigned to the Notes by a rating agency could result in an early redemption of the Notes by the Issuer (see also "*Risk related to the Nature of the Notes as Long-Term Securities and potential Early Redemption*" above).

TERMS AND CONDITIONS OF THE NOTES

ANLEIHEBEDINGUNGEN

Diese Anleihebedingungen sind in deutscher Sprache abgefasst und mit einer Übersetzung in die englische Sprache versehen. Der deutsche Wortlaut ist allein rechtsverbindlich. Die englische Übersetzung dient nur der Information.

§ 1

BESTIMMTE DEFINITIONEN UND AUSLEGUNG

Soweit aus dem Zusammenhang nicht etwas anderes hervorgeht, haben die nachfolgenden Begriffe in diesen Anleihebedingungen die folgende Bedeutung:

"**Alternativ-Benchmarksatz**" hat die in § 4(4)(f) festgelegte Bedeutung.

"**Anfängliche Marge**" hat die in § 4(2)(b) festgelegte Bedeutung.

"**Anpassungsspanne**" hat die in § 4(4)(f) festgelegte Bedeutung.

"**Anwendbarer Zinssatz**" hat die in § 4(1) festgelegte Bedeutung.

"**Benchmark-Änderungen**" hat die in § 4(4)(d) festgelegte Bedeutung.

"**Benchmark-Ereignis**" hat die in § 4(4)(f) festgelegte Bedeutung.

"**Berechnungsstelle**" hat die in § 7(2) festgelegte Bedeutung.

"**Clearingsystem**" hat die in § 2(3) festgelegte Bedeutung.

"**Dauerglobalurkunde**" hat die in § 2(2)(a) festgelegte Bedeutung.

"**Depotbank**" hat die in § 14(3) festgelegte Bedeutung.

"**Emittentin**" hat die in § 2(1) festgelegte Bedeutung.

"**Endfälligkeitstag**" hat die in § 5(1) festgelegte Bedeutung.

"**Ersetzungs-Garantie**" hat die in § 10(1)(d) festgelegte Bedeutung.

"**Erste Step-Up Marge**" hat die in § 4(2)(c) festgelegte Bedeutung.

"**Erster Resettermin**" hat die in § 4(2)(a) festgelegte Bedeutung.

TERMS AND CONDITIONS

These Terms and Conditions are written in the German language and provided with an English language translation. The German text will be the only legally binding version. The English language translation is provided for convenience only.

§ 1

CERTAIN DEFINITIONS AND INTERPRETATION

Unless the context otherwise requires, the following terms shall have the following meanings in these Terms and Conditions:

"**Alternative Benchmark Rate**" has the meaning specified in § 4(4)(f).

"**Initial Margin**" has the meaning specified in § 4(2)(b).

"**Adjustment Spread**" has the meaning specified in § 4(4)(f).

"**Prevailing Interest Rate**" has the meaning specified in § 4(1).

"**Benchmark Amendments**" has the meaning specified in § 4(4)(d).

"**Benchmark Event**" has the meaning specified in § 4(4)(f).

"**Calculation Agent**" has the meaning specified in § 7(2).

"**Clearing System**" has the meaning specified in § 2(3).

"**Permanent Global Note**" has the meaning specified in § 2(2)(a).

"**Custodian**" has the meaning specified in § 14(3).

"**Issuer**" has the meaning specified in § 2(1).

"**Maturity Date**" has the meaning specified in § 5(1).

"**Substitution Guarantee**" has the meaning specified in § 10(1)(d).

"**First Step-Up Margin**" has the meaning specified in § 4(2)(c).

"**First Reset Date**" has the meaning specified in § 4(2)(a).

"**Erster Optionaler Rückzahlungstag**" hat die in § 5(3) festgelegte Bedeutung.

"**Erster Step-Up Tag**" hat die in § 4(2)(b) festgelegte Bedeutung.

"**EUR**" hat die in § 2(1) festgelegte Bedeutung.

"**Festgelegte Stückelung**" hat die in § 2(1) festgelegte Bedeutung.

"**Gemeinsamer Vertreter**" hat die in § 11(5) festgelegte Bedeutung.

"**Geschäftstag**" bezeichnet einen Tag (außer einem Samstag oder Sonntag), an dem das Clearingsystem sowie alle betroffenen Bereiche des Trans-European Automated Real-time Gross settlement Express Transfer system 2 (TARGET) betriebsbereit sind, um die betreffenden Zahlungen weiterzuleiten.

"**Gläubiger**" hat die in § 2(4) festgelegte Bedeutung.

"**Gleichrangige Wertpapiere**" hat die in § 3(1) festgelegte Bedeutung.

"**Globalurkunden**" hat die in § 2(2)(a) festgelegte Bedeutung.

"**Hauptzahlstelle**" hat die in § 7(1) festgelegte Bedeutung.

"**Kontrollwechsel**" hat die in § 5(6)(c) festgelegte Bedeutung.

"**Kontrollwechselereignis**" hat die in § 5(6)(c) festgelegte Bedeutung.

"**Kontrollwechsel-Mitteilung**" hat die in § 5(6)(a) festgelegte Bedeutung.

"**Kontrollwechsel-Stichtag**" hat die in § 5(6)(c) festgelegte Bedeutung.

"**Konzerninterne Zahlungen**" hat die in § 4(9)(c) festgelegte Bedeutung.

"**Nachfolge-Benchmarksatz**" hat die in § 4(4)(f) festgelegte Bedeutung.

"**Nachfolgeschuldnerin**" hat die in § 10(1) festgelegte Bedeutung.

"**Neuer Benchmarksatz**" hat die in § 4(4)(f) festgelegte Bedeutung.

"**Nominierungsgremium**" hat die in § 4(4)(f) festgelegte Bedeutung.

"**First Optional Redemption Date**" has the meaning specified in § 5(3).

"**First Step-Up Date**" has the meaning specified in § 4(2)(b).

"**EUR**" has the meaning specified in § 2(1).

"**Specified Denomination**" has the meaning specified in § 2(1).

"**Holders' Representative**" has the meaning specified in § 11(5).

"**Business Day**" means a day (other than a Saturday or a Sunday) on which the Clearing System as well as all relevant parts of the Trans-European Automated Real-time Gross settlement Express Transfer system 2 (TARGET) are operational to forward the relevant payments.

"**Holder**" has the meaning specified in § 2(4).

"**Parity Securities**" has the meaning specified in § 3(1).

"**Global Notes**" has the meaning specified in § 2(2)(a).

"**Principal Paying Agent**" has the meaning specified in § 7(1).

"**Change of Control**" has the meaning specified in § 5(6)(c).

"**Change of Control Event**" has the meaning specified in § 5(6)(c).

"**Change of Control Notice**" has the meaning specified in § 5(6)(a).

"**Change of Control Effective Date**" has the meaning specified in § 5(6)(c).

"**Intra-Group Payments**" has the meaning specified in § 4(9)(c).

"**Successor Benchmark Rate**" has the meaning specified in § 4(4)(f).

"**Substitute Debtor**" has the meaning specified in § 10(1).

"**New Benchmark Rate**" has the meaning specified in § 4(4)(f).

"**Relevant Nominating Body**" has the meaning specified in § 4(4)(f).

"**Obligatorisches Zahlungsereignis**" hat die in § 4(9)(c) festgelegte Bedeutung.

"**Optionaler Rückzahlungstag**" hat die in § 5(3) festgelegte Bedeutung.

"**Qualifizierte Mehrheit**" hat die in § 11(2) festgelegte Bedeutung.

"**Quellensteuer-Ereignis**" hat die in § 5(2)(a) festgelegte Bedeutung.

"**Ratingagentur**" hat die in § 5(2)(b) festgelegte Bedeutung.

"**Ratingagenturereignis**" hat die in § 5(2)(b) festgelegte Bedeutung.

"**Rechtsstreitigkeiten**" hat die in § 14(2) festgelegte Bedeutung.

"**Referenzbankensatz**" hat die in § 4(3) festgelegte Bedeutung.

"**Referenzsatz**" hat die in § 4(3) festgelegte Bedeutung.

"**Reset-Bildschirmseite**" hat die in § 4(3) festgelegte Bedeutung.

"**Resettermin**" hat die in § 4(3) festgelegte Bedeutung.

"**Resetzeitraum**" hat die in § 4(3) festgelegte Bedeutung.

"**Rückzahlungstag**" bezeichnet den nach Maßgabe dieser Anleihebedingungen für die Rückzahlung der Schuldverschreibungen festgelegten Tag.

"**Schuldverschreibungen**" hat die in § 2(1) festgelegte Bedeutung.

"**SchVG**" hat die in § 11(1) festgelegte Bedeutung.

"**Steuerereignis**" hat die in § 5(2)(b) festgelegte Bedeutung.

"**Steuerhoheitsgebiet**" hat die in § 8 festgelegte Bedeutung.

"**Steuern**" hat die in § 8 festgelegte Bedeutung.

"**Stichtag**" hat die in § 4(4)(g) festgelegte Bedeutung.

"**Tochtergesellschaft**" hat die in § 3(1) festgelegte Bedeutung.

"**Unabhängiger Berater**" hat die in § 4(4)(f) festgelegte Bedeutung.

"**Ursprünglicher Benchmarksatz**" hat die in § 4(3) festgelegte Bedeutung.

"**Verbundenes Finanzierungsunternehmen**" hat die in § 10(1) festgelegte Bedeutung.

"**Compulsory Payment Event**" has the meaning specified in § 4(9)(c).

"**Optional Redemption Date**" has the meaning specified in § 5(3).

"**Qualified Majority**" has the meaning specified in § 11(2).

"**Gross-up Event**" has the meaning specified in § 5(2)(a).

"**Rating Agency**" has the meaning specified in § 5(2)(b).

"**Rating Agency Event**" has the meaning specified in § 5(2)(b).

"**Proceedings**" has the meaning specified in § 14(2).

"**Reference Bank Rate**" has the meaning specified in § 4(3).

"**Reference Rate**" has the meaning specified in § 4(3).

"**Reset Screen Page**" has the meaning specified in § 4(3).

"**Reset Date**" has the meaning specified in § 4(3).

"**Reset Period**" has the meaning specified in § 4(3).

"**Redemption Date**" means the day fixed for redemption of the Notes in accordance with these Terms and Conditions.

"**Notes**" has the meaning specified in § 2(1).

"**SchVG**" has the meaning specified in § 11(1).

"**Tax Event**" has the meaning specified in § 5(2)(b).

"**Taxing Jurisdiction**" has the meaning specified in § 8.

"**Taxes**" has the meaning specified in § 8.

"**Effective Date**" has the meaning specified in § 4(4)(g).

"**Subsidiary**" has the meaning specified in § 3(1).

"**Independent Adviser**" has the meaning specified in § 4(4)(f).

"**Original Benchmark Rate**" has the meaning specified in § 4(3).

"**Financing Affiliate**" has the meaning specified in § 10(1).

"**Vereinigte Staaten**" hat die in § 2(2)(b) festgelegte Bedeutung.

"**Vorläufige Globalurkunde**" hat die in § 2(2)(a) festgelegte Bedeutung.

"**Zinsfeststellungstag**" hat die in § 4(3) festgelegte Bedeutung.

"**Zinslaufbeginn**" bezeichnet 9. September 2020.

"**Zinsrückstände**" hat die in § 4(8) festgelegte Bedeutung.

"**Zinszahlungstag**" hat die in § 4(1) festgelegte Bedeutung.

"**Zinszeitraum**" hat die in § 4(1) festgelegte Bedeutung.

"**Zusätzliche Beträge**" hat die in § 8 festgelegte Bedeutung.

"**Zweite Step-Up Marge**" hat die in § 4(2)(d) festgelegte Bedeutung.

"**Zweiter Step-Up Tag**" hat die in § 4(2)(c) festgelegte Bedeutung.

"**United States**" has the meaning specified in § 2(2)(b).

"**Temporary Global Note**" has the meaning specified in § 2(2)(a).

"**Interest Determination Date**" has the meaning specified in § 4(3).

"**Interest Commencement Date**" means September 9, 2020.

"**Deferred Interest Payments**" has the meaning specified in § 4(8).

"**Interest Payment Date**" has the meaning specified in § 4(1).

"**Interest Period**" has the meaning specified in § 4(1).

"**Additional Amounts**" has the meaning specified in § 8.

"**Second Step-Up Margin**" has the meaning specified in § 4(2)(d).

"**Second Step-Up Date**" has the meaning specified in § 4(2)(c).

§ 2

GESAMTNENNBETRAG, FESTGELEGTE STÜCKELUNG, FORM, CLEARINGSYSTEM

(1) *Gesamtnennbetrag, Form, Festgelegte Stückelung.* Diese Emission von an den Inhaber zahlbaren nachrangigen Schuldverschreibungen (die "**Schuldverschreibungen**") der Merck KGaA, Darmstadt (die "**Emittentin**") wird in Euro ("**EUR**") im Gesamtnennbetrag von EUR 1.000.000.000 in Stückelungen je Schuldverschreibung von EUR 100.000 (die "**Festgelegte Stückelung**") begeben.

(2) *Vorläufige Globalurkunde, Dauerglobalurkunde, Austausch.*

- (a) Die Schuldverschreibungen sind anfänglich durch eine vorläufige Globalurkunde (die "**Vorläufige Globalurkunde**") ohne Zinsscheine verbrieft. Die Vorläufige Globalurkunde wird gegen eine Dauerglobalurkunde (die "**Dauerglobalurkunde**"; die Vorläufige Globalurkunde und die Dauerglobalurkunde zusammen die "**Globalurkunden**") ohne Zinsscheine ausgetauscht. Die Globalurkunden tragen jeweils die Unterschriften ordnungsgemäß

§ 2

AGGREGATE PRINCIPAL AMOUNT, SPECIFIED DENOMINATION, FORM, CLEARING SYSTEM

(1) *Aggregate Principal Amount, Form, Specified Denomination.* This issue of subordinated notes payable to the bearer (the "**Notes**") of Merck KGaA, Darmstadt (the "**Issuer**") is being issued in euro ("**EUR**") in the aggregate principal amount of EUR 1,000,000,000 in a denomination of EUR 100,000 each (the "**Specified Denomination**").

(2) *Temporary Global Note, Permanent Global Note, Exchange.*

- (a) The Notes are initially represented by one temporary global note (the "**Temporary Global Note**") without interest coupons. The Temporary Global Note shall be exchangeable for a permanent global note (the "**Permanent Global Note**"; the Permanent Global Note and the Temporary Global Note together the "**Global Notes**") without interest coupons. The Global Notes shall each be signed by authorised signatories of the Issuer and shall each be authenticated by or on behalf of the Principal Paying

bevollmächtigter Vertreter der Emittentin und sind jeweils von der Hauptzahlstelle oder in deren Namen mit einer Kontrollunterschrift versehen. Einzelkunden und Zinsscheine werden nicht ausgegeben.

- (b) Die Vorläufige Globalurkunde wird frühestens an einem Tag gegen die Dauerglobalurkunde austauschbar, der 40 Tage nach dem Ausgabetag der durch die Vorläufige Globalurkunde verbrieften Schuldverschreibungen liegt. Ein solcher Austausch darf nur nach Vorlage von Bescheinigungen gemäß U.S. Steuerrecht erfolgen, wonach der oder die wirtschaftlichen Eigentümer der durch die Vorläufige Globalurkunde verbrieften Schuldverschreibungen keine U.S. Personen sind (ausgenommen bestimmte Finanzinstitute oder bestimmte Personen, die Schuldverschreibungen über solche Finanzinstitute halten). Zahlungen von Zinsen oder Zinsrückständen auf durch eine Vorläufige Globalurkunde verbriefte Schuldverschreibungen erfolgen nur nach Vorlage solcher Bescheinigungen. Eine gesonderte Bescheinigung ist für jede solche Zahlung von Zinsen oder Zinsrückständen erforderlich. Jede Bescheinigung, die am oder nach dem 40. Tag nach dem Ausgabetag der durch die Vorläufige Globalurkunde verbrieften Schuldverschreibungen eingeht, wird als ein Ersuchen behandelt werden, diese Vorläufige Globalurkunde gemäß diesem § 2(2)(b) auszutauschen. Schuldverschreibungen, die im Austausch für die Vorläufige Globalurkunde geliefert werden, dürfen nur außerhalb der Vereinigten Staaten (wie unten definiert) geliefert werden.

"Vereinigte Staaten" bezeichnet die Vereinigten Staaten von Amerika (einschließlich deren Bundesstaaten und des District of Columbia) sowie deren Territorien (einschließlich Puerto Ricos, der U.S. Virgin Islands, Guam, American Samoa, Wake Island und der Northern Mariana Islands).

Agent. Definitive notes and interest coupons shall not be issued.

- (b) The Temporary Global Note shall be exchangeable for the Permanent Global Note at the earliest from the date falling 40 days after the issue date of the Notes represented by the Temporary Global Note. Such exchange shall only be made upon delivery of certifications to the effect that the beneficial owner or owners of the Notes represented by the Temporary Global Note is not a U.S. person (other than certain financial institutions or certain persons holding Notes through such financial institutions) as required by U.S. tax law. Payment of interest and Deferred Interest Payments, if any, on Notes represented by a Temporary Global Note will be made only after delivery of such certifications. A separate certification shall be required in respect of each such payment of interest or Deferred Interest Payments. Any such certification received on or after the 40th day after the issue date of the Notes represented by the Temporary Global Note will be treated as a request to exchange such Temporary Global Note pursuant to this § 2(2)(b). Any Notes delivered in exchange for the Temporary Global Note shall be delivered only outside of the United States (as defined below).

"United States" means the United States of America (including the States thereof and the District of Columbia) and its possessions (including Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, Wake Island and Northern Mariana Islands).

- (3) *Clearingsystem.* Die Dauerglobalurkunde wird solange von einem oder im Namen eines Clearingsystems verwahrt, bis sämtliche Verbindlichkeiten der Emittentin aus den Schuldverschreibungen erfüllt sind. "**Clearingsystem**" bezeichnet jeweils Folgendes: Clearstream Banking S.A. Luxemburg ("**CBL**") und Euroclear Bank S.A./ N.V. Brüssel, als Betreiberin des Euroclear Systems ("**Euroclear**") sowie jeder Funktionsnachfolger (CBL und Euroclear zusammen die "**ICSDs**").

Die Schuldverschreibungen werden in Form einer Classical Global Note ausgegeben und von einer gemeinsamen Verwahrstelle im Namen beider ICSDs verwahrt.

- (4) *Gläubiger, Übertragbarkeit.* "**Gläubiger**" bezeichnet jeden Inhaber eines Miteigentumsanteils oder anderen vergleichbaren Rechts an den Schuldverschreibungen, der oder die nach Maßgabe des anwendbaren Rechts und der jeweils geltenden Regelwerke des Clearingsystems übertragen werden können.

§ 3

STATUS DER SCHULDVERSCHREIBUNGEN, AUFRECHNUNGSVERBOT

- (1) *Status der Schuldverschreibungen.* Soweit nachstehend nichts anderes bestimmt ist, begründen die Schuldverschreibungen direkte, nicht besicherte, nachrangige Verbindlichkeiten der Emittentin, die im Fall der Abwicklung, Auflösung oder Liquidation der Emittentin (i) nur den Ansprüchen der persönlich haftenden Gesellschafter und der Kommanditaktionäre aus deren jeweiliger Beteiligung am Eigenkapital der Emittentin im Rang vorgehen, (ii) untereinander und mit jedem Gleichrangigen Wertpapier im Rang gleich stehen und (iii) allen anderen bestehenden und zukünftigen Verbindlichkeiten der Emittentin, ob nachrangig oder nicht nachrangig, im Rang nachgehen, soweit zwingende gesetzliche Vorschriften nichts anderes vorschreiben bzw. die Bedingungen des betreffenden Instruments ausdrücklich etwas anderes vorsehen.

Die Rechte der Gläubiger aus den Schuldverschreibungen gegenüber der Emittentin begründen direkte, nicht besicherte und nachrangige Rechte gegenüber der Emittentin im Sinne von § 39 Absatz 2 Insolvenzordnung, die im Fall der Insolvenz

- (3) *Clearing System.* The Permanent Global Note will be kept in custody by or on behalf of the Clearing System until all obligations of the Issuer under the Notes have been satisfied. "**Clearing System**" means each of the following: Clearstream Banking S.A. Luxembourg ("**CBL**") and Euroclear Bank S.A./N.V. Brussels as operator of the Euroclear System ("**Euroclear**") and any successor in such capacity (CBL and Euroclear together, the "**ICSDs**").

The Notes are issued in classical global note form and are kept in custody by a common depository on behalf of both ICSDs.

- (4) *Holder, Transferability.* "**Holder**" means any holder of a proportionate co-ownership or other beneficial interest or right in the Notes, which are transferable in accordance with applicable law and applicable rules of the Clearing System.

§ 3

STATUS OF THE NOTES, PROHIBITION OF SET-OFF

- (1) *Status of the Notes.* Except as otherwise provided below, the obligations of the Issuer under the Notes constitute direct, unsecured and subordinated obligations of the Issuer and, in the event of the winding-up, dissolution or liquidation of the Issuer, rank (i) senior only to the claims of the Issuer's general partners (*persönlich haftende Gesellschafter*) and limited partnership shareholders (*Kommanditaktionäre*) arising out of their respective participation in the equity of the Issuer, (ii) *pari passu* among themselves and *pari passu* with any Parity Securities and, (iii) junior to all other present and future obligations of the Issuer, whether subordinated or unsubordinated, except as otherwise provided by mandatory provisions of law or as expressly provided for by the terms of the relevant instrument.

The rights of the Holders towards the Issuer under the Notes constitute direct, unsecured and subordinated rights in the meaning of section 39 paragraph 2 of the German Insolvency Regulation (*Insolvenzordnung*) and, in the event of the insolvency of the Issuer,

der Emittentin, eines Vergleichs oder eines anderen der Abwendung der Insolvenz der Emittentin dienenden Verfahrens (i) nur den Ansprüchen der persönlich haftenden Gesellschafter und der Kommanditaktionäre aus deren jeweiliger Beteiligung am Eigenkapital der Emittentin im Rang vorgehen, (ii) untereinander und mit jedem Gleichrangigen Wertpapier im Rang gleich stehen und (iii) allen anderen bestehenden und zukünftigen Verbindlichkeiten der Emittentin, ob nachrangig oder nicht nachrangig, im Rang nachgehen, soweit nicht zwingende gesetzliche Vorschriften etwas anderes vorschreiben bzw. die Bedingungen des betreffenden Instruments ausdrücklich etwas anderes vorsehen.

Im Fall (i) der Abwicklung, Auflösung oder Liquidation der Emittentin gehen die Verbindlichkeiten der Emittentin aus den Schuldverschreibungen, und im Fall (ii) der Insolvenz der Emittentin oder eines Vergleichs oder eines anderen der Abwendung der Insolvenz der Emittentin dienenden Verfahrens, gehen die Rechte der Gläubiger gegenüber der Emittentin gemäß § 39 Absatz 2 Insolvenzordnung im Rang den Ansprüchen aller nicht nachrangigen und nachrangigen Gläubiger nach (soweit nicht zwingende gesetzliche Vorschriften etwas anderes vorschreiben bzw. die Bedingungen, denen die betreffenden Ansprüche unterliegen, ausdrücklich etwas anderes vorsehen), so dass Zahlungen auf die Schuldverschreibungen solange nicht erfolgen, wie die Ansprüche dieser nicht nachrangigen und nachrangigen Gläubiger gegen die Emittentin nicht zuvor vollständig erfüllt sind.

Für die Rechte der Gläubiger aus den Schuldverschreibungen ist diesen keine Sicherheit durch die Emittentin oder durch Dritte gestellt; eine solche Sicherheit wird auch zu keinem Zeitpunkt gestellt werden.

"**Gleichrangige Wertpapiere**" bezeichnet (i) jedes von der Emittentin begebene Wertpapier oder andere Instrument und gegen sie gerichtete Forderungen, die gleichrangig im Verhältnis zu den Verbindlichkeiten der Emittentin unter den Schuldverschreibungen sind, oder (ii) jedes von einer Tochtergesellschaft begebene Wertpapier oder andere Instrument, das durch die Emittentin garantiert wird oder von einer Patronatserklärung der Emittentin profitiert, bei dem

composition or other proceedings for the avoidance of insolvency of the Issuer, rank (i) senior only to the claims of the Issuer's general partners (*persönlich haftende Gesellschafter*) and limited partnership shareholders (*Kommanditaktionäre*) arising out of their respective participation in the equity of the Issuer, (ii) *pari passu* among themselves and *pari passu* with any Parity Securities and, (iii) junior to all other present and future obligations of the Issuer, whether subordinated or unsubordinated, except as otherwise provided by mandatory provisions of law or as expressly otherwise provided for by the terms of the relevant instrument.

In the case of (i) the winding-up, dissolution or liquidation of the Issuer, the obligations of the Issuer under the Notes, and (ii) the insolvency of the Issuer or composition or other proceedings for the avoidance of insolvency of the Issuer, the rights of the Holders towards the Issuer shall, pursuant to section 39 paragraph 2 of the German Insolvency Regulation (*Insolvenzordnung*), be subordinated to the claims of all unsubordinated and subordinated creditors of the Issuer (except as otherwise provided by mandatory provisions of law or as expressly otherwise provided for by the terms underlying the relevant claims) so that in any such case no amounts shall be payable in respect of the Notes until the claims of such unsubordinated and subordinated creditors of the Issuer shall have first been satisfied in full.

No security is, or shall at any time be, granted by the Issuer or any other person securing rights of the Holders under the Notes.

"**Parity Securities**" means (i) any securities or other instruments issued by the Issuer and claims towards the Issuer which are expressed to rank *pari passu* with the Issuer's obligations under the Notes or (ii) securities or other instruments issued by a Subsidiary, where such securities or instruments have the benefit of a guarantee or keep well agreement by the Issuer, and the obligations under such guarantee

die Verbindlichkeiten der Emittentin aus der maßgeblichen Garantie oder Patronatserklärung gleichrangig im Verhältnis zu den Verbindlichkeiten der Emittentin aus den Schuldverschreibungen sind.

Am Ausgabetag der Schuldverschreibungen sind Gleichrangige Wertpapiere der Emittentin die nicht besicherten nachrangigen Schuldverschreibungen der Emittentin erstmals kündbar im Jahr 2021, fällig im Jahr 2074, ISIN XS1152338072, die nicht besicherten nachrangigen Schuldverschreibungen der Emittentin erstmals kündbar im Jahr 2024, fällig im Jahr 2074, ISIN XS1152343668, die nicht besicherten nachrangigen Schuldverschreibungen der Emittentin erstmals kündbar im Jahr 2024, fällig im Jahr 2079, ISIN XS2011260531 und die nicht besicherten nachrangigen Schuldverschreibungen der Emittentin erstmals kündbar im Jahr 2029, fällig im Jahr 2079, ISIN XS2011260705.

"**Tochtergesellschaft**" bezeichnet jede direkte oder mittelbare mehrheitliche Tochtergesellschaft der Emittentin.

- (2) *Aufrechnungsverbot.* Die Gläubiger sind nicht berechtigt, Forderungen aus den Schuldverschreibungen gegen mögliche Forderungen der Emittentin aufzurechnen. Die Emittentin ist nicht berechtigt, Forderungen gegenüber einem Gläubiger gegen Verpflichtungen aus den Schuldverschreibungen aufzurechnen.
- (3) Unter Beachtung von § 3(1) bleibt es der Emittentin unbenommen, ihre Verbindlichkeiten aus den Schuldverschreibungen auch aus dem sonstigen freien Vermögen zu bedienen.

§ 4

ZINSEN, ZINSAUFSCHUB

- (1) *Zinszahlungstage und Zinszeiträume.* Vorbehaltlich der weiteren Bestimmungen dieses § 4 berechtigen die Schuldverschreibungen die Gläubiger für jeden Zinszeitraum (wie nachstehend definiert) vom Zinslaufbeginn (einschließlich) bis zu dem in § 4(10) vorgesehenen Zeitpunkt zu Zinsen in Höhe des für den jeweiligen Zinszeitraum gemäß § 4(2) anwendbaren Zinssatzes (der "**Anwendbare Zinssatz**") auf die Festgelegte Stückelung je Schuldverschreibung. Die Zinsen sind jährlich nachträglich am 9. September eines jeden Jahres (jeweils ein "**Zinszahlungstag**") zur Zahlung

or keep well agreement rank *pari passu* with the Issuer's obligations under the Notes.

On the issue date of the Notes Parity Securities of the Issuer are the unsecured subordinated notes with a first call date in 2021, due in 2074, ISIN XS1152338072, its unsecured subordinated notes with a first call date in 2024, due in 2074, ISIN XS1152343668, the unsecured subordinated notes with a first call date in 2024, due in 2079, ISIN XS2011260531 and its unsecured subordinated notes with a first call date in 2029, due in 2079, ISIN XS2011260705.

"**Subsidiary**" means any directly or indirectly majority-owned subsidiary of the Issuer.

- (2) *Prohibition of Set-off.* No Holder may set-off any claims arising under the Notes against any claims that the Issuer may have against it. The Issuer may not set-off any claims it may have against any Holder against any of its obligations under the Notes.
- (3) Subject to § 3(1), the Issuer may satisfy its obligations under the Notes also from other distributable assets (*sonstiges freies Vermögen*) of the Issuer.

§ 4

INTEREST, INTEREST DEFERRAL

- (1) *Interest Payment Dates and Interest Periods.* Subject to the further provisions of this § 4 the Notes entitle the Holders to interest for each Interest Period (as defined below) from and including the Interest Commencement Date to the date specified in § 4(10) at the prevailing interest rate according to § 4(2) (the "**Prevailing Interest Rate**") on the Specified Denomination per Note. Such interest shall be scheduled to be paid annually in arrear on September 9 of each year (each an "**Interest Payment Date**"), commencing on September 9, 2021, and will fall due and payable (*fällig*) in

vorgesehen, erstmals am 9. September 2021, und werden gemäß § 4(8) und § 4(9) fällig.

"Zinszeitraum" bezeichnet (i) den Zeitraum ab dem Zinslaufbeginn (einschließlich) bis zum ersten Zinszahlungstag (ausschließlich) und (ii) den Zeitraum ab einem Zinszahlungstag (einschließlich) bis zum unmittelbar folgenden Zinszahlungstag (ausschließlich).

(2) *Anwendbarer Zinssatz.*

(a) *Anfänglicher Festzinszeitraum.* Für jeden Zinszeitraum, der in den Zeitraum ab dem Zinslaufbeginn (einschließlich) bis zum 9. September 2026 (der **"Erste Resettermin"**) (ausschließlich) fällt, entspricht der Anwendbare Zinssatz 1,625 % *per annum*.

(b) *Erster Resetzeitraum.* Für jeden Zinszeitraum, der in den Resetzeitraum ab dem Ersten Resettermin (einschließlich) bis zum 9. September 2031 (dem **"Ersten Step-Up Tag"**) (ausschließlich) fällt, entspricht der Anwendbare Zinssatz dem Referenzsatz für diesen Resetzeitraum zuzüglich 1,998 % *per annum* (die **"Anfängliche Marge"**).

(c) *Zweiter Resetzeitraum.* Für jeden Zinszeitraum, der in einen Resetzeitraum ab dem Ersten Step-Up Tag (einschließlich) bis zum 9. September 2046 (dem **"Zweiten Step-Up Tag"**) (ausschließlich) fällt, entspricht der Anwendbare Zinssatz dem Referenzsatz für diesen Resetzeitraum zuzüglich der Ersten Step-Up Marge (wie nachfolgend definiert).

"Erste Step-Up Marge" bezeichnet die Anfängliche Marge zuzüglich 25 Basispunkten *per annum*.

(d) *Resetzeiträume nach dem zweiten Resetzeitraum.* Für jeden Zinszeitraum, der in einen Resetzeitraum fällt, der an oder nach dem Zweiten Step-Up Tag beginnt, entspricht der Anwendbare Zinssatz dem Referenzsatz für den betreffenden Resetzeitraum zuzüglich der Zweiten Step-Up Marge (wie nachstehend definiert).

accordance with the conditions set forth in § 4(8) and § 4(9).

"Interest Period" means (i) the period from and including the Interest Commencement Date to but excluding the first Interest Payment Date and (ii) the period from and including any Interest Payment Date to but excluding the immediately following Interest Payment Date.

(2) *Prevailing Interest Rate.*

(a) *Initial Fixed Rate Period.* For any Interest Period falling in the period from and including the Interest Commencement Date to but excluding September 9, 2026 (the **"First Reset Date"**), the Prevailing Interest Rate shall be equal to a rate of 1.625 % *per annum*.

(b) *First Reset Period.* For any Interest Period falling in the Reset Period from and including the First Reset Date to but excluding September 9, 2031 (the **"First Step-Up Date"**), the Prevailing Interest Rate shall be equal to the Reference Rate for such Reset Period plus 1.998 % *per annum* (the **"Initial Margin"**).

(c) *Second Reset Period.* For any Interest Period falling in a Reset Period from and including the First Step-Up Date to but excluding September 9, 2046 (the **"Second Step-Up Date"**), the Prevailing Interest Rate shall be equal to the Reference Rate for such Reset Period plus the First Step-Up Margin (as defined below).

"First Step-Up Margin" means the Initial Margin plus 25 basis points *per annum*.

(d) *Reset Periods following the second Reset Period.* For any Interest Period falling in any Reset Period commencing on or after the Second Step-Up Date, the Prevailing Interest Rate shall be equal to the Reference Rate for the relevant Reset Period plus the Second Step-Up Margin (as defined below).

"**Zweite Step-Up Marge**" bezeichnet die Anfängliche Marge zuzüglich 100 Basispunkten *per annum*.

(3) *Feststellung des Referenzsatzes.*

Die Berechnungsstelle bestimmt an jedem Zinsfeststellungstag den betreffenden Referenzsatz nach Maßgabe dieses § 4(3).

Der "**Referenzsatz**" für einen Resetzeitraum wird von der Berechnungsstelle an dem betreffenden Zinsfeststellungstag (wie nachstehend definiert) vor dem Resettermin, an dem der betreffende Resetzeitraum beginnt (der "**Referenz-Resettermin**"), wie folgt festgelegt:

- (a) Für jeden Resetzeitraum, der vor dem Eintritt des jeweiligen Stichtags (wie in § 4(4)(g) definiert) beginnt, entspricht der "**Referenzsatz**" dem Ursprünglichen Benchmarksatz an dem betreffenden Zinsfeststellungstag.

Falls der Ursprüngliche Benchmarksatz zu dem betreffenden Zeitpunkt an dem betreffenden Zinsfeststellungstag nicht auf der Reset-Bildschirmseite angezeigt wird, entspricht der "**Referenzsatz**" dem Referenzbanksatz an diesem betreffenden Zinsfeststellungstag.

Falls der Referenzbanksatz nicht gemäß der Definition dieses Begriffs festgestellt werden kann, entspricht der "**Referenzsatz**" dem Ursprünglichen Benchmarksatz auf der Reset-Bildschirmseite an dem letzten Tag vor dem Zinsfeststellungstag, an dem dieser Ursprüngliche Benchmarksatz angezeigt wurde.

- (b) Für jeden Resetzeitraum, der an oder nach dem jeweiligen Stichtag beginnt, wird der "**Referenzsatz**" gemäß § 4(4) bestimmt.

"**Ursprünglicher Benchmarksatz**" bezeichnet den um 11:00 Uhr (Frankfurter Zeit) gefixten, als Prozentsatz ausgedrückten Swapsatz *per annum* für in Euro denominierter Swap-Transaktionen mit einer Laufzeit von 5 Jahren, der auf der Reset-Bildschirmseite am betreffenden

"**Second Step-Up Margin**" means the Initial Margin plus 100 basis points *per annum*.

(3) *Determination of the Reference Rate.*

The Calculation Agent will determine the relevant Reference Rate in accordance with this § 4(3) on each Interest Determination Date.

The "**Reference Rate**" for a Reset Period will be determined by the Calculation Agent on the relevant Interest Determination Date (as defined below) prior to the Reset Date on which the relevant Reset Period commences (the "**Reference Reset Date**") as follows:

- (a) For each Reset Period beginning prior to the occurrence of the relevant Effective Date (as defined in § 4(4)(g)), the "**Reference Rate**" will be equal to the Original Benchmark Rate on the relevant Interest Determination Date.

If the Original Benchmark Rate does not appear on the Reset Screen Page as at such time on the relevant Interest Determination Date, the "**Reference Rate**" will be equal to the Reference Bank Rate on that Interest Determination Date.

If the Reference Bank Rate cannot be determined in accordance with the definition of such term the "Reference Rate" shall be equal to the Original Benchmark Rate on the Reset Screen Page on the last day preceding the Interest Determination Date on which such Original Benchmark Rate was displayed.

- (b) For each Reset Period commencing on or after the relevant Effective Date, the "Reference Rate" will be determined in accordance with § 4(4).

"**Original Benchmark Rate**" means the annual swap rate which is fixed at 11:00 a.m. (Frankfurt time) and is expressed as a percentage *per annum* for Euro denominated swap transactions with a maturity of 5 years which appears on the Reset Screen Page on the relevant Interest Determination Date at or around 11:00 a.m. (Frankfurt time).

Zinsfeststellungstag gegen 11:00 Uhr (Frankfurter Zeit) angezeigt wird.

Der "**Referenzbankensatz**" ist der Prozentsatz, der auf Basis der 5-Jahres-Mid-Swapsatz-Quotierungen, die der Berechnungsstelle auf Bitten der Emittentin ungefähr um 11:00 Uhr (Frankfurter Zeit) von bis zu fünf führenden von der Emittentin ausgewählten Swap-Händlern im Interbankenhandel (die "**Reset-Referenzbanken**") gestellt werden, am Zinsfeststellungstag von der Berechnungsstelle festgelegt wird. Wenn mindestens drei 5-Jahres-Mid-Swapsatz-Quotierungen genannt werden, wird der Referenzbankensatz das arithmetische Mittel der 5-Jahres-Mid-Swapsatz-Quotierungen unter Ausschluss der höchsten Quotierung (bzw., für den Fall von gleich hohen Quotierungen, einer der höchsten Quotierungen) und der niedrigsten Quotierung (bzw., für den Fall von gleich hohen Quotierungen, einer der niedrigsten Quotierungen) sein. Falls nur zwei 5-Jahres-Mid-Swapsatz-Quotierungen zur Verfügung gestellt werden, ist der Referenzbankensatz das rechnerische Mittel der zur Verfügung gestellten Quotierungen. Falls nur eine 5-Jahres-Mid-Swapsatz-Quotierung zur Verfügung gestellt wird, ist der Referenzbankensatz gleich der zur Verfügung gestellten Quotierung. Dabei bezeichnet "**5-Jahres-Mid-Swapsatz-Quotierung**" das arithmetische Mittel der nachgefragten (*bid*) und angebotenen (*offered*) Prozentsätze für den jährlichen Festzinszahlungsstrom (berechnet auf einer 30/360 Tage-Berechnungsbasis) einer fixed-for-floating Euro Zinsswap-Transaktion, (x) die eine 5-jährige Laufzeit hat und am betreffenden Resettermin beginnt, (y) die auf einen Betrag lautet, der dem einer repräsentativen einzelnen Transaktion in dem relevanten Markt zur relevanten Zeit eines anerkannten Händlers mit guter Bonität im Swap-Markt entspricht, und (z) deren variabler Zahlungsstrom auf dem 6-Monats EURIBOR Satz beruht (berechnet auf einer Actual/360 Tage-Berechnungsbasis).

Dabei gilt Folgendes:

"**Reset-Bildschirmseite**" bezeichnet die Reuters Bildschirmseite "ICESWAP2 / EURFIXA" unter der Überschrift "EURIBOR BASIS" und dem Untertitel "11:00 AM Frankfurt time" (auf dem solche Überschriften und Untertitel von Zeit zu Zeit erscheinen). Hat die Reset-Bildschirmseite dauerhaft

"**Reference Bank Rate**" means the percentage rate determined by the Calculation Agent on the basis of the 5-year Mid Swap Rate Quotations provided by up to five leading swap dealers in the interbank market selected by the Issuer (the "**Reset Reference Banks**") to the Calculation Agent at the request of the Issuer at approximately 11:00 a.m. (Frankfurt time) on the Interest Determination Date. If at least three 5-year Mid Swap Rate Quotations are provided, the Reference Bank Rate will be the arithmetic mean of the quotations, eliminating the highest quotation (or, in the event of equality one of the highest) and the lowest quotation (or, in the event of equality, one of the lowest). If only two 5-year Mid Swap Rate Quotations are provided, the Reference Bank Rate will be the arithmetic mean of the quotations provided. If only one 5-year Mid Swap Rate Quotation is provided, the Reference Bank Rate will be the quotation provided. For this purpose, "**5-year Mid Swap Rate Quotation**" means the arithmetic mean of the bid and offered rates for the annual fixed rate leg (calculated on a 30/360 day count basis) of a fixed-for-floating Euro interest rate swap transaction which transaction (x) has a term of 5 years and commencing on the relevant Reset Date, (y) is in an amount that is representative of a single transaction in the relevant market at the relevant time with an acknowledged dealer of good credit in the swap market, and (z) has a floating leg based on the 6-months EURIBOR rate (calculated on an Actual/360 day count basis).

Where:

"**Reset Screen Page**" means Reuters screen page "ICESWAP2 / EURFIXA" under the heading "EURIBOR BASIS" and the caption "11:00 AM Frankfurt time" (as such headings and captions may appear from time to time). If the Reset Screen Page permanently ceases to quote the Original Benchmark

aufgehört, den Ursprünglichen Benchmarksatz anzugeben, ist diese Quotierung jedoch auf einer anderen, von der Emittentin nach billigem Ermessen ausgewählten Bildschirmseite verfügbar (die "Ersatzbildschirmseite"), wird die Ersatzbildschirmseite zum Zweck der Festlegung des Ursprünglichen Benchmarksatzes eingesetzt.

"**Resettermin**" bezeichnet den Ersten Resettermin und danach jeden fünften Jahrestag des vorausgegangenen Resettermins.

"**Resetzzeitraum**" bezeichnet jeden Zeitraum ab dem Ersten Resettermin (einschließlich) bis zum nächstfolgenden Resettermin (ausschließlich) und nachfolgend ab jedem Resettermin (einschließlich) bis zu dem jeweils nächstfolgenden Resettermin (ausschließlich).

"**TARGET-Geschäftstag**" bezeichnet einen Tag, an dem das Trans-European Automated Real-time Gross settlement Express Transfer system 2 (TARGET) betriebsbereit ist.

"**Zinsfeststellungstag**" bezeichnet den zweiten TARGET-Geschäftstag vor dem betreffenden Referenz-Resettermin.

(4) *Benchmark-Ereignis.*

Wenn ein Benchmark-Ereignis (wie in § 4(4)(f) definiert) in Bezug auf den Ursprünglichen Benchmarksatz eintritt, gilt für die Bestimmung des betreffenden Referenzsatzes und die Verzinsung der Schuldverschreibungen gemäß § 4 Folgendes:

- (a) *Unabhängiger Berater.* Die Emittentin wird sich bemühen, sobald dies (nach Ansicht der Emittentin) nach Eintritt des Benchmark-Ereignisses und vor dem nächsten Zinsfeststellungstag erforderlich ist, einen Unabhängigen Berater (wie in § 4(4)(f) definiert) zu benennen, der einen Neuen Benchmarksatz (wie in § 4(4)(f) definiert), die Anpassungsspanne (wie in § 4(4)(f) definiert) und etwaige Benchmark-Änderungen (gemäß § 4(4)(d)) festlegt.
- (b) *Ausweichsatz (Fallback).* Wenn vor dem 10. Geschäftstag vor dem betreffenden Zinsfeststellungstag
 - (i) die Emittentin keinen Unabhängigen Berater ernannt; oder

Rate but such quotation is available from another page selected by the Issuer in its reasonable discretion (the "**Replacement Screen Page**"), the Replacement Screen Page must be used for the purpose of the determination of the Original Benchmark Rate.

"**Reset Date**" means the First Reset Date and thereafter each fifth anniversary of the immediately preceding Reset Date.

"**Reset Period**" means each period from and including the First Reset Date to but excluding the next following Reset Date and thereafter from and including each Reset Date to but excluding the next following Reset Date.

"**TARGET Business Day**" means a day on which the Trans-European Automated Real-time Gross settlement Express Transfer system 2 (TARGET) is operational.

"**Interest Determination Date**" means the second TARGET Business Day prior to the relevant Reference Reset Date.

(4) *Benchmark Event.*

If a Benchmark Event (as defined in § 4(4)(f)) occurs in relation to the Original Benchmark Rate, the relevant Reference Rate and the interest on the Notes in accordance with § 4 will be determined as follows:

- (a) *Independent Adviser.* The Issuer shall, as soon as this is (in the Issuer's view) required following the occurrence of the Benchmark Event and prior to the next Interest Determination Date, endeavour to appoint an Independent Adviser (as defined in § 4(4)(f)), who will determine a New Benchmark Rate (as defined in § 4(4)(f)), the Adjustment Spread (as defined in § 4(4)(f)) and any Benchmark Amendments (in accordance with § 4(4)(d)).
- (b) *Fallback rate.* If, prior to the 10th Business Day prior to the relevant Interest Determination Date,
 - (i) the Issuer does not appoint an Independent Adviser; or

- (ii) der ernannte Unabhängige Berater keinen Neuen Benchmarksatz, keine Anpassungsspanne oder keine Benchmark-Änderungen (sofern erforderlich) gemäß diesem § 4(4) festlegt,

- (ii) the Independent Adviser appointed by it does not determine a New Benchmark Rate, no Adjustment Spread or no Benchmark Amendments (if required) in accordance with this § 4(4),

dann entspricht der Referenzsatz für den nächsten Resetzeitraum dem an dem letzten, unmittelbar vor Eintritt des relevanten Stichtags liegenden Zinsfestsetzungstag festgestellten Referenzsatz.

the Reference Rate applicable to the immediately following Reset Period shall be the Reference Rate determined on the last Interest Determination Date immediately preceding the relevant Effective Date.

Falls dieser § 4(4)(b) bereits an dem Zinsfeststellungstag vor dem Ersten Resettermin angewendet werden muss, entspricht der Referenzsatz für den ersten Resetzeitraum -0,373 % *per annum*.

If this § 4(4)(b) is to be applied on the first Interest Determination Date prior to the First Reset Date, the Reference Rate applicable to the first Reset Period shall be -0.373 % *per annum*.

Falls der gemäß diesem § 4(4)(b) bestimmte Ausweichsatz (*Fallback*) zur Anwendung kommt, wird § 4(4) erneut angewendet, um den Referenzsatz für den nächsten nachfolgenden Resetzeitraum (und, sofern notwendig, weitere nachfolgende Resetzeiträume) zu bestimmen.

If the fallback rate determined in accordance with this § 4(4)(b) is to be applied, § 4(4) will be operated again to determine the Reference Rate applicable to the next subsequent (and, if required, further subsequent) Reset Period(s).

- (c) *Nachfolge-Benchmarksatz oder Alternativ-Benchmarksatz.* Falls der Unabhängige Berater nach billigem Ermessen feststellt,

- (c) *Successor Benchmark Rate or Alternative Benchmark Rate.* If the Independent Adviser determines in its reasonable discretion that:

- (i) dass es einen Nachfolge-Benchmarksatz gibt, dann ist dieser Nachfolge-Benchmarksatz der Neue Benchmarksatz; oder

- (i) there is a Successor Benchmark Rate, then such Successor Benchmark Rate shall subsequently be the New Benchmark Rate; or

- (ii) dass es keinen Nachfolge-Benchmarksatz aber einen Alternativ-Benchmarksatz gibt, dann ist dieser Alternativ-Benchmarksatz der Neue Benchmarksatz.

- (ii) there is no Successor Benchmark Rate but that there is an Alternative Benchmark Rate, then such Alternative Benchmark Rate shall subsequently be the New Benchmark Rate.

In beiden Fällen entspricht der "**Referenzsatz**" für den unmittelbar nachfolgenden Resetzeitraum und alle folgenden Resetzeiträume dann (x) dem Neuen Benchmarksatz an dem betreffenden Zinsfeststellungstag zuzüglich (y) der Anpassungsspanne.

In either case the "**Reference Rate**" for the immediately following Reset Period and all following Reset Periods will then be (x) the New Benchmark Rate on the relevant Interest Determination Date plus (y) the Adjustment Spread.

- (d) *Benchmark-Änderungen.* Wenn ein Neuer Benchmarksatz und die entsprechende

- (d) *Benchmark Amendments.* If any relevant New Benchmark Rate and the applicable

Anpassungsspanne gemäß diesem § 4(4) festgelegt werden, und wenn der Unabhängige Berater feststellt, dass Änderungen resultierend aus den vorgenannten Festlegungen hinsichtlich der Feststellungen des anwendbaren Zinssatzes notwendig sind, um die ordnungsgemäße Anwendung des Neuen Benchmarksatzes und der entsprechenden Anpassungsspanne zu gewährleisten (diese Änderungen, die "**Benchmark-Änderungen**"), dann wird der Unabhängige Berater die Benchmark-Änderungen feststellen, und wird die Emittentin diese durch eine Mitteilung gemäß § 4(4)(e) bekanntmachen.

Diese Benchmark-Änderungen können insbesondere folgende Regelungen in diesen Anleihebedingungen erfassen:

- (i) den Referenzsatz einschließlich der "Reset-Bildschirmseite" und/oder (in Ersetzung von Buchstabe (a) der Definition des Begriffs "Referenzsatz" in § 4(3)) die Methode zur Bestimmung des Ausweichsatzes (sog. *Fallback*) für den Referenzsatz einschließlich des Referenzbankensatzes; und/oder
 - (ii) die Definitionen der Begriffe "Geschäftstag", "Zinszahlungstag", "Geschäftstagekonvention", "Zinszeitraum", "Zinstagequotient" und/oder "Zinsfeststellungstag" (einschließlich der Festlegung ob der Referenzsatz vorwärts- oder rückwärtsgerichtet bestimmt wird); und/oder
 - (iii) der Geschäftstagekonvention gemäß § 6(2).
- (e) *Mitteilungen, etc.* Die Emittentin wird einen Neuen Benchmarksatz, die Anpassungsspanne und etwaige Benchmark-Änderungen gemäß diesem § 4(4) der Hauptzahlstelle, der Berechnungsstelle und gemäß § 13 den Gläubigern mitteilen, und zwar sobald eine solche Mitteilung (nach Ansicht der Emittentin) nach deren

Adjustment Spread are determined in accordance with this § 4(4), and if the Independent Adviser determines that, resulting from the aforementioned determinations, amendments to the determinations in respect of the rate of interest are necessary to ensure the proper operation of such New Benchmark Rate and the applicable Adjustment Spread (such amendments, the "**Benchmark Amendments**"), then the Independent Adviser will determine the Benchmark Amendments and the Issuer will give notice thereof in accordance with § 4(4)(e).

The Benchmark Amendments may include, without limitation, the following conditions of these Terms and Conditions:

- (i) the Reference Rate including the "Reset Screen Page" and/or (in replacement of clause (a) of the definition of the term "Reference Rate" in § 4(3)) the method for determining the fallback rate in relation to the Reference Rate, including the Reference Bank Rate; and/or
 - (ii) the definitions of the terms "Business Day", "Interest Payment Date", "Business Day Convention", "Interest Period", "Day Count Fraction" and/or "Interest Determination Date" (including the determination whether the Reference Rate will be determined on a forward looking or a backward looking basis); and/or
 - (iii) the business day convention in § 6(2).
- (e) *Notices, etc.* The Issuer will notify any New Benchmark Rate, the Adjustment Spread and the Benchmark Amendments (if any) determined under this § 4(4) to the Principal Paying Agent, the Calculation Agent and, in accordance with § 13, the Holders as soon as such notification is (in the Issuer's view) required following the determination thereof,

Feststellung erforderlich ist, spätestens jedoch an dem 10. Geschäftstag vor dem betreffenden Zinsfeststellungstag. Eine solche Mitteilung ist unwiderruflich und hat den Stichtag zu benennen.

Der Neue Benchmarksatz, die Anpassungsspanne und etwaige Benchmark-Änderungen, die jeweils in der Mitteilung benannt werden, sind für die Emittentin, die Hauptzahlstelle, die Berechnungsstelle und die Gläubiger bindend. Die Anleihebedingungen gelten ab dem Stichtag als durch den Neuen Benchmarksatz, die Anpassungsspanne und die etwaigen Benchmark-Änderungen geändert.

Am Tag dieser Mitteilung hat die Emittentin der Hauptzahlstelle und der Berechnungsstelle eine durch zwei Unterschriftsberechtigte der Emittentin unterzeichnete Bescheinigung zu übergeben, die

- (i)
 - (A) bestätigt, dass ein Benchmark-Ereignis eingetreten ist;
 - (B) den nach Maßgabe der Bestimmungen dieses § 4(4) festgestellten Neuen Benchmarksatz benennt;
 - (C) die entsprechende Anpassungsspanne und etwaige Benchmark-Änderungen benennt, die jeweils nach Maßgabe der Bestimmungen dieses § 4(4) festgestellt wurden; und
 - (D) den Stichtag benennt; und
- (ii) bestätigt, dass die etwaigen Benchmark-Änderungen notwendig sind, um die ordnungsgemäße Anwendung des Neuen Benchmarksatzes und der entsprechenden Anpassungsspanne zu gewährleisten.

but in any event not later than on the 10th Business Day prior to the relevant Interest Determination Date. Such notice shall be irrevocable and shall specify the Effective Date.

The New Benchmark Rate, the Adjustment Spread and the Benchmark Amendments (if any), each as specified in such notice, will be binding on the Issuer, the Principal Paying Agent, the Calculation Agent and the Holders. The Terms and Conditions shall be deemed to have been amended by the New Benchmark Rate, the Adjustment Spread and the Benchmark Amendments with effect from the Effective Date.

On the date of such notice, the Issuer shall deliver to the Principal Paying Agent and the Calculation Agent a certificate signed by two authorized signatories of the Issuer:

- (i)
 - (A) confirming that a Benchmark Event has occurred;
 - (B) specifying the relevant New Benchmark Rate determined in accordance with the provisions of this § 4(4);
 - (C) specifying the applicable Adjustment Spread and the Benchmark Amendments (if any), each determined in accordance with the provisions of this § 4(4); and
 - (D) specifying the Effective Date; and
- (ii) confirming that the Benchmark Amendments, if any, are necessary to ensure the proper operation of such relevant New Benchmark Rate and the applicable Adjustment Spread.

- (f) *Definitionen.* Zur Verwendung in diesem § 4(4):

Die "**Anpassungsspanne**", die positiv, negativ oder gleich Null sein kann, wird in Basispunkten ausgedrückt und bezeichnet entweder (a) die Spanne oder (b) das Ergebnis der Anwendung der Formel oder Methode zur Berechnung der Spanne, die

- (1) im Fall eines Nachfolge-Benchmarksatzes formell im Zusammenhang mit der Ersetzung des Ursprünglichen Benchmarksatzes durch den Nachfolge-Benchmarksatz von dem Nominierungsgremium empfohlen wird; oder
- (2) (sofern keine Empfehlung abgegeben wurde oder im Fall eines Alternativ-Benchmarksatzes) üblicherweise an den internationalen Anleihekapitalmärkten auf den Neuen Benchmarksatz angewendet wird, um einen industrieweit akzeptierten Ersatz-Benchmarksatz für den Ursprünglichen Benchmarksatz zu erzeugen, wobei sämtliche Feststellungen durch den Unabhängigen Berater nach billigem Ermessen vorgenommen werden; oder
- (3) (sofern der Unabhängige Berater nach billigem Ermessen feststellt, dass keine solche Spanne üblicherweise angewendet wird, und dass das Folgende angemessen ist für die Schuldverschreibungen) als industrieweiter Standard für Over-the-Counter Derivatetransaktionen, die sich auf den Ursprünglichen Benchmarksatz beziehen, anerkannt und bestätigt ist, wenn der Ursprüngliche Benchmarksatz durch den Neuen Benchmarksatz ersetzt worden ist, wobei sämtliche Feststellungen durch den Unabhängigen Berater nach billigem Ermessen vorgenommen werden.

- (f) *Definitions.* As used in this § 4(4):

The "**Adjustment Spread**", which may be positive, negative or zero, will be expressed in basis points and means either (a) the spread, or (b) the result of the operation of the formula or methodology for calculating the spread, which

- (1) in the case of a Successor Benchmark Rate, is formally recommended in relation to the replacement of the Original Benchmark Rate with the Successor Benchmark Rate by any Relevant Nominating Body; or
- (2) (if no such recommendation has been made, or in the case of an Alternative Benchmark Rate) is customarily applied to the New Benchmark Rate in the international debt capital markets to produce an industry-accepted replacement benchmark rate for the Original Benchmark Rate, provided that all determinations will be made by the Independent Adviser in its reasonable discretion; or
- (3) (if the Independent Adviser in its reasonable discretion determines that no such spread is customarily applied and that the following would be appropriate for the Notes) is recognised or acknowledged as being the industry standard for over-the-counter derivative transactions which reference the Original Benchmark Rate, where the Original Benchmark Rate has been replaced by the New Benchmark Rate, provided that all determinations will be made by the Independent Adviser in its reasonable discretion.

"**Alternativ-Benchmarksatz**" bezeichnet eine alternative Benchmark oder einen alternativen Bildschirmsatz, die bzw. der üblicherweise an den internationalen Anleihekapielmärkten zur Bestimmung von Reset-Zinssätzen in Euro angewendet wird, wobei sämtliche Feststellungen durch den Unabhängigen Berater vorgenommen werden.

"**Benchmark-Änderungen**" hat die in § 4(4)(d) festgelegte Bedeutung.

Ein "**Benchmark-Ereignis**" tritt ein, wenn:

- (1) der Ursprüngliche Benchmarksatz nicht mehr regelmäßig veröffentlicht wird oder nicht mehr erstellt wird; oder
- (2) eine öffentliche Erklärung des Administrators des Ursprünglichen Benchmarksatzes veröffentlicht wird, wonach dieser die Veröffentlichung des Ursprünglichen Benchmarksatzes dauerhaft oder auf unbestimmte Zeit eingestellt hat oder einstellen wird (in Fällen in denen kein Nachfolgeadministrator ernannt worden ist, der die Veröffentlichung des Ursprünglichen Benchmarksatzes vornehmen wird); oder
- (3) eine öffentliche Erklärung der Aufsichtsbehörde des Administrators des Ursprünglichen Benchmarksatzes veröffentlicht wird, wonach der Ursprüngliche Benchmarksatz dauerhaft oder auf unbestimmte Zeit nicht mehr fortgeführt wird oder nicht mehr fortgeführt werden wird; oder
- (4) eine öffentliche Erklärung der Aufsichtsbehörde des Administrators des Ursprünglichen Benchmarksatzes veröffentlicht wird, aufgrund derer der Ursprüngliche Benchmarksatz allgemein oder in Bezug auf die

"**Alternative Benchmark Rate**" means an alternative benchmark or screen rate which is customarily applied in the international debt capital markets for the purpose of determining reset rates of interest in Euro, provided that all determinations will be made by the Independent Adviser.

"**Benchmark Amendments**" has the meaning given to it in § 4(4)(d).

A "**Benchmark Event**" occurs if:

- (1) the Original Benchmark Rate ceases to be published on a regular basis or ceases to exist; or
- (2) a public statement by the administrator of the Original Benchmark Rate is made that it has ceased or that it will cease publishing the Original Benchmark Rate permanently or indefinitely (in circumstances where no successor administrator has been appointed that will continue the publication of the Original Benchmark Rate); or
- (3) a public statement by the supervisor of the administrator of the Original Benchmark Rate is made that the Original Benchmark Rate has been or will be permanently or indefinitely discontinued; or
- (4) a public statement by the supervisor of the administrator of the Original Benchmark Rate is made as a consequence of which the Original Benchmark Rate will be prohibited from being used either generally, or in respect of the Notes; or

Schuldverschreibungen nicht mehr verwendet werden darf; oder

- (5) die Verwendung des Ursprünglichen Benchmarksatzes zur Berechnung jedweder Zahlungen an Gläubiger für die Hauptzahlstelle, die Berechnungsstelle, die Emittentin oder einen Dritten rechtswidrig geworden ist; oder
- (6) eine öffentliche Erklärung der Aufsichtsbehörde des Administrators des Ursprünglichen Benchmarksatzes veröffentlicht wird, mit der bekanntgegeben wird, dass der Ursprüngliche Benchmarksatz nicht mehr repräsentativ ist; oder
- (7) sich die Methode für die Feststellung des Ursprünglichen Benchmarksatzes gegenüber der Methode, die der Administrator des Ursprünglichen Benchmarksatzes bei Zinslaufbeginn anwendete, wesentlich ändert.

"Nachfolge-Benchmarksatz" bezeichnet einen Nachfolger oder Ersatz des Ursprünglichen Benchmarksatzes, der formell durch das Nominierungsgremium empfohlen wurde.

"Neuer Benchmarksatz" bezeichnet den jeweils gemäß diesem § 4(4) bestimmten Nachfolge-Benchmarksatz bzw. Alternativ-Benchmarksatz.

"Nominierungsgremium" bezeichnet in Bezug auf die Ersetzung des Ursprünglichen Benchmarksatzes:

- (1) die Zentralbank für die Währung in der die Benchmark oder der Bildschirmsatz dargestellt wird oder eine Zentralbank oder andere Aufsichtsbehörde, die für die Aufsicht des Administrators der Benchmark oder des Bildschirmsatzes zuständig ist; oder
- (2) jede Arbeitsgruppe oder jeden Ausschuss gefördert durch, geführt

- (5) it has become unlawful for the Principal Paying Agent, the Calculation Agent, the Issuer or any other party to calculate any payments due to be made to any Holder using the Original Benchmark Rate; or

- (6) a public statement by the supervisor for the administrator of the Original Benchmark Rate is made announcing that the Original Benchmark Rate is no longer representative; or

- (7) the methodology for the determination of the Original Benchmark Rate is materially altered compared to the methodology as used by the administrator of the Original Benchmark Rate at the Interest Commencement Date.

"Successor Benchmark Rate" means a successor to or replacement of the Original Benchmark Rate which is formally recommended by any Relevant Nominating Body.

"New Benchmark Rate" means the Successor Benchmark Rate or, as the case may be, the Alternative Benchmark Rate determined in accordance with this § 4(4).

"Relevant Nominating Body" means, in respect of the replacement of the Original Benchmark Rate:

- (1) the central bank for the currency to which the benchmark or screen rate (as applicable) relates, or any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable); or
- (2) any working group or committee sponsored by, chaired or co-chaired

oder mitgeführt von oder gebildet von (a) der Zentralbank für die Währung in der die Benchmark oder der Bildschirmsatz dargestellt wird, (b) einer Zentralbank oder anderen Aufsichtsbehörde, die für die Aufsicht des Administrators der Benchmark oder des Bildschirmsatzes zuständig ist, (c) einer Gruppe der zuvor genannten Zentralbanken oder anderer Aufsichtsbehörden oder (d) dem Finanzstabilitätsrat (Financial Stability Board) oder Teilen davon.

"**Unabhängiger Berater**" bezeichnet ein von der Emittentin ernanntes unabhängiges Finanzinstitut mit internationalem Ansehen oder einen anderen unabhängigen Finanzberater mit Erfahrung in internationalen Kapitalmärkten.

- (g) Der Stichtag für die Anwendung des Neuen Benchmarksatzes, der Anpassungsspanne und der etwaigen Benchmark-Änderungen gemäß diesem § 4(4) (der "**Stichtag**") ist der Zinsfeststellungstag, der auf den frühesten der folgenden Tage fällt oder diesem nachfolgt:
- (i) den Tag des Eintritts des Benchmark-Ereignisses, wenn das Benchmark-Ereignis aufgrund der Absätze (1), (6) oder (7) der Definition des Begriffs "Benchmark-Ereignis" eingetreten ist; oder
 - (ii) den Tag, an dem die Veröffentlichung des Ursprünglichen Benchmarksatzes eingestellt wird bzw. an dem der Ursprüngliche Benchmarksatz eingestellt wird, wenn das Benchmark-Ereignis aufgrund der Absätze (2), (3) oder (4) der Definition des Begriffs "Benchmark-Ereignis" eingetreten ist; oder
 - (iii) den Tag, ab dem der Ursprüngliche Benchmarksatz nicht mehr verwendet werden darf, wenn das Benchmark-Ereignis aufgrund des

by or constituted at the request of (a) the central bank for the currency to which the benchmark or screen rate (as applicable) relates, (b) any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable), (c) a group of the aforementioned central banks or other supervisory authorities or (d) the Financial Stability Board or any part thereof.

"**Independent Adviser**" means an independent financial institution of international repute or other independent financial adviser experienced in the international capital markets, in each case appointed by the Issuer.

- (g) The effective date for the application of the New Benchmark Rate, the Adjustment Spread and the Benchmark Amendments (if any) determined under this § 4(4) (the "**Effective Date**") will be the Interest Determination Date falling on or after the earliest of the following dates:
- (i) if the Benchmark Event has occurred as a result of clauses (1), (6) or (7) of the definition of the term "Benchmark Event", the date of the occurrence of the Benchmark Event; or
 - (ii) if the Benchmark Event has occurred as a result of clauses (2), (3) or (4) of the definition of the term "Benchmark Event", the date of cessation of publication of the Original Benchmark Rate or of the discontinuation of the Original Benchmark Rate, as the case may be; or
 - (iii) if the Benchmark Event has occurred as a result of clause (5) of the definition of the term "Benchmark

Absatzes (5) der Definition des Begriffs "Benchmark-Ereignis" eingetreten ist.

Event", the date from which the prohibition applies.

- (h) Wenn ein Benchmark-Ereignis in Bezug auf einen Neuen Benchmarksatz eintritt, gilt dieser § 4(4) entsprechend für die Ersetzung des Neuen Benchmarksatzes durch einen neuen Nachfolge-Benchmarksatz bzw. Alternativ-Benchmarksatz. In diesem Fall gilt jede Bezugnahme in diesem § 4 auf den Begriff Ursprünglicher Benchmarksatz als Bezugnahme auf den zuletzt verwendeten Neuen Benchmarksatz.
- (i) In diesem § 4(4) schließt jede Bezugnahme auf den Begriff "Ursprünglicher Benchmarksatz" gegebenenfalls auch eine Bezugnahme auf eine etwaige Teilkomponente des Ursprünglichen Benchmarksatzes ein, wenn in Bezug auf diese Teilkomponente ein Benchmark-Ereignis eingetreten ist.
- (5) *Berechnung der Zinsen.* Die an dem jeweiligen Zinszahlungstag zu zahlenden Zinsen je Schuldverschreibung (die ergeben sich aus der Multiplikation des jeweiligen Anwendbaren Zinssatzes mit der Festgelegten Stückelung je Schuldverschreibung und dem Zinstagequotienten, wobei der daraus resultierende Betrag auf den nächsten Eurocent auf- oder abgerundet wird, und ab 0,5 eines Eurocents aufgerundet wird. Zinsen für einen beliebigen Zeitraum werden nach Maßgabe des § 4(7) berechnet.
- (6) *Zinsen nach Eintritt eines Kontrollwechselereignisses.* Wenn ein Kontrollwechselereignis (wie in § 5(6) definiert) eintritt und die Emittentin die Schuldverschreibungen nicht insgesamt gemäß § 5(6) zurückzahlt, erhöht sich der für die Berechnung der Zinsen ansonsten anzuwendende Anwendbare Zinssatz ab dem Kontrollwechsel-Stichtag (wie in § 5(6) definiert) um zusätzliche 500 Basispunkte *per annum*. Für den Fall, dass in dem Zeitraum zwischen dem Eintritt des ersten Kontrollwechsels und dem Tag, an dem die Kontrollwechsel-Mitteilung (wie in § 5(6) definiert) in Bezug auf diesen ersten Kontrollwechsel veröffentlicht wird, mehr als ein Kontrollwechsel eintritt, erhöht sich der für die Berechnung der Zinsen
- (h) If a Benchmark Event occurs in relation to any New Benchmark Rate, § 4(4) shall apply *mutatis mutandis* to the replacement of such New Benchmark Rate by any new Successor Benchmark Rate or Alternative Benchmark Rate, as the case may be. In this case, any reference in this § 4 to the term Original Benchmark Rate shall be deemed to be a reference to the New Benchmark Rate that last applied.
- (i) Any reference in this § 4(4) to the term Original Benchmark Rate shall be deemed to include a reference to any component part thereof, if any, in respect of which a Benchmark Event has occurred.
- (5) *Calculation of Interest.* Interest payable per Note on the respective Interest Payment Date shall be calculated by multiplying the Prevailing Interest Rate with the Specified Denomination and the Day Count Fraction and rounding the resulting figure to the nearest eurocent, with 0.5 eurocents being rounded upwards. If interest is to be calculated for any period of time, it shall be calculated in accordance with § 4(7).
- (6) *Interest following the occurrence of a Change of Control Event.* If a Change of Control Event (as defined in § 5(6)) occurs and the Issuer does not redeem the Notes in whole in accordance with § 5(6), the rate applicable for calculating the interest will be subject to an additional 500 basis points *per annum* above the otherwise applicable Prevailing Interest Rate from the Change of Control Effective Date (as defined in § 5(6)), provided however that, in case more than one Change of Control will have occurred in the period from the occurrence of the first Change of Control to (and including) the day on which the Change of Control Notice (as defined in § 5(6)) with regard to such first Change of Control is published,

ansonsten anzuwendende Anwendbare Zinssatz jedoch nur einmal.

- (7) *Berechnung der Zinsen.* Sofern Zinsen für einen beliebigen Zeitraum zu berechnen sind, erfolgt die Berechnung auf der Grundlage des Zinstagequotienten (wie nachfolgend definiert).

"**Zinstagequotient**" bezeichnet in Bezug auf die Berechnung von Zinsen auf die Schuldverschreibungen für einen beliebigen Zeitraum (der "**Zinsberechnungszeitraum**"):

- (a) wenn der Zinsberechnungszeitraum (einschließlich des ersten aber ausschließlich des letzten Tages dieses Zeitraums) kürzer ist als die Feststellungsperiode, in die das Ende des Zinsberechnungszeitraumes fällt oder ihr entspricht, die Anzahl der Tage in dem betreffenden Zinsberechnungszeitraum (einschließlich des ersten aber ausschließlich des letzten Tages dieses Zeitraums) geteilt durch das Produkt aus (1) der Anzahl der Tage in der Feststellungsperiode und (2) der Anzahl der Feststellungstermine in einem Kalenderjahr; oder
- (b) wenn der Zinsberechnungszeitraum (einschließlich des ersten aber ausschließlich des letzten Tages dieses Zeitraums) länger ist als die Feststellungsperiode, in die das Ende des Zinsberechnungszeitraumes fällt, die Summe aus (A) der Anzahl der Tage in dem Zinsberechnungszeitraum, die in die Feststellungsperiode fallen, in welcher der Zinsberechnungszeitraum beginnt, geteilt durch das Produkt aus (1) der Anzahl der Tage in dieser Feststellungsperiode und (2) der Anzahl der Feststellungstermine in einem Kalenderjahr und (B) der Anzahl der Tage in dem Zinsberechnungszeitraum, die in die nächste Feststellungsperiode fallen, geteilt durch das Produkt aus (1) der Anzahl der Tage in dieser Feststellungsperiode und (2) der Anzahl der Feststellungstermine in einem Kalenderjahr.

"**Feststellungsperiode**" ist der Zeitraum ab einem Feststellungstermin (einschließlich) bis zum nächsten Feststellungstermin (ausschließlich).

the otherwise applicable Prevailing Interest Rate will only be increased once.

- (7) *Calculation of Interest.* If interest is to be calculated for any period of time, it shall be calculated on the basis of the Day Count Fraction (as defined below).

"**Day Count Fraction**" means, in respect of the calculation of interest on any Note for any period of time (the "**Calculation Period**"):

- (a) if the Calculation Period (from and including the first day of such period but excluding the last) is equal to or shorter than the Determination Period during which the Calculation Period ends, the number of days in such Calculation Period (from and including the first day of such period but excluding the last) divided by the product of (1) the number of days in such Determination Period and (2) the number of Determination Dates that would occur in one calendar year; or
- (b) if the Calculation Period (from and including the first day of such period but excluding the last) is longer than the Determination Period during which the Calculation Period ends, the sum of: (A) the number of days in such Calculation Period falling in the Determination Period in which the Calculation Period begins divided by the product of (1) the number of days in such Determination Period and (2) the number of Determination Dates that would occur in one calendar year and (B) the number of days in such Calculation Period falling in the next Determination Period divided by the product of (1) the number of days in such Determination Period and (2) the number of Determination Dates that would occur in one calendar year.

"**Determination Period**" means the period from and including a Determination Date to but excluding the next Determination Date.

"Feststellungstermin" bezeichnet jeden 9. September.

- (8) *Zinsaufschub.* Zinsen sind an dem jeweiligen Zinszahlungstag fällig und zahlbar, sofern sich die Emittentin nicht entscheidet, die Zinsen aufzuschieben. Eine solche Nichtzahlung, die jedoch in Bezug auf die jeweiligen Zinsen nur insgesamt erfolgen kann, begründet keinen Verzug der Emittentin und keine anderweitige Verletzung ihrer Verpflichtungen aufgrund dieser Schuldverschreibungen oder für sonstige Zwecke. Soweit sich die Emittentin entscheidet, an einem Zinszahlungstag die Zinsen nicht zu zahlen, hat sie dies den Gläubigern gemäß § 13 unter Einhaltung einer Frist von mindestens sieben Geschäftstagen vor dem jeweiligen Zinszahlungstag bekannt zu machen.

Die aufgrund einer derartigen Entscheidung der Emittentin nicht gezahlten Zinsen stellen "**Zinsrückstände**" dar. Zinsrückstände werden nicht verzinst.

- (9) Nachzahlung von Zinsrückständen.
- (a) Die Emittentin kann ausstehende Zinsrückstände jederzeit (insgesamt, jedoch nicht teilweise) nach Mitteilung gemäß § 13 unter Einhaltung einer Frist von mindestens sieben Geschäftstagen zahlen (wobei eine solche Mitteilung unwiderruflich ist und die Emittentin verpflichtet ist, die jeweiligen Zinsrückstände an dem in dieser Mitteilung genannten Zahlungstag zu zahlen).
- (b) Bei Eintritt des frühesten der nachfolgenden Ereignisse gelten die ausstehenden Zinsrückstände (insgesamt, jedoch nicht teilweise) durch die Emittentin als für fällig und zahlbar erklärt:
- (i) der zehnte Geschäftstag nach Eintritt eines Obligatorischen Zahlungseignisses (wie nachfolgend definiert); oder
- (ii) der Tag, an dem die Schuldverschreibungen insgesamt zur Rückzahlung fällig sind; oder
- (iii) ein Zinszahlungstag, in Bezug auf den die Emittentin nicht entscheidet, die Zahlung aufgelaufener Zinsen auf die Schuldverschreibungen in

"**Determination Date**" means each September 9.

- (8) *Interest Deferral.* Interest shall be due and payable on the respective Interest Payment Date unless the Issuer elects to defer such interest. An election not to pay interest, which can only be made regarding the whole respective interest, shall not constitute a default of the Issuer or any other breach of obligations under the Notes or for any other purpose. If the Issuer decides to not pay the interest on an Interest Payment Date, the Issuer shall notify the Holders in accordance with § 13 not less than seven Business Days prior to the relevant Interest Payment Date.

Any interest not paid due to such an election of the Issuer shall constitute "**Deferred Interest Payments**". Deferred Interest Payments shall not bear interest themselves.

- (9) Payment of Deferred Interest Payments.
- (a) The Issuer may pay outstanding Deferred Interest Payments (in whole but not in part) at any time upon giving of not less than seven Business Days' notice in accordance with § 13 (which notice shall be irrevocable and will oblige the Issuer to pay the relevant Deferred Interest Payments on the payment date specified in such notice).
- (b) The Issuer shall be deemed to have declared outstanding Deferred Interest Payments (in whole but not in part) due and payable at the earliest of any of the following events:
- (i) the tenth Business Day following the occurrence of a Compulsory Payment Event (as defined below); or
- (ii) the due date for the redemption of the Notes; or
- (iii) an Interest Payment Date in respect of which the Issuer does not elect to defer the interest accrued on the

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| <p>Bezug auf die betreffende Zinsperiode aufzuschieben; oder</p> | <p>Notes in respect of the relevant Interest Period; or</p> |
| <p>(iv) der Tag, an dem eine freiwillige Auflösung der Emittentin beschlossen wird oder an dem eine Verfügung zur Auflösung, Abwicklung oder Liquidation der Emittentin ergeht (sofern dies nicht für die Zwecke einer Sanierung oder eines Insolvenzplanverfahrens oder als Folge eines Zusammenschlusses oder einer Umstrukturierung geschieht, während die Emittentin noch zahlungsfähig ist und die fortführende Gesellschaft im Wesentlichen alle Vermögenswerte und Verpflichtungen der Emittentin übernimmt).</p> | <p>(iv) the date on which the voluntary winding-up of the Issuer will be resolved or an order is made for the winding-up, dissolution or liquidation of the Issuer (in each case other than for the purposes of or pursuant to the restructuring or an insolvency plan procedure (<i>Insolvenzplanverfahren</i>) or an amalgamation or reorganisation while solvent, where the continuing entity assumes substantially all of the assets and obligations of the Issuer).</p> |
| <p>(c) Ein "Obligatorisches Zahlungsereignis" gilt bei Eintritt eines der folgenden Ereignisse als eingetreten:</p> | <p>(c) A "Compulsory Payment Event" shall be deemed to have occurred upon any of the following events:</p> |
| <p>(i) der Tag, (x) an dem die Jahreshauptversammlung oder eine andere Hauptversammlung der Emittentin für eine Beteiligung der Kommanditaktionäre am Eigenkapital der Emittentin eine Dividende, bzw. eine andere Ausschüttung oder Zahlung beschließt (mit Ausnahme einer Dividende bzw. einer anderen Ausschüttung oder Zahlung, die in Form von Kommanditaktien der Emittentin vorgenommen wird) und/oder (y) der Tag an dem eine Entnahme aufgrund der Beteiligung eines persönlich haftenden Gesellschafters am Eigenkapital der Emittentin zu Gunsten eines persönlich haftenden Gesellschafters beschlossen wird oder die Emittentin eine solche Entnahme leistet; oder</p> | <p>(i) the date on which (x) the Issuer's annual general meeting or any other general meeting (<i>Hauptversammlung</i>) of the Issuer resolves on a dividend, other distribution or other payment in respect of any participation of the limited partnership shareholders (<i>Kommanditaktionäre</i>) in the equity of the Issuer (other than a dividend, distribution or payment which is made in the form of limited partnership shares (<i>Kommanditaktien</i>) of the Issuer) and/or (y) the date on which any distribution to a general partner (<i>persönlich haftender Gesellschafter</i>) of the Issuer arising out of its participation in the equity of the Issuer is declared or made by the Issuer; or</p> |
| <p>(ii) die Emittentin erwirbt Kommanditaktien der Emittentin zurück oder zahlt einen Kapitalanteil eines persönlich haftenden Gesellschafters zurück oder eine ihrer Tochtergesellschaften kauft</p> | <p>(ii) the Issuer repurchases any limited partnership shares (<i>Kommanditaktien</i>) of the Issuer or any equity interest (<i>Kapitalanteil</i>) of a general partner (<i>persönlich haftender Gesellschafter</i>) or any of</p> |

ausstehende Kommanditaktien der Emittentin oder Kapitalanteile eines persönlich haftenden Gesellschafters zurück (ausgenommen (x) in Verbindung mit einem Mitarbeiterbeteiligungsprogramm oder einer ähnlichen Maßnahme zu Gunsten von Arbeitnehmern, leitenden Angestellten, Führungskräften oder Beratern, (y) als Ergebnis eines Umtauschs oder einer Wandlung einer Aktiegattung in eine andere oder (z) falls die Emittentin Kapitalanteile eines persönlich haftenden Gesellschafters oder Kommanditaktien der Emittentin als Entgelt für einen Verkauf von Vermögenswerten an Dritte erhält); oder

(iii) der Tag, an dem die Emittentin oder eine Tochtergesellschaft eine Zahlung oder Ausschüttung auf ein Gleichrangiges Wertpapier vornimmt; oder

(iv) der Tag, an dem die Emittentin oder eine Tochtergesellschaft (jeweils direkt oder indirekt) ein Gleichrangiges Wertpapier oder Schuldverschreibungen zurückzahlt, zurückkauft oder anderweitig erwirbt,

jeweils mit Ausnahme einer Ausschüttung einer Dividende, die die Emittentin im Zeitpunkt der Bekanntmachung des Zinsaufschubs gemäß § 4(8) bereits angekündigt aber noch nicht vollständig gezahlt hat

In den vorgenannten Fällen (iii) und (iv) tritt kein Obligatorisches Zahlungsereignis ein, wenn

(x) die Emittentin oder die betreffende Tochtergesellschaft gemäß den Anleihebedingungen des

its Subsidiaries repurchases or otherwise acquires any of the outstanding limited partnership shares (*Kommanditaktien*) of the Issuer or any equity interest (*Kapitalanteil*) of a general partner (*persönlich haftender Gesellschafter*) (other than (x) in connection with any employee benefit plan or similar arrangements with or for the benefit of employees, officers, directors or consultants, (y) as a result of the exchange or conversion of one class of shares for another class, or (z) in the case the Issuer receives any equity interest (*Kapitalanteil*) of a general partner (*persönlich haftender Gesellschafter*) or limited partnership shares (*Kommanditaktien*) of the Issuer as consideration for a sale of assets to third parties); or

(iii) the date on which the Issuer or any Subsidiary makes any payment or distribution in respect of any Parity Security; or

(iv) the date on which the Issuer or any Subsidiary redeems, repurchases or otherwise acquires (in each case directly or indirectly) any Parity Security or Notes,

in each case save for any distribution of a dividend that the Issuer has already announced but not yet (fully) paid out at time of the notification to the Holders of the relevant interest deferral in accordance with § 4(8).

The cases (iii) and (iv) above are subject to the provision that no Compulsory Payment Event occurs if

(x) the Issuer or the relevant Subsidiary is obliged under the terms and conditions of such Parity Security to

betreffenden Gleichrangigen Wertpapiers zu der Zahlung, zu der Rückzahlung, zu dem Rückkauf oder zu dem anderweitigen Erwerb verpflichtet ist; oder

- (y) die Emittentin oder die betreffende Tochtergesellschaft Gleichrangige Wertpapiere oder Schuldverschreibungen nach einem öffentlichen Rückkaufangebot oder öffentlichen Umtauschangebot mit einer unter dem jeweiligen Nennwert liegenden Gegenleistung je Gleichrangigem Wertpapier bzw. je Schuldverschreibung zurückkauft oder anderweitig erwirbt; oder
- (z) die betreffenden Zahlungen auf oder in Bezug auf Gleichrangige Wertpapiere Konzerninterne Zahlungen sind.

"Konzerninterne Zahlungen" sind Zahlungen, die ausschließlich an die Emittentin und/oder an eine oder mehrere ihrer Tochtergesellschaften erfolgen.

- (10) *Ende der Verzinsung.* Die Verzinsung der Schuldverschreibungen endet mit Beginn des Tages, an dem die Schuldverschreibungen zur Rückzahlung fällig werden. Sollte die Emittentin die Schuldverschreibungen bei Fälligkeit nicht einlösen, endet die Verpflichtung zur Zahlung von Zinsen auf die festgelegte Stückelung je ausstehender Schuldverschreibung zu dem dann Anwendbaren Zinssatz nicht am Tag der Fälligkeit, sondern erst mit dem Beginn des Tages der tatsächlichen Rückzahlung der Schuldverschreibungen.

§ 5

RÜCKZAHLUNG UND RÜCKKAUF

- (1) *Endfälligkeit.* Sofern nicht bereits zuvor zurückgezahlt oder zurückgekauft und entwertet, wird die Emittentin den Gesamtnennbetrag der ausstehenden Schuldverschreibungen am 9. September 2080 (der "**Endfälligkeitstag**") zurückzahlen.

make such payment, such redemption, such repurchase or such other acquisition; or

- (y) the Issuer or the relevant Subsidiary repurchases or otherwise acquires any Parity Security or Note in whole or in part in a public tender offer or public exchange offer at a consideration per Parity Security or, as applicable, per Note below its respective par value; or
- (z) the relevant payments on, or in respect of, any Parity Securities are Intra-Group Payments.

"Intra-Group Payments" means payments made exclusively to the Issuer and/or one or more of its Subsidiaries.

- (10) *Cessation of Interest Accrual.* The Notes shall cease to bear interest from the beginning of the day on which they are due for redemption. If the Issuer shall fail to redeem the Notes when due, the obligation to pay interest shall continue to accrue at the then Prevailing Interest Rate on the Specified Denomination per Note outstanding beyond the due date to the beginning of the day of the actual redemption of the Notes.

§ 5

REDEMPTION AND PURCHASE

- (1) *Maturity Date.* Unless previously redeemed or repurchased and cancelled, Issuer will repay the aggregate principal amount of the Notes outstanding on September 9, 2080 (the "**Maturity Date**").

(2) *Kündigungsrecht der Emittentin bei einem Quellensteuer-Ereignis, einem Steuerereignis oder einem Ratingagenturereignis.*

(a) *Quellensteuer-Ereignis*

Bei Eintritt eines Quellensteuer-Ereignisses ist die Emittentin berechtigt, die Schuldverschreibungen jederzeit (insgesamt, jedoch nicht teilweise) durch eine unwiderrufliche Mitteilung gemäß § 13 unter Einhaltung einer Frist von mindestens 10 Geschäftstagen mit Wirkung zu dem in der Kündigungserklärung festgelegten Rückzahlungstag zu kündigen und zurückzuzahlen.

Wenn die Emittentin ihr Kündigungsrecht gemäß Satz 1 ausübt, hat die Emittentin sämtliche ausstehenden Schuldverschreibungen an dem Rückzahlungstag zu einem Betrag je Schuldverschreibung in Höhe der festgelegten Stückelung zuzüglich der bis zum Rückzahlungstag (ausschließlich) aufgelaufenen, aber noch nicht bezahlten Zinsen sowie, zur Klarstellung, etwaiger gemäß § 4(9)(b) fälliger Zinsrückstände zurückzuzahlen.

Die Kündigungsmittteilung darf nicht früher als 90 Tage vor dem ersten Tag gemacht werden, an dem die Emittentin erstmals verpflichtet wäre, die jeweiligen Zusätzlichen Beträge (wie in § 8 beschrieben) in Ansehung fälliger Beträge auf die Schuldverschreibungen zu zahlen.

Ein "**Quellensteuer-Ereignis**" tritt ein, wenn der Emittentin ein Gutachten einer anerkannten Anwaltskanzlei vorliegt (und die Emittentin der Hauptzahlstelle eine Kopie davon gibt), aus dem hervorgeht, dass die Emittentin verpflichtet ist oder verpflichtet sein wird, Zusätzliche Beträge (wie in § 8 beschrieben) als Folge einer Änderung oder Ergänzung von Gesetzen oder Vorschriften der Bundesrepublik Deutschland oder einer ihrer Gebietskörperschaften oder Steuerbehörden oder als Folge einer Änderung oder Ergänzung der offiziellen Auslegung oder

(2) *Issuer Call Right due to a Gross-up Event, a Tax Event or a Rating Agency Event.*

(a) *Gross-up Event*

If a Gross-up Event occurs, the Issuer may call and redeem the Notes (in whole but not in part) at any time by giving of not less than 10 Business Days' irrevocable notice in accordance with § 13 with effect as of the Redemption Date specified in the notice.

If the Issuer exercises its call right in accordance with sentence 1, the Issuer will redeem, on the Redemption Date, all outstanding Notes at an amount per Note equal to the Specified Denomination plus any interest accrued and unpaid to but excluding the Redemption Date and, for the avoidance of doubt, any Deferred Interest Payments due and payable pursuant to § 4(9)(b).

No notice of redemption may be given earlier than 90 days prior to the earliest day on which the Issuer would be for the first time obliged to pay the Additional Amounts (as described in § 8) in question on payments due in respect of the Notes.

A "**Gross-up Event**" will occur if an opinion of a recognised law firm has been delivered to the Issuer (and the Issuer has provided the Principal Paying Agent with a copy thereof) stating that the Issuer has or will become obliged to pay Additional Amounts (as set out in § 8) as a result of any change in, or amendment to, the laws or regulations of the Federal Republic of Germany or any political subdivision or taxing authority thereof, or therein, or as a result of any amendment to, or any change in, any official interpretation or application of any such laws of regulations by any legislative body, court, or taxing

Anwendung dieser Gesetze oder Vorschriften durch eine gesetzgebende Körperschaft, ein Gericht, eine Steuerbehörde, eine Aufsichtsbehörde oder eine sonstige Behörde (einschließlich des Erlasses von Gesetzen sowie der Bekanntmachung gerichtlicher oder aufsichtsrechtlicher Entscheidungen) zu zahlen, allerdings nur soweit die betreffende Änderung, Ergänzung oder Durchführung an oder nach dem Ausgabetag der Schuldverschreibungen wirksam wird und die Emittentin die Zahlungsverpflichtung nicht durch das Ergreifen von Maßnahmen vermeiden kann, die sie nach Treu und Glauben für angemessen hält.

(b) *Steuerereignis oder Ratingagenturereignis*

Bei Eintritt eines Steuerereignisses oder eines Ratingagenturereignisses ist die Emittentin berechtigt, die Schuldverschreibungen jederzeit (insgesamt, jedoch nicht teilweise) durch eine unwiderrufliche Mitteilung gemäß § 13 unter Einhaltung einer Frist von mindestens 10 Geschäftstagen mit Wirkung zu dem in der Kündigungserklärung festgelegten Rückzahlungstag zu kündigen und zurückzuzahlen.

Wenn die Emittentin ihr Kündigungsrecht gemäß Satz 1 ausübt, hat die Emittentin sämtliche ausstehenden Schuldverschreibungen am Rückzahlungstag zurückzuzahlen, und zwar zu einem Betrag je Schuldverschreibung (i) in Höhe von 101 % der Festgelegten Stückelung, wenn eine solche Rückzahlung vor dem Ersten Optionalen Rückzahlungstag erfolgt, bzw. (ii) in Höhe der Festgelegten Stückelung, wenn eine solche Rückzahlung an oder nach dem Ersten Optionalen Rückzahlungstag erfolgt, jeweils zuzüglich der bis zum Rückzahlungstag (ausschließlich) aufgelaufenen, aber noch nicht bezahlten Zinsen sowie, zur Klarstellung, etwaiger gemäß § 4(9)(b) fälliger Zinsrückstände.

Ein "Steuerereignis" liegt vor, wenn

authority, governmental agency or regulatory authority (including the enactment of any legislation and the publication of any judicial decision or regulatory determination), provided that the relevant amendment, change or execution becomes effective on or after the issue date of the Notes and provided further that the payment obligation cannot be avoided by the Issuer taking such reasonable measures it (acting in good faith) deems appropriate.

(b) *Tax Event or Rating Agency Event*

If a Tax Event or a Rating Agency Event occurs, the Issuer may call and redeem the Notes (in whole but not in part) at any time by giving of not less than 10 Business Days' irrevocable notice in accordance with § 13 with effect as of the Redemption Date specified in the notice.

If the Issuer exercises its call right in accordance with sentence 1, the Issuer will redeem, on the Redemption Date, all outstanding Notes at an amount per Note equal to (i) 101 % of the Specified Denomination per Note if the redemption occurs prior to the First Optional Redemption Date, or (ii) the Specified Denomination per Note if such redemption occurs on or after the First Optional Redemption Date, in each case plus any interest accrued and unpaid to but excluding the Redemption Date and, for the avoidance of doubt, any Deferred Interest Payments due and payable pursuant to § 4(9)(b).

A "Tax Event" shall have occurred if

- (i) der Hauptzahlstelle ein Gutachten eines anerkannten unabhängigen Steuerberaters übergeben worden ist, aus dem hervorgeht, dass an oder nach dem Ausgabetag der Schuldverschreibungen als Folge:
- (A) einer Änderung oder Ergänzung der Gesetze (oder von aufgrund dieser Gesetze erlassenen Bestimmungen oder Vorschriften) der Bundesrepublik Deutschland oder einer ihrer Gebietskörperschaften oder Steuerbehörden, die an oder nach dem Ausgabetag der Schuldverschreibungen erlassen, verkündet oder anderweitig wirksam wird; oder
- (B) einer Änderung oder Ergänzung der bindenden offiziellen Auslegung solcher Gesetze, Bestimmungen oder Vorschriften durch eine gesetzgebende Körperschaft, ein Gericht, eine Regierungsstelle oder eine Aufsichtsbehörde (einschließlich des Erlasses von Gesetzen sowie der Bekanntmachung gerichtlicher oder aufsichtsrechtlicher Entscheidungen), die an oder nach dem Ausgabetag der Schuldverschreibungen erlassen, verkündet oder anderweitig wirksam wird; oder
- (C) einer allgemein anwendbaren offiziellen Auslegung oder Verkündung, die an oder nach dem Ausgabetag der Schuldverschreibungen erlassen oder verkündet wird und nach der die Rechtslage
- (i) an opinion of a recognised independent tax counsel has been delivered to the Principal Paying Agent, stating that on or after the issue date of the Notes, as a result of:
- (A) any amendment to, or change in, the laws (or any rules or regulations thereunder) of the Federal Republic of Germany or any political subdivision or any taxing authority thereof or therein which is enacted, promulgated, issued or becomes effective otherwise on or after the issue date of the Notes; or
- (B) any amendment to, or change in, an official and binding interpretation of any such laws, rules or regulations by any legislative body, court, governmental agency or regulatory authority (including the enactment of any legislation and the publication of any judicial decision or regulatory determination) which is enacted, promulgated, issued or becomes effective otherwise on or after the issue date of the Notes; or
- (C) any generally applicable official interpretation or pronouncement that provides for a position with respect to such laws or regulations that differs from the previous generally accepted position

im Hinblick auf diese Gesetze oder Vorschriften von der früheren allgemein anerkannten Rechtslage abweicht;

der Zinsaufwand aus den Schuldverschreibungen von der Emittentin nicht mehr für die Zwecke der deutschen Körperschaftsteuer voll abzugsfähig sind, bzw. innerhalb von 90 Tagen nach dem Datum dieses Gutachtens nicht mehr voll abzugsfähig sein werden; und

- (ii) die Emittentin dieses Risiko nicht durch das Ergreifen zumutbarer Maßnahmen vermeiden kann.

Ein "**Ratingagenturereignis**" tritt ein, wenn entweder:

- (x) eine Ratingagentur eine Methodologieänderung (wie nachstehend definiert) veröffentlicht, wodurch ein Verlust der Eigenkapitalanrechnung (wie nachstehend definiert) der Schuldverschreibungen eintritt; oder
- (y) eine Ratingagentur eine Methodologieänderung veröffentlicht, die zu einem Verlust der Eigenkapitalanrechnung der Schuldverschreibungen geführt hätte, wenn sich die den Schuldverschreibungen zugeordnete "Eigenkapitalanrechnung" nicht bereits zuvor geändert hätte, weil die Schuldverschreibungen bereits insgesamt oder teilweise refinanziert worden sind; oder
- (z) die Emittentin eine schriftliche Bestätigung von einer Ratingagentur von der die Emittentin ein Solicited Rating erhält, erhalten und diese an die Hauptzahlstelle in Kopie weitergegeben hat, welche besagt, dass aufgrund einer Methodologieänderung ein Verlust der Eigenkapitalanrechnung der

which is issued or announced on or after the issue date of the Notes;

the interest expense in respect of the Notes is no longer, or within 90 days of the date of that opinion will no longer be, fully deductible by the Issuer for German corporate income tax purposes; and

- (ii) such risk cannot be avoided by the Issuer taking reasonable measures available to it.

A "**Rating Agency Event**" will occur if either:

- (x) any Rating Agency publishes any Methodology Change (as defined below), as a result of which a Loss in Equity Credit (as defined below) for the Notes occurs; or
- (y) any Rating Agency publishes any Methodology Change which would have resulted in a Loss in Equity Credit for the Notes had the "equity credit" attributed to the Notes not changed previously because the Notes had been partially or fully refinanced; or
- (z) the Issuer has received, and has provided the Principal Paying Agent with a copy of, a written confirmation from any Rating Agency from which the Issuer is assigned a Solicited Rating that due to a Methodology Change a Loss in Equity Credit for the Notes has occurred.

Schuldverschreibungen eingetreten ist.

Die Emittentin informiert die Gläubiger über das Ratingagenturereignis in der Mitteilung der Rückzahlung (wie oben beschrieben).

Dabei gilt Folgendes:

"Methodologieänderung" bezeichnet jede Ergänzung, Klarstellung oder Änderung in der Methodologie für Nachrangkapital oder der Interpretation dieser Methodologie, die an oder nach dem Ausgabetag der Schuldverschreibungen wirksam wird.

"Ratingagentur" bezeichnet die S&P Global Ratings Europe Limited oder eine Nachfolgesellschaft ("**S&P**") Moody's Investors Service Limited oder eine Nachfolgesellschaft ("**Moody's**") oder eine andere durch die Emittentin bezeichnete Ratingagentur mit internationaler Anerkennung, von der die Emittentin ein Solicited Rating erhält, sowie deren jeweilige Nachfolgesellschaften.

"Solicited Rating" bezeichnet ein Rating, das von einer Ratingagentur erteilt wird, mit der die Emittentin in einem Vertragsverhältnis steht, im Rahmen dessen die Ratingagentur ein Rating für die Schuldverschreibungen erteilt und eine Eigenkapitalanrechnung der Schuldverschreibungen festlegt.

Ein **"Verlust der Eigenkapitalanrechnung"** tritt ein,

- (x) wenn die Schuldverschreibungen nicht länger ganz oder teilweise in derselben oder einer höheren Kategorie der "Eigenkapitalanrechnung" (oder einer vergleichbaren Beschreibung, die von einer Ratingagentur von Zeit zu Zeit genutzt wird, um zu beschreiben in wie weit die Bedingungen eines Instruments die vorrangigen Verbindlichkeiten der Emittentin unterstützen) zugeordnet sind wie an dem Tag, an dem diese Ratingagentur die

The Issuer will inform the Holders of such Rating Agency Event in the notice of redemption referred to above.

Where:

"Methodology Change" means any amendment to, clarification of, or a change in subordinated capital methodology or the interpretation thereof which becomes effective on or after issue date of the Notes.

"Rating Agency" means any of S&P Global Ratings Europe Limited or any of its successors ("**S&P**"), Moody's Investors Service Limited ("**Moody's**") or any of its successors or any other rating agency of international standing from which the Issuer receives a Solicited Rating, as specified from time to time by the Issuer, and, in each case their respective successors.

"Solicited Rating" means a rating assigned by a rating agency with whom the Issuer has a contractual relationship under which the Notes are assigned a rating and an equity credit.

A **"Loss in Equity Credit"** occurs

- (x) if the Notes are no longer eligible (in whole or in part) for the same or a higher category of "equity credit" (or such similar nomenclature as may be used by a Rating Agency from time to time to describe the degree to which the terms of an instrument are supportive of the Issuer's senior obligations) attributed to the Notes on the date on which such Rating Agency attributed to the Notes such category of "equity credit" for the first time; or

Schuldverschreibungen erstmals dieser Kategorie der "Eigenkapitalanrechnung" zugeordnet hat; oder

- (y) wenn die Zeitspanne, während der eine Ratingagentur die Schuldverschreibungen einer bestimmten Kategorie der "Eigenkapitalanrechnung" zuordnet, verkürzt wird gegenüber der Zeitspanne, für welche diese Ratingagentur die Schuldverschreibungen dieser Kategorie der "Eigenkapitalanrechnung" an dem Tag zugeordnet hat, an dem diese Ratingagentur die Schuldverschreibungen erstmals dieser Kategorie der "Eigenkapitalanrechnung" zugeordnet hat.

(3) *Rückzahlung nach Wahl der Emittentin.*

Die Emittentin ist berechtigt, die Schuldverschreibungen (insgesamt und nicht nur teilweise) durch eine unwiderrufliche Mitteilung gemäß § 13 unter Einhaltung einer Frist von mindestens 10 Geschäftstagen mit Wirkung zu jedem Optionalen Rückzahlungstag zu kündigen und zurückzuzahlen.

Wenn die Emittentin ihr Kündigungsrecht gemäß Satz 1 ausübt, hat die Emittentin sämtliche ausstehenden Schuldverschreibungen an dem in der Kündigungserklärung festgelegten Optionalen Rückzahlungstag zu einem Betrag je Schuldverschreibung in Höhe der Festgelegten Stückelung zuzüglich der bis zum Optionalen Rückzahlungstag (ausschließlich) aufgelaufenen, aber noch nicht bezahlten Zinsen sowie, zur Klarstellung, etwaiger gemäß § 4(9)(b) fälliger Zinsrückstände zurückzuzahlen.

"**Optionalen Rückzahlungstag**" bezeichnet

- (i) jeden Geschäftstag während des Zeitraums ab dem 9. Juni 2026 (der "**Erste Optionale Rückzahlungstag**") (einschließlich) bis zum Ersten Resettermin (ausschließlich);
- (ii) den Ersten Resettermin; und

- (y) if the period of time during which a Rating Agency attributes to the Notes a particular category of "equity credit" would be shortened as compared to the period of time for which such Rating Agency did attribute to the Notes that category of "equity credit" on the date on which such Rating Agency attributed to the Notes such category of "equity credit" for the first time.

(3) *Redemption at the Option of the Issuer.*

The Issuer may call and redeem the Notes (in whole but not in part) by giving of not less than 10 Business Days' irrevocable notice in accordance with § 13 with effect as of any Optional Redemption Date.

If the Issuer exercises its call right in accordance with sentence 1, the Issuer will redeem, on the Optional Redemption Date specified in the notice, all outstanding Notes at an amount per Note equal to the Specified Denomination plus any interest accrued and unpaid to but excluding the Optional Redemption Date and, for the avoidance of doubt, any Deferred Interest Payments due and payable pursuant to § 4(9)(b).

"**Optional Redemption Date**" means

- (i) each Business Day during the period from and including June 9, 2026 (the "**First Optional Redemption Date**") to but excluding the First Reset Date;
- (ii) the First Reset Date; and

- (iii) jeden auf den Ersten Resettermin folgenden Zinszahlungstag.
- (4) *Rückkauf von Schuldverschreibungen.* Die Emittentin oder Tochtergesellschaften können unter Einhaltung der einschlägigen gesetzlichen Vorschriften jederzeit Schuldverschreibungen im Markt oder anderweitig zu jedem beliebigen Preis kaufen. Derartig erworbene Schuldverschreibungen können entwertet, gehalten oder wieder veräußert werden.
- (5) *Kündigungsrecht der Emittentin bei geringem ausstehenden Gesamtnennbetrag.* Wenn zu irgendeinem Zeitpunkt der Gesamtnennbetrag der ausstehenden und nicht von der Emittentin und ihren Tochtergesellschaften gehaltenen Schuldverschreibungen auf 25 % oder weniger des Gesamtnennbetrags der Schuldverschreibungen, die ursprünglich ausgegeben wurden (einschließlich Schuldverschreibungen, die gemäß § 12(1) zusätzlich begeben worden sind), fällt, ist die Emittentin berechtigt, die Schuldverschreibungen jederzeit (insgesamt, jedoch nicht teilweise) durch eine unwiderrufliche Mitteilung gemäß § 13 unter Einhaltung einer Frist von mindestens 10 Geschäftstagen mit Wirkung zu dem in der Kündigungserklärung festgelegten Rückzahlungstag zu kündigen und zurückzuzahlen.
- Wenn die Emittentin ihr Kündigungsrecht gemäß Satz 1 ausübt, hat die Emittentin sämtliche ausstehenden Schuldverschreibungen an dem Rückzahlungstag zu einem Betrag je Schuldverschreibung in Höhe der Festgelegten Stückelung zuzüglich der bis zum Rückzahlungstag (ausschließlich) aufgelaufenen, aber noch nicht bezahlten Zinsen sowie, zur Klarstellung, etwaiger gemäß § 4(9)(b) fälliger Zinsrückstände zurückzuzahlen.
- (6) *Kündigungsrecht der Emittentin nach Eintritt eines Kontrollwechselereignisses.*
- (a) Wenn ein Kontrollwechselereignis (wie in § 5(6)(c) definiert) eintritt, hat die Emittentin binnen 20 Geschäftstagen den Kontrollwechsel-Stichtag (wie in § 5(6)(c) definiert) zu bestimmen und das Kontrollwechselereignis und den Kontrollwechsel-Stichtag gemäß § 13
- (iii) each Interest Payment Date following the First Reset Date.
- (4) *Purchase of Notes.* The Issuer or any Subsidiary may, in compliance with applicable laws, at any time purchase Notes in the open market or otherwise and at any price. Such acquired Notes may be cancelled, held or resold.
- (5) *Issuer Call Right in the case of Minimal Outstanding Aggregate Principal Amount.* If at any time the aggregate principal amount of the Notes outstanding and held by persons other than the Issuer and its Subsidiaries is equal to or less than 25 % of the aggregate principal amount of the Notes originally issued (including any Notes additionally issued in accordance with § 12(1)), the Issuer may call and redeem the Notes (in whole but not in part) at any time by giving of not less than 10 Business Days' irrevocable notice in accordance with § 13 with effect as of the Redemption Date specified in the notice.
- If the Issuer exercises its call right in accordance with sentence 1, the Issuer will redeem, on the Redemption Date, all outstanding Notes at an amount per Note equal to the Specified Denomination plus any interest accrued and unpaid to but excluding the Redemption Date and, for the avoidance of doubt, any Deferred Interest Payments due and payable pursuant to § 4(9)(b).
- (6) *Issuer Call Right following a Change of Control Event.*
- (a) If a Change of Control Event (as defined in § 5(6)(c)) occurs, the Issuer will fix the Change of Control Effective Date (as defined in § 5(6)(c)) and give notice in accordance with § 13 of the Change of Control and the Change of Control Effective Date within 20 Business Days (the "**Change of Control Notice**").

anzuzeigen (die "**Kontrollwechsel-Mitteilung**").

- (b) Bei Eintritt eines Kontrollwechselereignisses ist die Emittentin berechtigt, die Schuldverschreibungen (insgesamt, jedoch nicht teilweise) durch Erklärung gemäß dem nachstehenden Satz 3 mit Wirkung zu dem Kontrollwechsel-Stichtag zu kündigen und zurückzuzahlen.

Wenn die Emittentin ihr Kündigungsrecht gemäß Satz 1 ausübt, hat die Emittentin sämtliche ausstehenden Schuldverschreibungen an dem Kontrollwechsel-Stichtag zu einem Betrag je Schuldverschreibung in Höhe der Festgelegten Stückelung zuzüglich der bis zum Kontrollwechsel-Stichtag (ausschließlich) aufgelaufenen, aber noch nicht bezahlten Zinsen sowie, zur Klarstellung, etwaiger gemäß § 4(9)(b) fälliger Zinsrückstände zurückzuzahlen.

Die Emittentin kann ihr Recht zur Kündigung und Rückzahlung der Schuldverschreibungen gemäß diesem § 5(6) durch eine Bekanntmachung an die Gläubiger gemäß § 13 nur innerhalb einer Frist von nicht mehr als fünf Geschäftstagen nach der Veröffentlichung der Kontrollwechsel-Mitteilung ausüben. Die Kündigungserklärung kann auch zeitgleich mit oder in der Kontrollwechsel-Mitteilung erfolgen

- (c) In diesem § 5(6) gilt:

Ein "**Kontrollwechselereignis**" gilt jedes Mal in einem der folgenden Fälle als eingetreten, wenn (i) E. Merck KG, Darmstadt das Recht verliert, die Mehrheit der persönlich haftenden Gesellschafter ohne Kapitalanteil der Merck KGaA, Darmstadt mit Zustimmung der einfachen Mehrheit der anderen persönlich haftenden Gesellschafter zu bestellen, und (ii) eine Person oder mehrere Personen, die abgestimmt handeln, oder einer oder mehrere Dritte, die im Auftrag einer solchen Person oder solcher Personen handeln, zu irgendeiner Zeit mittelbar oder unmittelbar (unabhängig

- (b) If a Change of Control Event occurs, the Issuer may call and redeem the Notes (in whole but not in part) by giving notice in accordance with the following sentence 3 with effect as of the Change of Control Effective Date.

If the Issuer exercises its call right in accordance with sentence 1, the Issuer will redeem, on the Change of Control Effective Date, all outstanding Notes at an amount per Note equal to the Specified Denomination plus any interest accrued and unpaid to but excluding the Change of Control Effective Date and, for the avoidance of doubt, any Deferred Interest Payments due and payable pursuant to § 4(9)(b).

The Issuer may give notice to the Holders of the call and redemption pursuant to this § 5(6) only within five Business Days after the publication of the Change of Control Notice in accordance with § 13. Such notice may be given simultaneously with or in the Change of Control Notice.

- (c) In this § 5(6):

A "**Change of Control Event**" shall be deemed to have occurred at each time if (i) E. Merck KG, Darmstadt loses the right to appoint, subject to the consent of the simple majority of the other partners liable on an unlimited basis (*persönlich haftende Gesellschafter*) of Merck KGaA, Darmstadt, the majority of the personally liable partners not contributing capital (*persönlich haftende Gesellschafter ohne Kapitalanteil*) of Merck KGaA, Darmstadt, and (ii) any person or persons acting in concert or any person or persons acting on behalf of any such person(s), at any time directly or indirectly

davon, ob die persönlich haftenden Gesellschafter oder der Aufsichtsrat der Merck KGaA, Darmstadt ihre bzw. seine Zustimmung erteilt hat bzw. haben) mehr als 50 % des Grundkapitals der Merck KGaA, Darmstadt erwirbt (erwerben) (ein "**Kontrollwechsel**"); und die Merck KGaA, Darmstadt bei Eintritt des Kontrollwechsels über ein (mit Zustimmung der Merck KGaA, Darmstadt erteiltes) Rating von einer Ratingagentur verfügt, entsprechend: (x) einem Investment Grade Rating (Baa3/BBB- oder gleichwertig oder besser) und dieses Rating von einer Ratingagentur innerhalb von 120 Tagen nach dem Kontrollwechsel zu einem non-investment Grade Rating (Ba1/BB+ oder gleichwertig oder schlechter) herabgestuft oder das Rating zurückgezogen wurde und nicht innerhalb dieser 120-Tagesperiode anschließend (im Falle einer Herabstufung) durch diese Ratingagentur wieder auf ein Investment Grade Rating heraufgestuft oder (im Falle einer Zurückziehung) durch das Investment Grade Rating einer anderen Ratingagentur ersetzt wurde; oder (y) einem non-investment Grade Rating (Ba1/BB+ oder gleichwertig oder schlechter) und dieses Rating durch eine Ratingagentur innerhalb von 120 Tagen nach Kontrollwechsel um eine oder mehrere Stufen (zur Erläuterung: Ba1 nach Ba2 entspricht einer Stufe) herabgestuft und nicht innerhalb dieser 120-Tagesperiode anschließend wieder auf das ursprüngliche oder ein besseres Rating durch diese Ratingagentur heraufgestuft wurde, wobei falls die Merck KGaA, Darmstadt zum Zeitpunkt des Eintritts des Kontrollwechsels über ein Rating von mehr als einer Ratingagentur verfügt, von denen mindestens eines ein Investment Grade Rating ist, die Regelung unter (x) Anwendung findet; und im Zusammenhang mit einer der oben genannten Entscheidungen die betreffende Ratingagentur öffentlich bekannt macht oder gegenüber der Merck KGaA, Darmstadt schriftlich bestätigt, dass diese Entscheidung ganz oder teilweise auf den Kontrollwechsel zurückzuführen ist.

acquire(s) (whether or not approved by the partners liable on an unlimited basis (*persönlich haftende Gesellschafter*) or the supervisory board (*Aufsichtsrat*) of Merck KGaA, Darmstadt more than 50 % of the share capital (*Grundkapital*) of Merck KGaA, Darmstadt (a "**Change of Control**"); and at the time of the occurrence of a Change of Control, Merck KGaA, Darmstadt carries (with the agreement of Merck KGaA, Darmstadt) from any Rating Agency: (x) an investment grade credit rating (Baa3/BBB-, or equivalent, or better), and such rating from any Rating Agency is within 120 days of such time either downgraded to a non-investment grade credit rating (Ba1/BB+, or equivalent, or worse) or withdrawn and is not within such 120-day period subsequently (in the case of a downgrade) upgraded to an investment grade credit rating by such Rating Agency or (in the case of withdrawal) replaced by an investment grade credit rating from any other Rating Agency; or (y) a non-investment grade credit rating (Ba1/BB+, or equivalent, or worse), and such rating from any Rating Agency is within 120 days of such time downgraded by one or more notches (for illustration, Ba1 to Ba2 being one notch) and is not within such 120-day period subsequently upgraded to its earlier credit rating or better by such Rating Agency, provided that if at the time of the occurrence of the Change of Control Merck KGaA, Darmstadt carries a rating from more than one Rating Agency, at least one of which is investment grade, then sub-paragraph (x) will apply; and in making the relevant decision(s) referred to above, the relevant Rating Agency announces publicly or confirms in writing to Merck KGaA, Darmstadt that such decision(s) resulted, in whole or in part, from the occurrence of the Change of Control.

Falls sich die von Moody's oder S&P verwendeten Rating Kategorien gegenüber denen, die in vorangegangenen Absatz angegeben wurden, ändern sollten, wird die Emittentin diejenigen Rating Kategorien von Moody's oder S&P bestimmen, die den früheren Rating Kategorien von Moody's oder S&P möglichst nahe kommen; der vorangegangene Absatz ist dann entsprechend auszulegen.

"**Kontrollwechsel-Stichtag**" bezeichnet den von der Emittentin in der Kontrollwechsel-Mitteilung festgelegten Tag, der (i) falls zum betreffenden Zeitpunkt nicht nachrangige Fremdkapitalwertpapiere der Merck KGaA, Darmstadt ausstehen, der fünfte Geschäftstag nach dem Tag sein muss, an dem solche Wertpapiere aufgrund einer Kündigung der Gläubiger dieser Wertpapiere wegen des gleichen Kontrollwechsel-Ereignisses (oder eines vergleichbaren Konzepts) fällig werden können; und (ii) falls zum betreffenden Zeitpunkt keine nicht nachrangigen Fremdkapitalwertpapiere der Merck KGaA, Darmstadt ausstehen ein Geschäftstag sein muss, der nicht mehr als 40 Tage nach Bekanntmachung der Kontrollwechsel-Mitteilung liegen darf.

§ 6 ZAHLUNGEN

- (1) *Zahlung von Kapital und Zinsen.* Die Emittentin verpflichtet sich, Kapital und Zinsen auf die Schuldverschreibungen sowie alle sonstigen auf die Schuldverschreibungen zahlbaren Beträge bei Fälligkeit in Euro zu zahlen. Die Zahlung von Kapital und Zinsen sowie allen sonstigen auf die Schuldverschreibungen zahlbaren Beträge erfolgt an die Hauptzahlstelle zur Weiterleitung an das Clearingsystem oder an dessen Order zur Gutschrift für die jeweiligen Kontoinhaber und im Fall von Zinsen und Zinsrückständen auf Schuldverschreibungen, die durch die Vorläufige Globalurkunde verbrieft sind, nach ordnungsgemäßer Bescheinigung gemäß § 2(2)(b). Die Zahlung an das Clearingsystem oder an dessen Order, vorausgesetzt, die Schuldverschreibungen werden noch durch das Clearingsystem gehalten, befreit die Emittentin in Höhe der geleisteten

If the rating designations employed by any of Moody's or S&P are changed from those which are described in the paragraph above, the Issuer shall determine the rating designations of Moody's or S&P (as appropriate) as are most equivalent to the prior rating designations of Moody's or S&P and the paragraph above shall be read accordingly.

"**Change of Control Effective Date**" means the date fixed by the Issuer in the Change of Control Notice, which (i) must, if at the relevant time any senior debt securities of Merck KGaA, Darmstadt are outstanding, be the fifth Business Day following the date on which such securities may become payable due to put notices of the holders of such securities in respect of the same Change of Control Event (or a similar concept); and (iii) must, if at the relevant time no senior debt securities of Merck KGaA, Darmstadt are outstanding, be a Business Day which falls not more than 40 days after publication of the Change of Control Notice.

§ 6 PAYMENTS

- (1) *Payment of Principal and Interest.* The Issuer undertakes to pay, as and when due, principal and interest as well as all other amounts payable on the Notes in euro. Payment of principal and interest as well as all other amounts due and payable on the Notes shall be made to the Principal Paying Agent for on-payment to the Clearing System or to its order for credit to the respective accountholders and, in the case of payments of interest and Deferred Interest Payments on Notes represented by the Temporary Global Note, upon due certification as provided in § 2(2)(b). Payments to the Clearing System or to its order shall, to the extent of amounts so paid and provided the Notes are still held on behalf of the Clearing System, constitute the discharge of the Issuer from its corresponding obligations under the Notes.

Zahlung von ihren entsprechenden Verbindlichkeiten aus den Schuldverschreibungen.

- (2) *Fälligkeitstag kein Geschäftstag.* Falls ein Fälligkeitstag für die Zahlung von Kapital und/oder Zinsen und/oder Zinsrückständen kein Geschäftstag ist, erfolgt die Zahlung, erst am nächstfolgenden Geschäftstag; Gläubiger sind nicht berechtigt, Zinsen oder eine andere Entschädigung wegen eines solchen Zahlungsaufschubs zu verlangen.
- (3) *Lieferung und Zahlungen nur außerhalb der Vereinigten Staaten.* Unbeschadet der übrigen Bestimmungen in diesen Anleihebedingungen erfolgen die Lieferung oder Kapitalrückzahlungen oder Zinszahlungen bezüglich der Schuldverschreibungen, sei es in bar oder in anderer Form, ausschließlich außerhalb der Vereinigten Staaten.

§ 7

ZAHLSTELLEN UND BERECHNUNGSSTELLE

- (1) *Hauptzahlstelle.* Die Hauptzahlstelle (die "**Hauptzahlstelle**") ist:
- Deutsche Bank Aktiengesellschaft
Trust & Agency Services
Taunusanlage 12
60325 Frankfurt am Main
Bundesrepublik Deutschland
- (2) *Berechnungsstelle.* Die Berechnungsstelle (die "**Berechnungsstelle**") ist:
- Deutsche Bank Aktiengesellschaft
Trust & Agency Services
Taunusanlage 12
60325 Frankfurt am Main
Bundesrepublik Deutschland
- (3) *Ortswechsel.* Die Hauptzahlstelle und die Berechnungsstelle behalten sich das Recht vor, jederzeit ihre jeweiligen bezeichneten Geschäftsstellen durch eine andere bezeichnete Geschäftsstelle in der Bundesrepublik Deutschland zu ersetzen.
- (4) *Berechnungen der Berechnungsstelle.* Sämtliche Bescheinigungen, Mitteilungen, Gutachten, Festsetzungen, Berechnungen, Quotierungen und Entscheidungen, die von der Berechnungsstelle für die Zwecke dieser Anleihebedingungen gemacht, abgegeben, getroffen oder eingeholt werden, sind

- (2) *Due Date not a Business Day.* If the due date for any payment of principal and/or interest and/or Deferred Interest Payments is not a Business Day, payment shall be effected only on the next Business Day; a Holder shall have no right to claim payment of any interest or other indemnity in respect of such delay in payment.
- (3) *No Delivery or Payment Except outside United States.* Notwithstanding any other provision of these Terms and Conditions, no delivery or payment of principal or interest in respect of the Notes, whether in cash or otherwise, shall be made unless such payment is made outside the United States.

§ 7

PAYING AGENTS AND CALCULATION AGENT

- (1) *Principal Paying Agent.* Principal paying agent (the "**Principal Paying Agent**") shall be:
- Deutsche Bank Aktiengesellschaft
Trust & Agency Services
Taunusanlage 12
60325 Frankfurt am Main
Federal Republic of Germany
- (2) *Calculation Agent.* Calculation agent (the "**Calculation Agent**") shall be:
- Deutsche Bank Aktiengesellschaft
Trust & Agency Services
Taunusanlage 12
60325 Frankfurt am Main
Federal Republic of Germany
- (3) *Change of Office.* Each of the Principal Paying Agent and the Calculation Agent reserves the right at any time to change its specified office to some other specified office in the Federal Republic of Germany.
- (4) *Calculations made by the Calculation Agent.* All certificates, communications, opinions, determinations, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of these Terms and Conditions by the Calculation Agent shall (in the

(sofern nicht vorsätzliches Fehlverhalten oder ein offensichtlicher Irrtum vorliegt) für die Emittentin, die Gläubiger und die Zahlstellen bindend.

- (5) *Änderung der Bestellung oder Abberufung.* Die Emittentin behält sich das Recht vor, jederzeit die Bestellung der Hauptzahlstelle oder der Berechnungsstelle zu ändern oder zu beenden und eine andere Hauptzahlstelle oder zusätzliche oder andere Zahlstellen oder eine andere Berechnungsstelle zu bestellen. Die Emittentin wird zu jedem Zeitpunkt eine Hauptzahlstelle und eine Berechnungsstelle unterhalten. Eine Änderung, Abberufung, Bestellung oder ein sonstiger Wechsel wird nur wirksam (außer im Insolvenzfall, in dem eine solche Änderung sofort wirksam wird), sofern die Gläubiger hierüber gemäß § 13 vorab unter Einhaltung einer Frist von mindestens 30 und nicht mehr als 45 Tagen informiert wurden.
- (6) *Erfüllungsgehilfe(n) der Emittentin.* Die Hauptzahlstelle und die Berechnungsstelle handeln ausschließlich als Beauftragte der Emittentin und übernehmen keine Verpflichtungen gegenüber den Gläubigern; es wird kein Vertrags-, Auftrags- oder Treuhandverhältnis zwischen ihnen und den Gläubigern begründet.
- (7) Wenn die Emittentin gemäß § 4(4) einen Unabhängigen Berater bestellt, dann sind § 7(4)-(6) entsprechend auf den Unabhängigen Berater anzuwenden.

§ 8

BESTEUERUNG

Alle in Bezug auf die Schuldverschreibungen von der Emittentin an die Gläubiger zahlbaren Kapitalbeträge, Zinsen und Zinsrückstände werden ohne Einbehalt oder Abzug von gegenwärtigen oder zukünftigen Steuern oder Abgaben gleich welcher Art ("**Steuern**") gezahlt, die von oder im Namen der Bundesrepublik Deutschland, ihrer Bundesländer oder einer ihrer anderen steuererhebungsberechtigten Gebietskörperschaften (das "**Steuerhoheitsgebiet**") im Wege des Abzugs oder Einbehalts auferlegt oder erhoben werden, es sei denn, ein solcher Abzug oder Einbehalt ist gesetzlich vorgeschrieben. Falls die Emittentin gesetzlich zu einem solchen Abzug oder Einbehalt verpflichtet ist, wird die Emittentin diejenigen zusätzlichen Beträge ("**Zusätzliche Beträge**") zahlen, die erforderlich sind, damit die den Gläubigern zufließenden Beträge jeweils den Beträgen entsprechen, die diese ohne einen solchen Einbehalt oder

absence of wilful misconduct or manifest error) be binding upon the Issuer, the Holders and the paying agents.

- (5) *Variation or Termination of Appointment.* The Issuer reserves the right at any time to vary or terminate the appointment of the Principal Paying Agent or the Calculation Agent and to appoint another Principal Paying Agent or additional or other paying agents or another Calculation Agent. The Issuer shall at all times maintain a Principal Paying Agent and a Calculation Agent. Any variation, termination, appointment or other change shall only take effect (other than in the case of insolvency, when it shall be of immediate effect) after not less than 30 nor more than 45 days' prior notice thereof shall have been given to the Holders in accordance with § 13.
- (6) *Agent of the Issuer.* The Principal Paying Agent and the Calculation Agent act solely as agents of the Issuer and do not assume any obligations towards or relationship of contract, agency or trust for or with any of the Holders.
- (7) If the Issuer appoints an Independent Adviser in accordance with § 4(4), § 7(4)-(6) shall apply *mutatis mutandis* to the Independent Adviser.

§ 8

TAXATION

All payments of principal, interest and Deferred Interest Payments made by the Issuer in respect of the Notes to the Holders shall be made without withholding or deduction for, any present or future taxes or duties of whatever nature ("**Taxes**") imposed or levied by way of deduction or withholding by or on behalf of the Federal Republic of Germany, its federal states (*Bundesländer*) or any authority therein or thereof having power to tax (the "**Taxing Jurisdiction**"), unless such deduction or withholding is required by law. If the Issuer is required by law to make such deduction or withholding, the Issuer shall pay such additional amounts (the "**Additional Amounts**") as shall result in receipt by the Holders of such amounts as would have been received by them had no such withholding or deduction been

Abzug erhalten hätten. Die Verpflichtung zur Zahlung solcher Zusätzlichen Beträge besteht jedoch nicht in Bezug auf Folgendes:

- (1) Deutsche Kapitalertragsteuer (inklusive der sog. Abgeltungsteuer), die nach dem deutschen Einkommensteuergesetz abgezogen oder einbehalten wird, und den deutschen Solidaritätszuschlag und die deutsche Kirchensteuer oder jede andere Steuer, welche die deutsche Kapitalertragsteuer bzw. den Solidaritätszuschlag bzw. die Kirchensteuer ersetzen sollte, und Einbehalte jeder Art, die von der Emittentin oder einem ihrer Vertreter für Rechnung des Inhabers der Schuldverschreibungen auf die von diesem geschuldete Vermögensteuer vorzunehmen sind, für den Fall, dass eine entsprechende Steuer von dem deutschen Gesetzgeber eingeführt wird; oder
- (2) Zahlungen an einen Gläubiger oder an einen Dritten für einen Gläubiger, falls dieser Gläubiger (oder ein Treuhänder, Treugeber, Begünstigter, Mitglied oder Gesellschafter eines solchen Gläubigers, sofern es sich bei dem Gläubiger um eine Vermögensmasse, ein Treuhandvermögen, eine Personengesellschaft oder eine Kapitalgesellschaft handelt) aufgrund einer früheren oder gegenwärtigen Verbindung zu Deutschland, einschließlich eines solchen Gläubigers (bzw. Treuhänders, Treugebers, Begünstigten, Mitglieds oder Gesellschafters), der Staatsbürger oder Einwohner dieses Landes war oder ist oder in diesem Land ein Gewerbe, ein Geschäft oder eine Repräsentanz betrieben hat oder betreibt oder eine Betriebsstätte hatte oder hat, einem solchen Einbehalt oder Abzug unterliegt und sich diese Verbindung nicht nur darauf beschränkt, dass er die Schuldverschreibung hält oder die unter dieser jeweils zu leistenden Zahlungen erhält; oder
- (3) Zahlungen an einen Gläubiger oder an einen Dritten für einen Gläubiger, falls kein Einbehalt oder Abzug hätte erfolgen müssen, wenn die Schuldverschreibung zum Zeitpunkt der fraglichen Zahlung in einem Depotkonto bei einem nicht in Deutschland ansässigen Kreditinstitut Finanzdienstleistungsinstitut, Wertpapierhandelsunternehmen oder einer nicht in Deutschland ansässigen Wertpapierhandelsbank verwahrt gewesen wären; oder
- (4) Zahlungen, falls der Einbehalt oder Abzug bei Zahlung begründet wird durch (i) eine Richtlinie oder Verordnung der Europäischen Union betreffend die

required, except that no Additional Amounts shall be payable with respect to:

- (1) German *Kapitalertragsteuer* (including *Abgeltungsteuer*) to be deducted or withheld pursuant to the German Income Tax Act (*Einkommensteuergesetz*), and the German Solidarity Surcharge (*Solidaritätszuschlag*) and the German Church Tax (*Kirchensteuer*) or any other tax which may substitute the German *Kapitalertragsteuer* or *Solidaritätszuschlag* or *Kirchensteuer*, as the case may be, and withholdings of any kind to be made by the Issuer or one of its representatives on behalf of a Holder, where such Holder is subject to German net asset tax (*Vermögensteuer*), in case such a tax will be enacted by the German legislative authorities; or
- (2) payments to, or to a third party on behalf of, a Holder where such Holder (or a fiduciary, trustor, beneficiary, member or interest holder of such Holder, if such Holder is an estate, a trust, a partnership or a corporation) is liable to such withholding or deduction by reason of having some present or former connection with Germany, including, without limitation, such Holder (or such fiduciary, trustor, beneficiary, member or interest holder) being or having been a citizen or resident thereof or being or having been engaged in a trade or business present therein or having, or having had, a permanent establishment therein, other than by reason only of the holding of such Note or the receipt of the relevant payment in respect thereof; or
- (3) payments to, or to a third party on behalf of, a Holder where no such withholding or deduction would have been required to be made if the Notes were credited at the time of payment to a securities deposit account with a bank, financial services institution, securities trading business or securities trading bank, in each case outside Germany; or
- (4) payments where such withholding or deduction is imposed pursuant to (i) any European directive or regulation concerning the taxation of interest income

Besteuerung von Zinserträgen, welche an eine natürliche Person oder an bestimmte juristische Personen, die als sonstige Einrichtungen bezeichnet werden, ausgezahlt werden, oder (ii) eine zwischenstaatliche Vereinbarung über die Besteuerung solcher Zinserträge, an der Deutschland oder die Europäische Union beteiligt ist, oder (iii) eine gesetzliche Vorschrift, die eine solche Richtlinie, Verordnung oder Vereinbarung umsetzt oder befolgt, oder (iv) das luxemburgische Gesetz vom 23. Dezember 2005, geändert durch das Gesetz vom 17. Juli 2008, bezüglich natürlicher Personen, die in Luxemburg ansässig sind, oder (v) einen Vertrag gemäß Abschnitt 1471(b) des U.S. Internal Revenue Code von 1986 (der "**Code**") oder andere Regelungen gemäß den Abschnitten 1471 bis 1474 des Codes sowie sämtliche darunter erlassene Vorschriften, amtliche Auslegungen und Umsetzungsakte, die auf zwischenstaatlichen Vereinbarungen beruhen; oder

- (5) Zahlungen, soweit der Einbehalt oder Abzug von einem Gläubiger oder von einem Dritten für einen Gläubiger vorzunehmen ist, der einen solchen Einbehalt oder Abzug dadurch rechtmäßig hätte vermeiden können (aber nicht vermieden hat), dass er gesetzliche Vorschriften beachtet, oder dafür sorgt, dass Dritte dieses tun, oder dadurch, dass er eine Nichtansässigkeitserklärung oder einen vergleichbaren Antrag auf Steuerbefreiung gegenüber der am Zahlungsort zuständigen Steuerbehörde abgibt oder dafür sorgt, dass dies durch einen Dritten erfolgt, oder
- (6) Zahlungen, deren Einbehalt oder Abzug von einem Gläubiger oder von einem Dritten für einen Gläubiger vorzunehmen ist, der einen solchen Einbehalt oder Abzug durch die Bewirkung einer Zahlung über eine andere Zahlstelle in einem Mitgliedstaat der Europäischen Union, welche nicht zu einem solchen Einbehalt oder Abzug verpflichtet ist, hätte vermeiden können; oder
- (7) Zahlungen, soweit der Einbehalt oder Abzug vorzunehmen ist, weil der Gläubiger eine Schuldverschreibung mehr als 30 Tage nach dem Tag zur Zahlung vorlegt, an dem diese Zahlung erfüllbar und fällig wurde bzw., soweit dies später eintritt, nach dem Tag, an dem die fällige Zahlung ordnungsgemäß bereitgestellt wurde; oder

paid to an individual and certain types of entities called "residual entities", or (ii) any international treaty or understanding relating to such taxation and to which Germany or the European Union is a party, or (iii) any provision of law implementing, or complying with, or introduced to conform with, such directive, regulation, treaty or understanding, or (iv) the Luxembourg law of December 23, 2005, as amended by the law of July 17, 2008, with respect to Luxembourg resident individuals, or (v) an agreement described in section 1471(b) of the U.S. Internal Revenue Code of 1986 (the "**Code**") or otherwise imposed pursuant to sections 1471 through 1474 of the Code, any regulations or agreements thereunder, any official interpretations thereof, or any law implementing an intergovernmental approach thereto; or

- (5) payments to the extent such withholding or deduction is payable by or on behalf of a Holder who could lawfully avoid (but has not so avoided) such withholding or deduction by complying or procuring that any third party complies with any statutory requirements or by making or procuring that a third party makes a declaration of non-residence or other similar claim for exemption to any tax authority in the place where the payment is effected; or
- (6) payments to the extent such withholding or deduction is payable by or on behalf of a Holder who would have been able to avoid such withholding or deduction by effecting a payment via another paying agent in a Member State of the European Union, not obliged to withhold or deduct tax; or
- (7) payments to the extent such withholding or deduction is for or on account of the presentation by the Holder of any Note for payment on a date more than 30 days after the date on which such payment became due and payable or the date on which payment thereof is duly provided for, whichever occurs later; or

(8) jegliche Kombination der Absätze (1)-(7).

Zudem werden keine Zusätzlichen Beträge im Hinblick auf Zahlungen auf die Schuldverschreibungen an einen Gläubiger gezahlt, welcher die Zahlung als Treuhänder oder Personengesellschaft oder als sonstiger nicht alleiniger wirtschaftlicher Eigentümer erhält, soweit nach den Gesetzen des Steuerhoheitsgebiets eine solche Zahlung für Steuerzwecke dem Einkommen eines Begünstigten bzw. Treugebers bezüglich einer solchen Treuhand oder eines Gesellschafters der Personengesellschaft oder eines wirtschaftlichen Eigentümers zugerechnet würde, der jeweils selbst nicht zum Erhalt von Zusätzlichen Beträgen berechtigt wäre, wenn er selbst Gläubiger der Schuldverschreibung(en) wäre.

§ 9

VORLEGUNGSFRIST

Die in § 801 Absatz 1 Satz 1 BGB bestimmte Vorlegungsfrist wird für die Schuldverschreibungen auf zehn Jahre verkürzt.

§ 10

ERSETZUNG DER EMITTENTIN

(1) *Ersetzung.* Die Emittentin (wobei eine Bezugnahme auf die Emittentin auch alle früheren Nachfolgeschuldnerinnen (wie nachfolgend definiert) umfasst) ist jederzeit berechtigt, wenn kein Zahlungsverzug hinsichtlich Kapital oder Zinsen oder Zinsrückstände auf die Schuldverschreibungen vorliegt, ohne weitere Zustimmung der Gläubiger ein Verbundenes Finanzierungsunternehmen an ihrer Stelle als Hauptschuldnerin (ein solches Unternehmen ist die "**Nachfolgeschuldnerin**") für alle Verpflichtungen aus und im Zusammenhang mit den Schuldverschreibungen einzusetzen, vorausgesetzt, dass:

- (a) die Nachfolgeschuldnerin alle Verpflichtungen der Emittentin aus den Schuldverschreibungen übernimmt;
- (b) die Nachfolgeschuldnerin in der Lage ist, sämtliche sich aus den Schuldverschreibungen ergebenden Zahlungsverpflichtungen in Euro leisten kann, ohne gesetzlich zu einem Abzug oder Einbehalt von Steuern (wie in § 8 definiert) in dem Land oder Hoheitsgebiet, in dem die Nachfolgeschuldnerin ihren Sitz hat (mit

(8) any combination of items (1)-(7);

nor shall any Additional Amounts be paid with respect to any payment on a Note to a Holder who is a fiduciary or partnership or who is other than the sole beneficial owner of such payment to the extent such payment would be required by the laws of the Taxing Jurisdiction to be included in the income, for tax purposes, of a beneficiary or trustor with respect to such fiduciary or a member of such partnership or a beneficial owner who would not have been entitled to such Additional Amounts had such beneficiary, trustor, member or beneficial owner been the Holder of the Note(s).

§ 9

PRESENTATION PERIOD

The presentation period provided in section 801 paragraph 1 sentence 1 of the German Civil Code (*Bürgerliches Gesetzbuch*) is reduced to ten years for the Notes.

§ 10

SUBSTITUTION OF ISSUER

(1) *Substitution.* The Issuer (reference to which shall always include any previous Substitute Debtor (as defined below)) may, at any time, if no payment of principal or interest or Deferred Interest Payments on any of the Notes is in default, without the consent of the Holders, substitute for the Issuer any Financing Affiliate (as defined below) as the principal debtor in respect to the Notes (any such company, the "**Substitute Debtor**"), provided that:

- (a) the Substitute Debtor assumes all obligations of the Issuer under the Notes;
- (b) the Substitute Debtor is in a position to fulfil all payment obligations under the Notes in euro without being required by law to make any withholding or deduction for, any Taxes (as defined in § 8) levied by the country or jurisdiction in which the Substitute Debtor is domiciled (other than taxes which would also be levied in the absence of such substitution);

Ausnahme von Steuern, die auch angefallen wären, wäre die Ersetzung nicht erfolgt), verpflichtet zu sein;

- (c) kein Kündigungsrecht gemäß § 5 aufgrund der Ersetzung der Emittentin durch die Nachfolgeschuldnerin ausgelöst wird;
- (d) die Emittentin unwiderruflich und unbedingt gegenüber den Gläubigern die Zahlung aller von der Nachfolgeschuldnerin auf die Schuldverschreibungen zahlbaren Beträge garantiert (die "**Ersetzungs-Garantie**");
- (e) die Nachfolgeschuldnerin sich verpflichtet, jedem Gläubiger sämtliche Steuern, Gebühren oder Abgaben zu erstatten, die ihm im Zuge der Ersetzung der Emittentin gemäß diesem § 10 auferlegt werden, vorausgesetzt, dass sich die Verpflichtung auf Beträge beschränkt, die der Gläubiger ohne die Ersetzung der Emittentin nicht hätte tragen müssen; und
- (f) der Hauptzahlstelle jeweils ein Rechtsgutachten bezüglich jeder betroffenen Rechtsordnung von anerkannten Rechtsanwälten vorgelegt wurden, die bestätigen, dass die Bestimmungen in den vorstehenden Unterabsätzen (a) bis (e) erfüllt wurden.

Für Zwecke dieses § 10 bezeichnet "**Verbundenes Finanzierungsunternehmen**" jedes verbundene Unternehmen im Sinne des § 15 AktG der Emittentin, dessen Geschäftszweck in der Aufnahme von Mitteln für die Refinanzierung von verbundenen Unternehmen besteht und die keine wesentlichen operativen Vermögenswerte oder Anteile an operativen Gesellschaften der Emittentin oder deren Tochtergesellschaften hält.

- (2) *Schuldbefreiung; Bezugnahmen.* Nach einer Ersetzung gemäß diesem § 10 gilt die Nachfolgeschuldnerin als in den Schuldverschreibungen an Stelle der Emittentin als Hauptschuldnerin bestimmt und die Schuldverschreibungen gelten als dementsprechend ergänzt, um der Ersetzung zur Durchsetzung zu verhelfen, und als das relevante Steuerhoheitsgebiet in Bezug auf § 8, ein Quellensteuer-Ereignis und ein Steuerereignis gilt sowohl die Jurisdiktion, in der die

- (c) none of the issuer call rights specified in § 5 occurs as a consequence of the substitution of the Issuer by the Substitute Debtor;
- (d) the Issuer irrevocably and unconditionally guarantees in favour of each Holder the payment of all sums payable by the Substitute Debtor in respect of the Notes (the "**Substitution Guarantee**");
- (e) the Substitute Debtor undertakes to reimburse any Holder for such taxes, fees or duties which may be imposed upon such Holder in relation to the substitution of the Issuer in accordance with this § 10, provided that such undertaking shall be limited to amounts that would not have been imposed upon the Holder had such substitution of the Issuer not occurred; and
- (f) there shall have been delivered to the Principal Paying Agent one opinion for each jurisdiction affected of lawyers of recognized standing to the effect that subparagraphs (a) through (e) above have been satisfied.

For purposes of this § 10, "**Financing Affiliate**" shall mean any affiliated company (*verbundenes Unternehmen*) within the meaning of § 15 German Stock Corporation Act (*Aktiengesetz*) of the Issuer, which has the corporate function of raising financing and passing it on to affiliates and which holds no significant operating assets or has any ownership in the operating companies of the Issuer or its Subsidiaries.

- (2) *Discharge from Obligations; References.* Upon a substitution in accordance with this § 10, the Substitute Debtor shall be deemed to be named in the Notes as the principal debtor in place of the Issuer as issuer and the Notes shall thereupon be deemed to be amended to give effect to the substitution including that the relevant Taxing Jurisdiction in relation to the Issuer in § 8, a Gross-up Event and Tax Event shall be the Substitute Debtor's country of domicile for tax purposes as well as the Federal Republic of Germany.

Nachfolgeschuldnerin steuerlich ansässig ist, als auch die Bundesrepublik Deutschland.

§ 3(1) gilt als insoweit angepasst, dass der Rang der Ansprüche aus den Schuldverschreibungen gleichbleibt.

Zudem beziehen sich die Bezugnahmen auf die Emittentin in § 4(9)(c)(i), § 4(9)(c)(ii) und in der Definition von Ratingagenturereignis weiterhin nur auf die Merck KGaA.

Die Bezugnahmen auf die Emittentin in § 4(9)(b)(iii), § 4(9)(c)(iv), § 4(9)(c)(v) und § 5(5) beziehen sich sowohl auf die Nachfolgeschuldnerin als auch auf die Merck KGaA.

Jede Ersetzung zusammen mit der Mitteilung gemäß § 10(3) befreit, im Fall der Einsetzung einer anderen Gesellschaft als Hauptschuldnerin, die Emittentin von allen Verbindlichkeiten, die sie als Hauptschuldnerin (nicht jedoch, zur Klarstellung, in Bezug auf die Ersetzungs-Garantie) unter den Schuldverschreibungen hatte.

- (3) *Benachrichtigung der Gläubiger.* Spätestens 15 Geschäftstage nach Durchführung der Ersetzung wird die Nachfolgeschuldnerin dies den Gläubigern und, sollten die Schuldverschreibungen an einer Börse notiert sein, dieser Börse gemäß § 13 mitteilen und jede andere Person oder Stelle, gemäß den anwendbaren Gesetzen und Regelungen informieren.

§ 11

BESCHLÜSSE DER GLÄUBIGER, ÄNDERUNG DER ANLEIHEBEDINGUNGEN, GEMEINSAMER VERTRETER

- (1) *Beschlüsse durch die Gläubiger.* Die Emittentin kann mit den Gläubigern Änderungen der Anleihebedingungen oder sonstige Maßnahmen durch Mehrheitsbeschluss der Gläubiger nach Maßgabe der §§ 5 ff. des Gesetzes über Schuldverschreibungen aus Gesamtemissionen ("**SchVG**") in seiner jeweils geltenden Fassung beschließen.

Eine Änderung der Anleihebedingungen ohne Zustimmung der Emittentin scheidet aus. Die Gläubiger können insbesondere einer Änderung wesentlicher Inhalte der Anleihebedingungen, einschließlich der in § 5 Absatz 3 SchVG vorgesehenen Maßnahmen durch Beschlüsse mit den

§ 3(1) is deemed to be amended insofar that the ranking of the Notes stays the same.

In addition, the references to the Issuer in § 4(9)(c)(i), in § 4(9)(c)(ii) and in the definition of Rating Agency Event shall continue to refer only to Merck KGaA.

The references to the Issuer in § 4(9)(b)(iii), § 4(9)(c)(iv), § 4(9)(c)(v) and § 5(5) shall refer to the Substitute Debtor and Merck KGaA.

Any such substitution, together with the notice referred to in § 10(3), shall, in the case of the substitution of any other company as principal debtor, release the Issuer as issuer from all of its obligations as principal debtor (but not, for the avoidance of doubt, in relation to the Substitution Guarantee) in respect of the Notes.

- (3) *Notification to Holders.* Not later than 15 Business Days after effecting the substitution, the Substitute Debtor shall give notice thereof to the Holders and, if any Notes are listed on any stock exchange, to such stock exchange in accordance with § 13 and to any other person or authority as required by applicable laws or regulations.

§ 11

RESOLUTIONS OF HOLDERS, AMENDMENT OF THE TERMS AND CONDITIONS, HOLDERS' REPRESENTATIVE

- (1) *Resolutions of Holders.* The Issuer may agree with the Holders on amendments to the Terms and Conditions or on other matters by virtue of a majority resolution of the Holders pursuant to § 5 et seq. of the German Act on Issues of Debt Securities (*Gesetz über Schuldverschreibungen aus Gesamtemissionen – "SchVG"*), as amended from time to time.

There will be no amendment of the Terms and Conditions without the Issuer's consent. In particular, the Holders may consent to amendments which materially change the substance of the Terms and Conditions, including such measures as provided for under § 5 paragraph 3 SchVG by resolutions passed

in dem nachstehenden § 11(2) genannten Mehrheiten zustimmen. Ein ordnungsgemäß gefasster Mehrheitsbeschluss ist für alle Gläubiger gleichermaßen verbindlich.

(2) *Mehrheit.* Vorbehaltlich des nachstehenden Satzes und der Erreichung der erforderlichen Beschlussfähigkeit, beschließen die Gläubiger mit der einfachen Mehrheit der an der Abstimmung teilnehmenden Stimmrechte. Beschlüsse, durch welche der wesentliche Inhalt der Anleihebedingungen, insbesondere in den Fällen des § 5 Absatz 3 Nr. 1 bis 9 SchVG, geändert wird oder sonstige wesentliche Maßnahmen beschlossen werden, bedürfen zu ihrer Wirksamkeit einer Mehrheit von mindestens 75 % der an der Abstimmung teilnehmenden Stimmrechte (eine "**Qualifizierte Mehrheit**").

(3) *Beschlussfassung, Gläubigerversammlung.* Die Gläubiger können Beschlüsse in einer Gläubigerversammlung gemäß §§ 5 ff. SchVG oder im Wege einer Abstimmung ohne Versammlung gemäß § 18 und §§ 5 ff. SchVG fassen.

(a) Die Teilnahme an der Gläubigerversammlung und die Ausübung der Stimmrechte sind von einer vorherigen Anmeldung der Gläubiger abhängig. Die Anmeldung muss unter der in der Bekanntmachung der Einberufung mitgeteilten Adresse spätestens am dem dritten Tag vor der Gläubigerversammlung zugehen. Mit der Anmeldung müssen die Gläubiger ihre Berechtigung zur Teilnahme an der Abstimmung durch einen in Textform erstellten besonderen Nachweis der Depotbank und durch Vorlage eines Sperrvermerks der Depotbank, aus dem hervorgeht, dass die betreffenden Schuldverschreibungen ab dem Tag der Absendung der Anmeldung (einschließlich) bis zum angegebenen Ende der Gläubigerversammlung (einschließlich) nicht übertragbar sind, nachweisen.

(b) Zusammen mit der Stimmabgabe müssen die Gläubiger ihre Berechtigung zur Teilnahme an der Abstimmung ohne Versammlung durch einen in Textform erstellten besonderen Nachweis der Depotbank und

by such majority of the votes of the Holders as stated under § 11(2) below. A duly passed majority resolution shall be binding equally upon all Holders.

(2) *Majority.* Except as provided by the following sentence and provided that the quorum requirements are being met, the Holders may pass resolutions by simple majority of the voting rights participating in the vote. Resolutions which materially change the substance of the Terms and Conditions, in particular in the cases of § 5 paragraph 3 numbers 1 through 9 SchVG, or which relate to material other matters may only be passed by a majority of at least 75 % of the voting rights participating in the vote (a "**Qualified Majority**").

(3) *Passing of resolution, Meeting.* The Holders can pass resolutions in a meeting (*Gläubigerversammlung*) in accordance with § 5 et seqq. SchVG or by means of a vote without a meeting (*Abstimmung ohne Versammlung*) in accordance with § 18 and § 5 et seqq. SchVG.

(a) Attendance at the meeting and exercise of voting rights is subject to the Holders' registration. The registration must be received at the address stated in the convening notice no later than the third day preceding the meeting. As part of the registration, Holders must provide evidence of their eligibility to participate in the vote by means of a special confirmation of the Custodian in text form and by submission of a blocking instruction by the Custodian stating that the relevant Notes are not transferable from and including the day such registration has been sent until and including the stated end of the meeting.

(b) Together with casting their vote, Holders must provide evidence of their eligibility to participate in the vote without a meeting by means of a special confirmation of the Custodian in text form and by submission of

durch Vorlage eines Sperrvermerks der Depotbank, aus dem hervorgeht, dass die betreffenden Schuldverschreibungen ab dem Tag der Stimmabgabe (einschließlich) bis zum letzten Tag des Abstimmungszeitraums (einschließlich) nicht übertragbar sind, nachweisen.

- (4) *Zweite Versammlung.* Wird für die Gläubigerversammlung gemäß § 11(3)(a) oder die Abstimmung ohne Versammlung gemäß § 11(3)(b) die mangelnde Beschlussfähigkeit festgestellt, kann – im Falle der Gläubigerversammlung – der Vorsitzende eine zweite Versammlung im Sinne von § 15 Absatz 3 Satz 2 SchVG und – im Falle der Abstimmung ohne Versammlung – der Abstimmungsleiter eine zweite Versammlung im Sinne von § 18 Absatz 4 S. 2 und § 15 Absatz 3 Satz 3 SchVG einberufen. Die Teilnahme an der zweiten Versammlung und die Ausübung der Stimmrechte sind von einer vorherigen Anmeldung der Gläubiger abhängig. Für die Anmeldung der Gläubiger zu einer zweiten Versammlung gelten die Bestimmungen des § 11(3)(a) entsprechend.
- (5) *Gemeinsamer Vertreter.* Die Gläubiger können durch Mehrheitsbeschluss die Bestellung oder Abberufung eines gemeinsamen Vertreters (der "**Gemeinsame Vertreter**"), die Aufgaben und Befugnisse des Gemeinsamen Vertreters, die Übertragung von Rechten der Gläubiger auf den Gemeinsamen Vertreter und eine Beschränkung der Haftung des Gemeinsamen Vertreters bestimmen. Die Bestellung eines Gemeinsamen Vertreters bedarf einer Qualifizierten Mehrheit, wenn er ermächtigt werden soll, Änderungen des wesentlichen Inhalts der Anleihebedingungen oder sonstigen wesentlichen Maßnahmen gemäß § 11(2) zuzustimmen.
- (6) *Bekanntmachungen.* Bekanntmachungen betreffend diesen § 11 erfolgen ausschließlich gemäß den Bestimmungen des SchVG.
- (7) *Ersetzungs-Garantie.* Im Fall einer Schuldnerersetzung gemäß § 10 gilt dieser § 11 entsprechend für die Änderung der Ersetzungs-Garantie gemäß § 10(1)(d), und Änderungen der Anleihebedingungen und die Ersetzungs-Garantie sind nur mit Zustimmung der Nachfolgeschuldnerin und der Merck KGaA als Garantin zulässig.

a blocking instruction by the Custodian stating that the relevant Notes are not transferable from and including the day such vote has been cast until and including the day the voting period ends.

- (4) *Second Meeting.* If it is ascertained that no quorum exists for the meeting pursuant to § 11(3)(a) or the vote without a meeting pursuant to § 11(3)(b), in case of a meeting the chairman (*Vorsitzender*) may convene a second meeting in accordance with § 15 paragraph 3 sentence 2 SchVG or in case of a vote without a meeting the scrutineer (*Abstimmungsleiter*) may convene a second meeting within the meaning of § 18 paragraph 4 sentence 2 and § 15 paragraph 3 sentence 3 SchVG. Attendance at the second meeting and exercise of voting rights is subject to the Holders' registration. The provisions set out in § 11(3)(a) shall apply *mutatis mutandis* to Holders' registration for a second meeting
- (5) *Holders' Representative.* The Holders may by majority resolution provide for the appointment or dismissal of a holders' representative (the "**Holders' Representative**"), the duties and responsibilities and the powers of such Holders' Representative, the transfer of the rights of the Holders to the Holders' Representative and a limitation of liability of the Holders' Representative. Appointment of a Holders' Representative may only be passed by a Qualified Majority if such Holders' Representative is to be authorized to consent, in accordance with § 11(2) hereof, to a material change in the substance of the Terms and Conditions or other material matters.
- (6) *Notices.* Any notices concerning this § 11 shall be made exclusively pursuant to the provisions of the SchVG.
- (7) *Substitution Guarantee.* In the event of a substitution pursuant to § 10, this § 11 shall apply *mutatis mutandis* for an amendment of the Substitution Guarantee pursuant to § 10(1)(d), and the Terms and Conditions and such Substitution Guarantee may only be amended with the consent of the Substitute Debtor and Merck KGaA as guarantor.

§ 12

BEGEBUNG WEITERER SCHULDVERSCHREIBUNGEN, ENTWERTUNG

- (1) *Begebung weiterer Schuldverschreibungen.* Die Emittentin ist berechtigt, jederzeit ohne Zustimmung der Gläubiger weitere Schuldverschreibungen mit gleicher Ausstattung (gegebenenfalls mit Ausnahme des Tags der Begebung, des Beginns des Zinslaufs und/oder des Ausgabepreises) in der Weise zu begeben, dass sie mit diesen Schuldverschreibungen eine einheitliche Serie (Gesamtemission) bilden.
- (2) *Entwertung.* Sämtliche vollständig zurückgezahlten Schuldverschreibungen sind unverzüglich zu entwerten und können nicht wiederbegeben oder wiederverkauft werden.

§ 13

MITTEILUNGEN

- (1) *Bekanntmachung.* Alle die Schuldverschreibungen betreffenden Mitteilungen, außer wie in § 11(6) vorgesehen, sind auf der Internetseite der Luxemburger Börse (www.bourse.lu) elektronisch zu veröffentlichen. Jede derartige Mitteilung gilt mit dem dritten Tag nach dem Tag der Veröffentlichung (oder bei mehrfacher Veröffentlichungen mit dem dritten Tag nach dem Tag der ersten solchen Veröffentlichung) als wirksam erfolgt.
- (2) *Mitteilungen an das Clearingsystem.* Solange Schuldverschreibungen an der Luxemburger Börse notiert sind, sind alle die Schuldverschreibungen betreffenden Mitteilungen gemäß § 13(1) bekanntzumachen. Soweit die Mitteilung den Zinssatz betrifft, oder die Regeln der Luxemburger Börse dies sonst zulassen, kann die Emittentin eine Veröffentlichung nach § 13(1) durch eine Mitteilung an das Clearingsystem zur Weiterleitung an die Gläubiger ersetzen; jede derartige Mitteilung gilt am siebten Tag nach dem Tag der Mitteilung an das Clearingsystem als den Gläubigern mitgeteilt.

§ 14

ANWENDBARES RECHT, GERICHTSSTAND UND GERICHTLICHE GELTENDMACHUNG

- (1) *Anwendbares Recht.* Form und Inhalt der Schuldverschreibungen sowie die Rechte und Pflichten der Gläubiger und der Emittentin

§ 12

FURTHER ISSUES, CANCELLATION

- (1) *Further Issues.* The Issuer may from time to time, without the consent of the Holders, issue further Notes having the same terms and conditions as the Notes in all respects (or in all respects except for the issue date, commencement of the interest accrual period and/or issue price) so as to form a single series (*Gesamtemission*) with the Notes.
- (2) *Cancellation.* All Notes redeemed in full shall be cancelled forthwith and may not be reissued or resold.

§ 13

NOTICES

- (1) *Publication.* All notices concerning the Notes, except as stipulated in § 11(6), will be made by means of electronic publication on the internet website of the Luxembourg Stock Exchange (www.bourse.lu). Any notice will be deemed to have been validly given on the third day following the date of such publication (or, if published more than once, on the third day following the date of the first such publication).
- (2) *Notification to Clearing System.* So long as any Notes are listed on the Luxembourg Stock Exchange, § 13(1) shall apply. In the case of notices regarding the rate of interest or, if the rules of the Luxembourg Stock Exchange otherwise so permit, the Issuer may deliver the relevant notice to the Clearing System for communication by the Clearing System to the Holders, in lieu of publication as set forth in § 13(1) above; any such notice shall be deemed to have been given on the seventh day after the day on which the said notice was given to the Clearing System.

§ 14

APPLICABLE LAW, PLACE OF JURISDICTION AND ENFORCEMENT

- (1) *Applicable Law.* The Notes, as to form and content, and all rights and obligations of the Holders and the Issuer, shall be governed by German law.

bestimmen sich in jeder Hinsicht nach deutschem Recht.

- (2) *Gerichtsstand.* Nicht ausschließlich zuständig für sämtliche im Zusammenhang mit den Schuldverschreibungen entstehenden Klagen oder sonstige Verfahren ("**Rechtsstreitigkeiten**") ist das Landgericht Frankfurt am Main.

Für Entscheidungen gemäß §§ 9 Absatz 2, 13 Absatz 3 und 18 Absatz 2 SchVG und für Entscheidungen über die Anfechtung von Beschlüssen der Gläubiger gemäß § 20 SchVG ist jeweils das gemäß SchVG genannte Gericht zuständig.

- (3) *Gerichtliche Geltendmachung.* Jeder Gläubiger von Schuldverschreibungen ist berechtigt, in jedem Rechtsstreit gegen die Emittentin oder in jedem Rechtsstreit, in dem der Gläubiger und die Emittentin Partei sind, seine Rechte aus diesen Schuldverschreibungen im eigenen Namen auf der folgenden Grundlage zu schützen und geltend zu machen: (i) er bringt eine Bescheinigung der Depotbank bei, bei der er für die Schuldverschreibungen ein Wertpapierdepot unterhält, welche (a) den vollständigen Namen und die vollständige Adresse des Gläubigers enthält, (b) den Gesamtnennbetrag der Schuldverschreibungen bezeichnet, die zu dem Datum der Bescheinigung auf dem Wertpapierdepot verbucht sind und (c) bestätigt, dass die Depotbank gegenüber dem Clearingsystem eine schriftliche Erklärung abgegeben hat, die die vorstehend unter (a) und (b) bezeichneten Informationen enthält und von dem Clearingsystem bestätigt wurde; (ii) er legt eine Kopie der die betreffenden Schuldverschreibungen verbriefenden Globalurkunde vor, deren Übereinstimmung mit dem Original eine vertretungsberechtigte Person des Clearingsystems oder des Verwahrers des Clearingsystems bestätigt hat, ohne dass eine Vorlage der Originalbelege oder der die Schuldverschreibungen verbriefenden Globalurkunde in einem solchen Verfahren erforderlich wäre oder (iii) auf jede andere Weise, die im Lande der Geltendmachung prozessual zulässig ist. "**Depotbank**" bezeichnet jede Bank oder ein sonstiges anerkanntes Finanzinstitut, das berechtigt ist, das Wertpapierverwahrungsgeschäft zu betreiben und bei der/dem der Gläubiger ein Wertpapierdepot für die Schuldverschreibungen unterhält und die/das

- (2) *Submission to Jurisdiction.* The District Court (*Landgericht*) in Frankfurt am Main shall have non-exclusive jurisdiction for any action or other legal proceedings ("**Proceedings**") arising out of or in connection with the Notes.

The relevant court specified in the SchVG shall have jurisdiction for all judgments pursuant to §§ 9(2), 13(3) and 18(2) SchVG and for all judgments over contested resolutions by Holders in accordance with § 20 SchVG.

- (3) *Enforcement.* Any Holder of Notes may in any proceedings against the Issuer, or to which such Holder and the Issuer are parties, protect and enforce in his own name his rights arising under such Notes on the basis of (i) a statement issued by the Custodian with whom such Holder maintains a securities account in respect of the Notes (a) stating the full name and address of the Holder, (b) specifying the aggregate principal amount of Notes credited to such securities account on the date of such statement and (c) confirming that the Custodian has given written notice to the Clearing System containing the information pursuant to (a) and (b) which has been confirmed by the Clearing System; (ii) a copy of the Note in global form certified as being a true copy by a duly authorized officer of the Clearing System or a depositary of the Clearing System, without the need for production in such proceedings of the actual records or the global note representing the Notes or (iii) any other means of proof permitted in legal proceedings in the country of enforcement. "**Custodian**" means any bank or other financial institution of recognized standing authorized to engage in securities custody business with which the Holder maintains a securities account in respect of the Notes and which maintains an account with the Clearing System, and includes the Clearing System.

ein Konto beim Clearingsystem unterhält, einschließlich des Clearingsystems.

**§ 15
SPRACHE**

Diese Anleihebedingungen sind in deutscher Sprache abgefasst. Eine Übersetzung in die englische Sprache ist beigefügt. Der deutsche Text ist bindend und maßgeblich. Die Übersetzung in die englische Sprache ist unverbindlich.

**§ 15
LANGUAGE**

These Terms and Conditions are written in the German language and provided with an English language translation. The German text shall be controlling and binding. The English language translation is provided for convenience only.

The following paragraph in italics does not form part of the Terms and Conditions.

Restrictions regarding redemption and repurchase of the Notes

The Issuer intends (without thereby assuming a legal or contractual obligation) that it will redeem or repurchase the Notes only to the extent they are replaced with instruments with at least equivalent S&P equity credit. The net proceeds received by the Issuer or subsidiary of the Issuer from the sale to third party purchasers of securities which are assigned an S&P equity credit (or such similar nomenclature then used by S&P) that is at least equal to the equity credit assigned to the Notes on the basis of the initial category of "equity credit" will count as replacement (but taking into account any changes in hybrid capital methodology or the interpretation thereof since the issue date of the Notes).

The following exceptions apply as to the Issuer's replacement intention. The Notes are not required to be replaced:

- (i) if the rating assigned by S&P to the Issuer is (x) at least "A" (or such similar nomenclature then used by S&P), or (y) if lower, at least the rating assigned to the Issuer when the Issuer's most recent hybrid security was issued (excluding refinancings) and the Issuer is comfortable that such rating would not fall below this level as a result of such redemption or repurchase, or*
- (ii) in the case of repurchase or a redemption, taken together with other relevant repurchases or redemptions of hybrid securities of the Issuer of less than (x) 10 % of the aggregate principal amount of the Issuer's outstanding hybrid notes in any period of 12 consecutive months or (y) 25 % of the aggregate principal amount of the Issuer's outstanding hybrid notes issued in any period of 10 consecutive years is repurchased, provided that such repurchase or redemption has no materially negative effect on the Issuer's credit profile, or*
- (iii) if the Notes are redeemed following the occurrence of a Rating Agency Event, a Tax Event or a Gross-up Event, or*
- (iv) in the case of a repurchase of Notes, such repurchase relates to an aggregate principal amount of Notes which is less than or equal to the excess (if any) above the maximum aggregate principal amount of the Issuer's hybrid capital to which S&P then assigns equity content under its prevailing methodology, or*
- (v) if the Notes are not assigned an "equity credit" (or such similar nomenclature then used by S&P at the time of such redemption or repurchase), or*
- (vi) if such redemption or repurchase occurs on or after the Second Step-up Date.*

Terms used but not defined in the preceding sentence shall have the meaning set out in the Terms and Conditions.

USE OF PROCEEDS

The net proceeds from the issue and sale of the Notes will amount to approximately EUR 996,000,000. The Issuer intends to use the net proceeds for general corporate purposes, including a potential repurchase of certain of its outstanding EUR 1,000,000,000 Subordinated Fixed to Reset Rate Notes due 2074 with a first call date in 2021 (XS1152338072).

DESCRIPTION OF THE ISSUER AND THE GROUP

General Information on Merck KGaA

Incorporation, Corporate Seat, Duration, Corporate Purpose and Regulation

The Issuer is a corporation with general partners (*Kommanditgesellschaft auf Aktien* – KGaA) operating under German law and registered under its legal name "MERCK Kommanditgesellschaft auf Aktien" in the commercial register at the local court (*Amtsgericht*) in Darmstadt under HRB 6164. The Issuer conducts its business, amongst others, under the commercial name "Merck". The Legal Entity Identifier (LEI) of the Issuer is 529900OAREIS0MOPTW25.

The Issuer was established in 1995 by transferring a predominant part of the assets of E. Merck OHG ("**E. Merck**") to the Issuer, whereby E. Merck became one of the general partners of the Issuer. At the time of the transfer, E. Merck was organized as a general partnership under German law (*offene Handelsgesellschaft* – OHG). In 1995, the Issuer placed about 26% of its total capital with investors in connection with its initial public offering and in 2007 completed a EUR 2 billion capital increase. On April 4, 2009, E. Merck was transformed from a general partnership (*offene Handelsgesellschaft* – OHG) into a limited partnership under German law (*Kommanditgesellschaft* – KG) with its registered office in Darmstadt, Germany.

The registered office and business address of the Issuer is Frankfurter Strasse 250, 64293 Darmstadt, Germany (tel. +49 6151 72-0). The website of the Issuer is www.merckgroup.com. The information on the website does not form part of this Prospectus unless that information is incorporated by reference into this Prospectus.

Pursuant to article 2 of the Issuer's Articles of Association, the object of the company is

- (i) the manufacture and distribution of chemical and biotechnological products, particularly pharmaceuticals, basic substances for medicinal products, specialty chemicals, industrial chemicals, pigments and cosmetic substances,
- (ii) the manufacture, distribution and trade in laboratory preparations and equipment, particularly reagents and diagnostic agents, and
- (iii) the development, acquisition and exploitation of chemical processes and facilities.

The Issuer is established for an unlimited period of time.

Financial Year

The financial year of the Issuer is the calendar year.

Auditors

The auditor of the Issuer's annual and consolidated financial statements for the 2018 and 2019 fiscal years is KPMG AG Wirtschaftsprüfungsgesellschaft, Klingelhöferstrasse 18, 10785 Berlin, Germany ("**KPMG**"). The annual financial statements according to HGB, as well as the consolidated financial statements of the Issuer according to IFRS for the 2018 and 2019 fiscal years, were audited by KPMG and each provided with an unqualified auditor's opinion. KPMG is a member of the German Chamber of Auditors (*Wirtschaftsprüferkammer*).

Organizational Structure

The Issuer manages the operations of the Group as the parent company. Per June 30, 2020 the Group included 374 fully consolidated subsidiaries.

Legal Structure and Share Capital

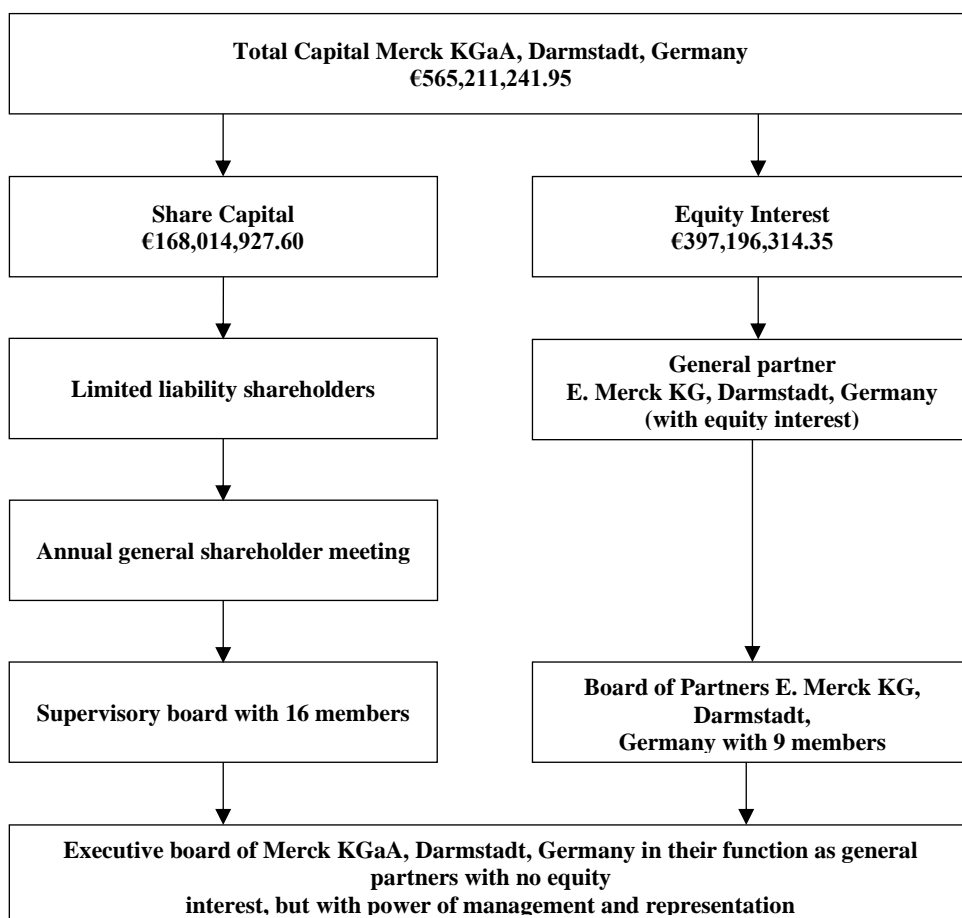
The Issuer is a corporation with general partners (*Kommanditgesellschaft auf Aktien*). A corporation with general partners is a company with its own legal personality, having two types of stakeholders. One group comprises one or more partners having unlimited liability for the company's creditors (general partner – *persönlich haftende Gesellschafter*). The second group are the shareholders, holding an interest in the share capital, divided into shares, without any personal liability for the company's debts (limited liability shareholders – *Kommanditaktionäre*).

As of December 31, 2019, the total capital (*Gesamtkapital*) of the Issuer was EUR 565,211,241.95 and consisted of the share capital (*Grundkapital*) of EUR 168,014,927.60 divided into 129,242,252 shares (including 129,242,251 no-par value bearer shares and one registered share) and the equity interest (*Kapitalanteil*) of EUR 397,196,314.35 held by the general partner E. Merck.

Thus, the general partner E. Merck holds an approximate 70% interest in the total capital of the Issuer. The equity interest of E. Merck in the Issuer is not certificated by shares and does not carry any voting rights. The total capital is fully paid up.

The shares of Merck are no-par value shares. One share is a registered share (share number 1); the remaining shares are bearer shares. The holder of the registered share is E. Merck Beteiligungen KG. The transfer of the registered share requires the Issuer's approval. The approval is granted at the sole discretion of the personally liable general partner with an equity interest, namely E. Merck.

The following chart illustrates the capital structure of Merck as of December 31, 2019 as described above:



The bearer shares of Merck have been admitted to the regulated market (*regulierter Markt*) and to the listing segment with additional transparency requirements (Prime Standard) of the Frankfurt Stock Exchange.

On June 18, 2007 Merck became part of the DAX 30 Index. The DAX 30 Index is the German stock index that tracks the price developments of the 30 largest and most actively traded German equities.

Major Shareholders

To the best knowledge of Merck, the following shareholders (including, where relevant, their affiliates and subsidiaries) hold as of May 31, 2020 at least 3% of the voting rights in the Issuer:

Shareholder	Share of voting rights (in %)
BlackRock, Inc.....	7.3
Sun Life Financial, Inc.....	4.7
Deutsche Bank AG Group.....	4.2
State Street Corporation	3.7
Crédit Agricole S.A.....	3.4
The Vanguard Group, Inc.....	3.2
Select Equity Group, L.P.....	3.1

A change in the shareholder structure is possible in certain cases. For example, E. Merck may use its right under the Articles of Association to convert its equity interest in whole or in part into share capital.

No arrangements are known to Merck which may at a subsequent date result in a change in control over the Issuer.

History

The history of the Group dates back to 1668, when Friedrich Jacob Merck purchased a pharmacy in Darmstadt, the Engel-Apotheke, which is still owned and operated by the Merck family today. With a history of more than 350 years, the Group is one of the oldest chemical and pharmaceutical enterprises worldwide.

Ratings

The following table shows the credit ratings of Merck as of the date of the Prospectus:

Rating Agency	Long-term Rating	Outlook	Short-term Rating
Standard & Poor's Ratings Services ("Standard & Poor's").....	A ¹	stable	A-1 ²
Moody's Investors Service ("Moody's").....	Baa1 ³	stable	P-2 ⁴
Scope Ratings ("Scope").....	A- ⁵	stable	S-1 ⁶

S&P and Scope are established in the European Union. Moody's is established in the United Kingdom. S&P, Scope and Moody's are registered under Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 on credit rating agencies, as amended (the "CRA Regulation").⁷

-
- ¹ Standard & Poor's defines "A" as follows: "An obligor rated 'A' has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories. The ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or (-) sign to show relative standing within the major rating categories."
- ² Standard & Poor's defines "A-1" as follows: "An obligor rated 'A-1' has strong capacity to meet its financial commitments. It is rated in the highest category by Standard & Poor's. Within this category, certain obligors are designated with a plus sign (+). This indicates that the obligor's capacity to meet its financial commitments is extremely strong. The ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or (-) sign to show relative standing within the major rating categories."
- ³ Moody's defines "Baa1" as follows: "Obligations rated 'Baa' are subject to moderate credit risk. They are considered medium grade and as such may possess certain speculative characteristics. Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category."
- ⁴ Moody's defines "P-2" as follows: "Issuers (or supporting institutions) rated Prime-2 have a strong ability to re-pay short-term debt obligations."
- ⁵ Scope defines "A-" as follows: "Ratings at the A level reflect an opinion of strong credit quality with a very low risk of a default-like event. The AA, A, BBB, BB and B rating categories are divided into three sub-categories for each, using the '+' and '-' suffixes for the top and bottom sub-category, respectively. "
- ⁶ Scope defines "S-1" as follows: "Ratings at the S-1 level reflect an opinion of very low credit risk with high capacity to repay short-term obligations."
- ⁷ The European Securities and Markets Authority publishes on its website (<https://www.esma.europa.eu/supervision/credit-rating-agencies/risk>) a list of credit rating agencies registered in accordance with the CRA Regulation. That list is updated within five working days following the adoption of a decision under Article 16, 17 or 20 CRA Regulation. The European

A credit rating is not a recommendation to buy, sell or hold securities and may be subject to revision, suspension or withdrawal at any time by the relevant rating agency.

Business

Overview

The Group considers itself to be a leading science and technology enterprise in healthcare, life science and performance materials. About 57,000 employees in 66 countries work to further develop technologies that improve and enhance life - from biopharmaceutical therapies to treat cancer or multiple sclerosis, cutting-edge systems for scientific research and production, to electronic materials for the semiconductor and display industries.

The Group is building on established brands in all of its businesses and focuses its investments to benefit from global megatrends such as a rising prevalence of chronic diseases, general increase in life expectancy and technology market trends such as the Internet of Things, artificial intelligence and autonomous driving.

The Group's research and development activities are mainly concentrated in Darmstadt (Germany), Boston (USA), Beijing (China) and Tokyo (Japan).

In fiscal year ended December 31, 2019, the Group posted net sales of EUR 16,152 million (fiscal year ended December 31, 2018: EUR 14,836 million).

Business Sectors

The business of the Group comprises three business sectors.

- The "**Healthcare Business Sector**" stands for innovative therapies focusing on people. As of December 31, 2019, Healthcare consisted of the Biopharma and Allergopharma businesses.
 - Biopharma: discovers, develops, manufactures and markets innovative pharmaceutical and biological prescription drugs to treat cancer, multiple sclerosis, infertility, growth disorders as well as certain cardiovascular and metabolic diseases.
 - Allergopharma: high-dosage, hypoallergenic, standardized preparations for allergen-specific immunotherapy for pollen and house dust mite allergies, as well as a wide range of diagnostic allergy tests.

The Healthcare Business Sector contributed 42% of total net sales of the Group in the fiscal year ended December 31, 2019 (fiscal year ended December 31, 2018: 42%).

On March 31, 2020, Merck announced the completion of the divestment of its Allergopharma business in Europe to Dermapharm Holding SE. The closing of the transaction for the Allergopharma business in China is expected for the second half of 2020. The transaction encompasses the Allergopharma business in Europe and Asia, including the therapeutic and diagnostic product portfolio as well as the production site in Reinbek near Hamburg (Germany), and aims to further sharpen the focus of the Healthcare Business Sector on the development of innovative medicines for difficult-to-treat diseases. Allergopharma's adrenaline autoinjector development project for the treatment of anaphylactic reactions is not part of the transaction and will remain with Merck. In the fiscal year 2019, Allergopharma generated sales of EUR 87 million.

- The "**Life Science Business Sector**" has a broad product and technology portfolio and offers innovative solutions for the life science industry. The business sector's products and services are used in the research, development

Commission shall publish that updated list in the Official Journal of the European Union within 30 days following such update.

and manufacture of biotechnological and pharmaceutical drug therapies and for general laboratory applications. In addition, the Group's products and services also reach adjacent markets such as the food and beverage industry.

The Life Science Business Sector contributed 42% of total net sales of the Group in the fiscal year ended December 31, 2019 (fiscal year ended December 31, 2018: 42%).

- The "**Performance Materials Business Sector**" comprises the Group's entire specialty chemicals business. It offers high-tech performance chemicals for applications in fields such as consumer electronics, lighting, coatings, printing technology, plastics and cosmetics.

The Performance Materials Business Sector contributed 16% of total net sales of the Group in the fiscal year ended December 31, 2019 (fiscal year ended December 31, 2018: 16%).

Key Performance Indicators and Geographical Distribution of Net Sales and R&D costs

The following provides an overview of the business sectors' key performance indicators for the first six month of fiscal year 2020 and the fiscal years 2019 and 2018:

Six-months ended June 30, 2020	Health Care	Life Science	Performance Materials
		<i>(in EUR million)</i>	
Net sales	3,200	3,575	1,714
Operating result (EBIT) ^{1*}	692	731	86
EBITDA pre ^{2*}	846	1,122	524
Business free cash flow ^{3*}	638	718	389

Fiscal Year ended December 31, 2019	Health Care	Life Science	Performance Materials
		<i>(in EUR million)</i>	
Net sales	6,714	6,864	2,574
Operating result (EBIT) ^{1*}	1,149	1,280	307
EBITDA pre ^{2*}	1,922	2,129	803
Business free cash flow ^{3*}	1,252	1,375	641

Fiscal Year ended December 31, 2018	Health Care	Life Science	Performance Materials
		<i>(in EUR million)</i>	
Net sales	6,246	6,185	2,406
Operating result (EBIT) ^{1*}	731	1,036	508
EBITDA pre ^{2*}	1,556	1,840	786
Business free cash flow ^{3*}	1,025	1,393	588

*) Not defined by International Financial Reporting Standards (IFRS).

1) "EBIT is defined as a key figure for earnings before interest and taxes on income. Equals the operating result.

2) "EBITDA pre" excludes in addition to EBITDA specific income and expense of a one-time nature such as integration and restructuring costs, acquisition-related items, and other one-time items.

3) Business free cash flow is defined as "EBITDA pre" less investments in property, plant and equipment, software, advance payments for intangible assets, changes in inventories, trade accounts receivable as well as receivables from royalties and licenses.

The following provides an overview of the geographic distribution of net sales and research and development costs for the fiscal years 2019 and 2018:

Fiscal Year ended December 31, 2019	Europe	North America	APAC	LatAM	MEA
			<i>(in EUR million)</i>		
Net sales	4,735	4,214	5,599	1,012	591
Research and development costs ^{1*}	(1,997)	(164)	(79)	(18)	(11)

Fiscal Year ended December 31, 2018	Europe	North America	APAC	LatAM	MEA
			<i>(in EUR million)</i>		
Net sales	4,559	3,818	4,965	950	544
Research and development costs ^{1*}	(1,938)	(186)	(69)	(17)	(14)

*) Not defined by International Financial Reporting Standards (IFRS).

1) Research and development costs comprise the costs of research departments and process development, the expenses incurred as a result of research and development collaborations as well as the costs of clinical trials (both before and after approval is granted).

Known Trends affecting the Business of the Group

The Group has identified the following global megatrends that are most likely to affect the Group going forward:

Rising prevalence of chronic diseases and general increase in life expectancy: Merck is expecting that the rising prevalence of chronic diseases and general increase in life expectancy continue to drive the demand for its healthcare products. To meet these demands and respond appropriately to the dynamics of its markets, Merck transformed its Healthcare business sector in recent years.

Technology megatrends (Internet of Things, artificial intelligence and autonomous driving): Merck is expecting that market trends such the Internet of Things, artificial intelligence and autonomous driving will lead to high innovation pressure and drive the growth of data from every side. With its Performance Materials Business, Merck believes it is well positioned to participate in these trends and targets primarily the electronic material market.

Principal Industries

Healthcare

As of December 31, 2019, the Healthcare Business Sector comprised the two businesses Biopharma and Allergopharma (divested in the first six months of the fiscal year 2020). In 2019, Healthcare generated 42% of Group sales and 40% of EBITDA pre (excluding Corporate and Other). The regions Europe and North America generated 55% of Healthcare's net sales in 2019. In recent years, Merck has steadily expanded its presence in growth markets. In 2019, Asia-Pacific and Latin America accounted for 38% of sales. On March 31, 2020, Merck announced the completion of the divestment of its Allergopharma business to Dermapharm Holding SE.

Biopharma

Overview

The Group's Biopharma business discovers, develops, manufactures and markets innovative pharmaceutical and biological prescription drugs to treat cancer, multiple sclerosis, infertility, growth disorders as well as certain cardiovascular and metabolic diseases. Biopharma is the larger of Merck's Healthcare businesses. The Biopharma business operates in four franchises: Oncology, Neurology & Immunology, Fertility, General Medicine & Endocrinology. The streamlined R&D pipeline positions the Group with a clear focus on becoming a global specialty innovator in oncology, immuno-oncology and immunology, including multiple sclerosis.

Main Products

Biopharma's products are primarily prescribed by specialists and sales are dominated by drugs manufactured using biotechnology.

Neurology and Immunology: Merck develops innovative treatments to help manage neurodegenerative diseases such as multiple sclerosis ("MS"). As of March 2020, Merck had received regulatory approvals for Mavenclad® in 70 countries, including those of the European Union, the United States, Australia, Canada, and Switzerland. Together with the well-established interferon beta therapy Rebif®, Mavenclad® is a complementary new treatment option in Merck's MS product portfolio. Further development programs for neurology and immunology include evobrutinib as a potential treatment for multiple sclerosis. In September 2019, Merck initiated two global pivotal Phase III trials of evobrutinib which run in a modified study design since February 2020.

Oncology is focused on developing novel cancer-specific therapies that provide beneficial therapeutic outcomes and create new options for cancer patients. Erbitux® (cetuximab) is the third best-selling drug in the portfolio of the Biopharma business and is the Group's flagship product in oncology. The product is a standard of care for patients with epidermal growth factor receptor ("EGFR")-expressing, RAS wild-type metastatic colorectal cancer ("mCRC") therapy, as well as both recurrent / metastatic and locally advanced squamous cell carcinoma of the head and neck ("SCCHN").

In March 2020 Merck announced that the Japanese Ministry of Health, Labour and Welfare (MHLW) has approved TEPMETKO®* (tepotinib) for the treatment of patients with unresectable, advanced or recurrent non-small cell lung cancer (NSCLC) with MET exon 14 (METex14) skipping alterations. This is the first regulatory approval globally for an oral MET inhibitor indicated for the treatment of advanced NSCLC harboring MET gene alterations. TEPMETKO was previously granted SAKIGAKE 'fast-track' designation and orphan drug designation by the MHLW.

In September 2019, the US Food and Drug Administration (FDA) granted Breakthrough Therapy Designation for tepotinib in patients with metastatic NSCLC harboring METex14 skipping alterations who progressed following platinum-based cancer therapy. Merck plans to file tepotinib for regulatory review with the FDA in 2020. Tepotinib is also being investigated in the INSIGHT 2 study (NCT03940703) in combination with the tyrosine kinase inhibitor (TKI) osimertinib in epidermal growth factor receptor (EGFR)-mutated, MET amplified, locally advanced or metastatic NSCLC that has acquired resistance to prior EGFR TKI.

Immuno-oncology: Through the strategic alliance with Pfizer Inc., the Biopharma segment has continued to make progress in the development of avelumab, an investigational fully human anti-programmed death-ligand 1 ("PD-L1") antibody. Merck and Pfizer Inc have received more than 50 regulatory approvals for avelumab under the brand name Bavencio®. In May 2019, Merck and Pfizer Inc. announced that the FDA had approved Bavencio® in combination with axitinib for the first-line treatment of patients with advanced renal cell carcinoma (RCC). In October 2019, Merck and Pfizer Inc. reported that the European Commission (EC) had also approved Bavencio® in combination with axitinib for the first-line treatment of adult patients with advanced RCC. Japan approval did follow in December 2019.

Merck, together with Pfizer, continues to explore the therapeutic potential of avelumab in a large clinical development program known as JAVELIN where more than 10,000 patients are evaluated across more than 15 different tumor types. Furthermore, Merck has entered into several strategic collaborations to evaluate the efficacy of avelumab in combination with other therapies:

While some of the sub-programs of JAVELIN did not meet the primary endpoint (like JAVELIN Gastric 300, JAVELIN Ovarian 100, JAVELIN Gastric 100, JAVELIN Head and Neck 100), Merck and Pfizer announced in January 2020 that the Phase III JAVELIN Bladder 100 study met its primary endpoint of overall survival (OS) at the planned interim analysis. In this study, patients with previously untreated locally advanced or metastatic urothelial carcinoma (UC) whose disease did not progress on induction chemotherapy and who were randomized to receive first-line maintenance therapy with BAVENCIO® (avelumab) and best supportive care (BSC) lived significantly longer than those who received BSC only. In the US FDA granted approval for the first line switch maintenance treatment of patients with locally advanced or metastatic UC (July 2020).

On February 5, 2019 Merck and GlaxoSmithKline plc (GSK) agreed on a collaboration in immuno-oncology. The two companies will jointly develop and commercialize Bintrafusp alfa (known as M7824), a bifunctional fusion protein developed by Merck. Ongoing trials include five pivotal studies (1L NSCLC vs pembrolizumab, Stage III NSCLC 1L & 2L, Biliary Tract and 2L Cervical) and several safety run in & signal finding studies which are initiated or in planning, including TNBC (Triple Negative Breast Cancer).

Fertility is an important growth driver for the Biopharma business, offering products that help couples to conceive a child, ranging from drugs to technologies. Infertility has become a key topic globally due to the trend towards delaying childbirth. On top of that, demand in growth markets is steadily increasing, fuelling sales. In addition, Merck is facing a rapidly changing environment in the fertility market, changes in competitive environment trending towards increased price pressure in the drugs business, more educated patients and an increasing importance of technologies in fertility. The innovative strategic objective of the Fertility business is to develop from the world market leader in fertility drugs into an integrated fertility treatment partner. Merck therefore focuses on turning these trends into opportunities to achieve further growth.

General Medicine & Endocrinology is the largest business franchise of the Healthcare segment in terms of sales, contributing significantly to the overall profitability of Biopharma and Merck. Although no longer patent-protected, the brand equity built over decades make Merck's products cornerstones for the treatment of chronic cardiovascular, metabolic and endocrine diseases. Today Concor® (leading beta-blocker for chronic cardiovascular diseases), Euthyrox® (leading

treatment for hypothyroidism), Glucophage® (first-line treatment of type 2 diabetes), and Saizen® (treatment of growth hormone deficiency) are high-value brands and market leaders in many key markets around the world.

Research and Development

In 2019, Healthcare spent EUR 1,666 million in R&D, the majority of which relates to the Biopharma Segment. In addition to in-house research, Biopharma is committed to building long-term relationships with external partner companies, academic institutions and collaborative groups in order to enhance the productivity of its drug discovery activities, providing greater access to innovative and emerging technologies. The business is also seeking to strengthen its franchises by in-licensing clinical stage compounds.

Along with the sustained effort to foster an environment of end-to-end development – from early research to late stage development and product registration – there is a resolute commitment to ensure that the patient's needs are the primary driver in all decision making. A patient-centric approach to R&D is increasingly inherent across Biopharma, from research of the highest-quality through to quick and efficient clinical development. Across the continuum of R&D, there is a renewed energy to build a solution-oriented, collaborative and accountable culture that delivers value to the business and to patients. With an unwavering focus on world-class science, and the development of strategic external opportunities, Biopharma R&D aims to accelerate its pipeline.

In research, the early phases of discovery remain structured across three distinct yet closely aligned Translational Innovation Platforms ("TIPs"): Oncology, Immuno-Oncology and Immunology as the core focus areas of expertise.

With four global hubs in Darmstadt, Germany, Boston, Massachusetts, USA, Tokyo, Japan, and Beijing, China, the broad footprint of Biopharma provides access to innovation in its key markets. Across the spectrum of biopharma – from academia, to hospitals, to research institutions, and to other companies in the biopharmaceutical industry – Biopharma complements its internal expertise by leveraging the experience and knowledge of others through partnerships. With a forward-looking view, Biopharma's R&D organization is positioning itself for future success. Strong collaboration, an unwavering commitment to exceptional science and a focus on objective decision making are the key principles that will guide the R&D teams going forward.

Life Science

Overview

In the Life Science business sector, Merck serves more than 1.6 million customers in academia, biotech and pharma – helping them to deliver the promise of their work better, faster and safer. As a leading player in the global life science industry, the business sector offers innovative solutions for scientists and engineers at every stage – from research and development to biomanufacturing to testing. The more than 300,000 products range from lab water systems to genome-editing tools, antibodies and cell lines, as well as end-to-end bioprocessing systems to support the manufacturing needs of both emerging biotech and large pharma. In addition, the products and services also serve adjacent markets such as the food and beverage industry.

After successfully orchestrating the largest acquisition in the history of Merck, the Life Science business sector redesigned its organizational structure in the second quarter of 2017 to capture growth opportunities even more nimbly and to align the entire organization to optimally contribute to and capitalize on the strength of the Group. Strategic Marketing & Innovation units and commercial teams were streamlined into three distinct business units - Research Solutions, Process Solutions and Applied Solutions - each designed to increase agility and drive sustained entrepreneurship to better serve its customers.

The Life Science business sector generates recurring sales and stable, attractive cash flows in an industry characterized by stringent regulatory requirements. A highly diversified and loyal customer base additionally ensures a low-risk profile. Merck benefits from a broad and relevant portfolio, a highly efficient supply chain that includes a superb e-commerce platform and global reach. In 2019, Life Science generated 42% of Group sales as well as 44% of EBITDA pre (excluding Corporate and Other).

Business Units

Research Solutions serves customers focused on identifying and developing new therapies. Merck offers a broad and relevant portfolio of solutions that enables scientific discovery through collaborative partnerships across the customer journey. This includes more than 200,000 products and services, including molecular platforms, protein and pathway technologies, biochemicals, materials science and cell culture workflow tools. In May 2017, the Group acquired Grzybowski Scientific Inventions for its revolutionary computer-aided retro-synthesis software that optimizes productivity and organic synthesis. The technology, now marketed as Synthia™, complements the Group's leading e-commerce platform and chemistry portfolio of more than 400,000 building blocks, catalysts and reagents for chemical syntheses.

Process Solutions delivers end-to-end products and expertise to customers who take what is developed in labs and manufacture it. Merck offers a diverse range of products to pharmaceutical and biotechnology companies that enables customers to develop large- and small-molecule drugs safely, effectively and cost-efficiently. The 15,000-plus products and services in this business unit include single-use manufacturing, filtration, chromatography and purification, virus reduction, pharma and biopharma raw materials, drug delivery compounds and engineering and validation services. In August 2019, Merck acquired all ownership rights to the ProcessPad™ platform from Simplyfeye Softwares Private Limited. Adding to the Group's biopharmaceutical product portfolio, the web-based platform provides easy, on-demand access to data for aggregation, analysis, visualization and management. It advances Merck's BioContinuum™ Platform by adding a building block that connects across functions and with suppliers to deliver continuous manufacturing. In October 2019, Merck became the first to make acoustic technology available for cell therapy manufacturing with the acquisition of FloDesign Sonics of Massachusetts, United States. The unique acoustic cell processing platform will industrialize the manufacturing of autologous cell therapy and provide revolutionary cancer treatment by way of chimeric antigen receptor T (CAR-T) cell therapies. A strategic fit with Merck's goal of advancing cell-based therapies to patients, the acquisition will allow further advancement toward potentially life-saving treatments.

Applied Solutions supports customers in their efforts to ensure that drugs, food and beverages are safe for consumption. Merck provides trusted products and comprehensive workflow solutions that streamline processes, lower costs and deliver consistent, reliable results. The 62,000-plus products and services include analytical separation systems, reference materials, lab water instruments with consumables and services, and microbiology and bio-monitoring testing materials. In August 2019, Merck announced the acquisition of BSSN Software, a Darmstadt, Germany-based laboratory informatics company. The acquisition continues the acceleration of customers' digital transformation in the lab by giving scientists better, more efficient access to their lab data. Earlier in 2019, Merck completed the divestiture of its flow cytometry business to Luminex Corporation of Texas, United States. A process begun in 2018, this included the portfolio's combined stock, asset, and inventory purchases.

Research & Development

Across the three Life Science business units of Research Solutions, Process Solutions and Applied Solutions, Merck invests significantly in R&D, with more than 2,000 employees working in various R&D functions around the world. In 2019, Merck continued to focus on delivering the promise of accelerating access to health for people everywhere with investment in collaboration with the global scientific community. The business sector in 2019 launched 18,500 products, including those launched through Merck's "faucet program" for antibodies, reference materials, chemicals and nanomaterials. These included innovation from all business units, such as ZooMAb® recombinant antibodies, Sucrose Ultrafiltrated, a Millipak® Final Fill extension and a Stericup® extension of the Milli-Q® 7000 line. In addition, as of December 2019, Merck had won approvals of 22 patents with regards to its CRISPR genome editing technology in nine regions, including China, Europe and North America.

Performance Materials

Overview

The Performance Materials Business Sector comprises Merck's entire specialty chemicals business. The portfolio includes high-tech chemicals for applications in fields such as consumer electronics, lighting, coatings, printing technology, paints,

plastics, and cosmetics. Performance Materials consists of three business units: Display Solutions, Semiconductor Solutions and Surface Solutions. In 2019, the Performance Materials business sector's share of Group sales amounted to 16% and its share of EBITDA pre (excluding Corporate and Other) was 17%. The EBITDA pre-margin amounted to 31.2% of net sales.

Business Units

Semiconductor Solutions is, with the completion of the acquisitions of Versum on October 7, 2019, and Intermolecular on September 20, 2019, the largest business unit in Performance Materials. It consists of two dedicated units: Semiconductor Materials and Delivery Systems & Services. The Semiconductor Materials unit supplies products for every major step in the wafer manufacturing process, including doping, lithography, patterning, deposition, planarization, etching, and cleaning. Specialty cleaners and conductive pastes for semiconductor packaging round off the portfolio. The Delivery Systems & Services (DS&S) business develops and deploys safe and reliable delivery equipment that enables the Group's Semiconductor Materials business to provide hazardous materials to its customers.

Display Solutions comprises the liquid crystals, OLED (organic light-emitting diodes), photoresists for display applications and adjacent future display technologies. Even though competition continues to intensify, the Group considers itself as the global market and technology leader in the display materials business in 2019. Modern, energy-efficient technologies such as UB-FFS (ultra-brightness fringe-field-switching) have further established themselves in the market. The Group has secured projects in the area of large-surface displays as well as for high-resolution mobile devices with its XtraBright™, XtraBrilliant™, and XtraBoost™ products. The OLED business continued to develop favorably and experienced a high demand due to the increased production capacities of display customers.

Surface Solutions business unit provides its customers with solutions that help them to create innovative surfaces of all kinds. Its materials enable more beautiful, more resistant, and more effective products. The pearlescent pigments allow striking automotive coatings, fascinating cosmetics, extraordinary packaging, innovative product design, and even unique food creations. With a broad portfolio of active ingredients, the unit enables cosmetics manufacturers to enrich their skin care products with moisturizing, protecting, or anti-aging effects. Moreover, with its functional solutions it serves a large number of innovative applications, from dirt-repellent and easy-care surfaces to laser markings of plastic parts and cables.

Research & Development

In 2019, R&D expenditures amounted to EUR 267 million, which is equivalent to 10.4% of Net Sales. R&D activities of Performance Materials are primarily located in Germany, Japan, the US, South Korea, Taiwan, China, France, and Israel. In order to streamline its cost-base and processes, Merck reallocated its R&D resources and closed its main R&D site in Chilworth, United Kingdom, in September 2019. The closure of Merck's site in Atsugi, Japan, will follow by mid-2021. In addition, as announced in 2018, Merck will downsize by 400 positions in Germany by 2022.

In order to bring its R&D closer to its businesses and reflect its new organizational structure after the acquisition of Intermolecular and Versum, Merck transferred its research activities of "Early Research & Business Development" to its business units. The Group also has set up a Chief Technology Office (CTO), which bundles important technology competencies and technology scouting. As a dedicated technology organization, the CTO focuses on interacting with top-level customers and the electronics industry, managing research partnerships, shaping the Group's technology roadmap and managing its long-term R&D portfolio.

Material Investments

The Issuer has made no material investments since the date of its last published financial statements and, as at the date of this Prospectus, its management has made no firm commitments on such material investments in the future.

Risk Management

Risk management within the Group is described for all risk owners in detailed guidelines. These define the principles of risk management, outline roles and responsibilities, and help those responsible to implement the legal and operational

requirements. Specific terminology and standard risk reports harmonize the risk management process worldwide. Regular risk reports are submitted to the Executive Board and the Supervisory Board on a bi-annual basis. Furthermore, significant changes in the assessment of the risks already known and new significant risks shall be reported at any time and are communicated to the Executive Board on an ad hoc basis. The internal auditing department reviews the risk management system on a regular basis.

Intellectual Property Rights

The Group endeavours to protect its products on a worldwide basis in countries where appropriate with patents, trademarks and other intellectual property rights, in order to safeguard its investments, particularly in R&D, but also in production and marketing. The Group aims to achieve the highest possible level of protection for its product developments and an intensive life-cycle management system in all key markets, especially Europe, the United States, China and Japan. The Group also endeavours to patent new processes and production procedures, secondary indications, active ingredient combinations and preparations for new and existing products. In the case of approved active pharmaceutical ingredients, the data exclusivity granted in the key industrialized countries and regions (i.e. United States, Japan and Europe) to protect the regulatory documentation is another important factor in the protection of products and investments.

Patents

Patent protection is available in most industrialized countries for both new active ingredients and the products that contain them, and for the indications, galenic specialties, such as formulations and manufacturing procedures, among others. The Group monitors its competitors and follows up any patent infringements. To compensate for the lengthy development times of pharmaceutical products resulting from the drug regulatory procedures, various countries have introduced laws to extend the term of pharmaceutical patents and grant the regulatory documentation special protection (data exclusivity). It has been possible for several years now to extend the normal terms of patents for pharmaceutical products by up to five years in the United States and Japan. A similar system (supplementary protection certificates) with the same maximum term of up to five years was introduced in the European Union in 1993. In addition, in some jurisdictions paediatric extensions of 6 months are available if a drug was investigated for paediatric use. The Group takes advantage of these laws insofar as it seems reasonable and is feasible and applies for patent extensions or supplementary protection certificates.

In the Group's Biopharma business, the top-selling and thus most important products in 2019 were Rebif®, Mavenclad®, Erbitux®, Bavencio®, Gonal-f®, Concor®, Glucophage®, Euthyrox® and Saizen®. For some of these products patent rights are in force and remain active.

In the Group's Life Science business sector, marketed products and products in development for the life science technologies business field are currently protected by more than 800 patent families. An important technology is the gene editing technology, namely the CRISPR technology which includes all reagents needed for genome editing as well as a comprehensive service offering. Several patents with regards to the CRISPR technology were awarded to the Group in 2019 and are subject to an active licensing business.

The protection of the products of the Group's Performance Materials Business Sector by currently more than 3,000 patent families is regarded an important asset. These patents relate to both individual chemical substances and to mixtures and components of mixtures for special applications up to and including finished displays with enhanced features. The Group owns patents for high-tech liquid crystal mixtures – for example for the polymer-stabilized vertical alignment or in-plane switching LCD technologies now used in LCD televisions. The Group holds more than 3,500 patents and patent applications worldwide in the field of materials for OLED displays, effect pigments for the automotive, plastics, printing and cosmetics industry, and in the field of functional pigments. Furthermore, the Group holds more than 5,000 patents and patent applications relating to materials for the Semiconductor Industry, mainly going back to the acquisitions of AZ Electronic Materials and Versum Materials. Those patents mostly protect process chemicals or their application for the Optronics and Integrated Circuit markets or reagents, fine chemicals and the like. The Group considers this to be a key success factor.

Licenses

In addition to selling products from its own research and development pipeline, the Group generates significant merchandise sales by licensing products from other manufacturers. Licensing products to other companies is also becoming increasingly significant for the Group in order to ensure a long-term commitment to developing and marketing future products from the Group's R&D pipeline on a global basis.

A comparison covering several years shows an above-proportionate increase in the percentage of licensed products to products developed by the Group itself. The Group is a licensee who is present in all major global sales markets and has an efficient distribution system and marketing know-how.

Licensing is in particular important for the Group's Biopharma business. Also, in the Life Science business sector licensing-in is a valuable tool to establish a broad product portfolio for customers in the R&D area. On the other hand, cross-licensing with partners in the field of liquid crystals is of limited importance. There are only few licenses of particular importance held by the Group in its Performance Materials Business Sector.

While the management of the Group considers the licenses to be collectively important for the businesses, generally speaking, there is, with one exception, no license or group of licenses of a single licensor that is so important that the Group would be dependent on single licenses or licensors and termination of that license would have a material adverse effect on the Group's business. The exception is Erbitux®, which was in-licensed from ImClone Systems, Inc. (now Eli Lilly) in 1998 and is one of Biopharma's main products. In this case, dependency exists on the part of the Group, so that a discontinuation of this license would have a severe impact on its oncology business.

The most important licensed products, the respective licensors (in-license) or licensee (out-license), the licensed territory and the area of application, excluding in-licensed and out-licensed development projects, are summarized in the following table:

Product	Licensor / Licensee	Licensed territory	Area of application or indication
Erbitux®(In-license)	Eli Lilly (former ImClone Systems, Inc.)	Profit share Japan	Oncology (various cancer types)
Erbitux®(In-license)	BMS	Royalties Japan	Oncology (various cancer types)
Avonex® / Plegridy® (Out-license)	Biogen	US and Canada	Multiple Sclerosis
Avonex® / Plegridy® (In-license)	YEDA / Weizman	US and Canada	Multiple Sclerosis
Viibryd® (Out-license)	Allergan	US	Antidepressant
Rebif® NF (In-license)	GSK	Worldwide	Multiple Sclerosis
Mavenclad® (In-license)	Teva (Ivax)	Worldwide	Multiple Sclerosis
Xalkori® (In-license)	Pfizer	US, CA, DE, FR, GB, ES, IT, JP, ARG, TUR, CHN	Oncology
Bavencio® (Out-license)	Pfizer	Worldwide	Oncology

In-licensed or out-licensed development projects in the pharmaceutical field, i.e., potential products of the future that are not yet fully developed, are also important in terms of licensing activities. Examples include: TGF- β Trap molecule (Bintrafusp alfa); IL 17 A-F nanobody; atacept and sprifermin. Other important alliances covering various projects were established for example with Vertex, F-Star and several academic institutes.

In case of out-licensing the products are being developed worldwide together with or independently by major partners of the pharmaceutical industry. The Group participates in their success by way of milestone and royalty payments. Life Science focusses on out-licensing especially in the gene editing area. Out-licensing is of minor relevance in the Performance Materials Business Sector.

Governmental, Legal or Administrative Proceedings

During the ordinary course of its business activities, the Issuer and its subsidiaries are regularly involved in legal proceedings, both as a claimant and as a defendant.

Save as described in the following, neither the the Issuer nor its subsidiaries are currently involved, and have not been involved in the past 12 months, in governmental, legal or arbitration proceedings (including pending or threatened proceedings) that could or recently had a significant impact on the financial position or profitability of the Issuer or the Group. The Group has set up provisions for legal disputes in an amount that it considers appropriate.

Product-related and patent disputes

Merck is involved in a patent dispute in the United States with Biogen Inc. (Massachusetts, USA) ("**Biogen**"). Biogen claims that the sale of Rebif® in the United States infringes on a Biogen patent. The disputed patent was granted to Biogen in 2009 in the United States. Subsequently, Biogen sued Merck and other pharmaceutical companies for infringement of this patent. Merck defended itself against all allegations and brought a countersuit claiming that the patent is invalid and not infringed by its actions. A Markman hearing took place in January 2012, leading to a decision in the first quarter of 2016. A court-ordered mediation proceeding did not lead to an agreement between the parties. On February 23, 2018, a first-instance decision was rendered in favour of Merck. This jury verdict was overturned by a first-instance federal judge. For the time being the patent is thus deemed to be legally valid and to have been infringed. Merck filed a complaint with the United States Court of Appeals of the Federal Circuit (CAFC – second instance) against the first-instance ruling in October 2018. Oral proceedings at the CAFC took place on March 6, 2020. A decision can be expected within the next 3 – 4 months.

In the Performance Materials Business Sector, Merck is involved in a legal dispute with JNC Corporation, Japan, ("**JNC**"). JNC claims that by manufacturing and marketing certain liquid crystals mixtures, Merck infringes on JNC patents. JNC asserts its claims in court in two jurisdictions. Merck maintains that JNC's patent infringement assertion is invalid in three jurisdictions owing to relevant prior art and has filed the corresponding nullity actions. As of the end of the second quarter of 2020, the nullity actions were concluded in two jurisdictions with legally binding effect in favor of Merck. A patent infringement action was only conducted in two jurisdictions and was concluded in 2019. In the third jurisdiction, a patent infringement and a nullity action as well as a correction trial are still pending. In view of these developments, the provision was reduced as of June 30, 2020 and amounts to a double-digit million euro sum.

In France, due to complaints of patients regarding potential side effects of the drug Levothyrox, a criminal investigation by the public prosecutor was opened in March 2018 – the investigation is currently not directed against anybody specifically. In that context, several civil proceedings were initiated against Merck. As of the date of this Prospectus, all decisions have been rendered in favour of Merck, except for one summary judgement against which an appeal has been filed by Merck before the French supreme court. In the largest collective civil action initiated by 4,115 claimants for an alleged lack of information, the first instance fully rejected all claims made against Merck by a ruling rendered on March 5, 2019. An appeal has been filed by 3,329 claimants. A ruling was rendered on June 25, 2020. The Court found that Merck had not sufficiently informed patients when introducing Euthyrox New Formulation in France. It ordered Merck to pay EUR 1,000 per claimant as damages plus EUR 300 per claimant for the legal costs. Merck will bring this case before the *Cour de Cassation* (French Supreme Court).

Antitrust and other government proceedings

Paroxetine: In connection with the divested generics business, Merck is subject to antitrust investigations by the British Competition and Market Authority ("**CMA**") in the United Kingdom. In March 2013, the CMA informed Merck of the assumption that a settlement agreement entered into in 2002 between Generics (UK) Ltd. and several subsidiaries of GlaxoSmithKline in connection with the antidepressant drug paroxetine violates British and European competition law. Merck, the then owner of Generics (UK) Ltd., was allegedly involved in the negotiations for the settlement agreement and is therefore liable. The investigations into Generics (UK) Ltd. started in 2011, without this being known to Merck. On February 11, 2016, the CMA imposed a fine in this matter. Merck has taken legal action against this fine. The Appeals Tribunal has since submitted the relevant legal questions to the European Court of Justice (CJEU) for a preliminary ruling.

Raptiva®: In December 2011, the Brazilian federal state of São Paulo sued Merck for damages because of alleged collusion between various pharmaceutical companies and an association of patients suffering from psoriasis and vitiligo. The collusion is alleged to have been intended to increase sales of the medicines from the companies to the detriment of patients and state coffers. Moreover, patients are also suing for damages in connection with the product Raptiva®.

Sigma-Aldrich: On July 6, 2017, Merck received notice from the European Commission (the "**EU Commission**"), in connection with the antitrust review proceedings for the acquisition of Sigma-Aldrich, in which the EU Commission informed Merck of its preliminary conclusion that Merck and Sigma-Aldrich allegedly transmitted incorrect and/or misleading information within the scope of the acquisition of Sigma-Aldrich. The EU Commission received registration of the merger on April 21, 2015 and granted clearance on June 15, 2015 subject to the condition that Merck and Sigma-Aldrich divest parts of the European solvents and inorganic chemicals businesses of Sigma-Aldrich in order to resolve antitrust concerns. According to the preliminary viewpoint of the EU Commission communicated in the letter dated July 6, 2017, Merck and Sigma-Aldrich withheld in this connection important information about an innovation project allegedly relevant for certain laboratory chemicals of significance to the analysis by the EU Commission. According to the EU Commission, the innovation project should have been included in the remedies package. On July 1, 2020, the EU Commission informed Merck that the allegations made against Merck will be dropped. The accusations made against Sigma-Aldrich remain the object of the ongoing proceedings. This could lead to a fine being imposed, against which legal recourse could be taken. As of the date of this Prospectus, the existing provision amounting to a mid double-digit euro sum was reduced to a low double-digit million euro sum.

Trademark rights / breach of agreement

Merck is involved in various legal disputes with Merck & Co. Inc., Kenilworth, NJ, United States (outside the United States and Canada: Merck Sharp & Dohme ("**MSD**"), among other things due to breach of the co-existence agreement between the two companies and / or trademark / name right infringement regarding the use of the designation "Merck". In this context, Merck has sued MSD in various countries and has been sued by MSD in the United States.

In addition to provisions for the mentioned litigation, provisions existed as of the balance sheet date for various smaller pending legal disputes.

Material agreements

The following section provides a summary of material agreements to which the Issuer is a party:

Financing Arrangements

Multicurrency Revolving Credit Facility

The Group has a EUR 2.0 billion multicurrency revolving credit facility with Merck Financial Services ("**Merck FS**") and the Issuer as borrowers and the Issuer as guarantor, established in March 2013. It was renewed in 2020 and is in place until 2025 to cover any unexpected cash needs. As of the date of this Prospectus, the credit facility is undrawn.

Notes issued under the Debt Issuance Program of the Issuer

In the fiscal years 2009, 2010, 2015, 2019 and 2020 Merck FS issued notes under the EUR 15 billion Debt Issuance Programme of the Group. These notes are guaranteed by the Issuer and are listed on the Luxembourg Stock Exchange.

The following table provides a summary of the notes issued under the Debt Issuance Programme currently outstanding:

Issuer	Principal amount in EUR million	Maturity
Merck FS	550	September 1, 2022
Merck FS	600	December 15, 2023
Merck FS	750	July 16, 2025
Merck FS	600	July 5, 2027
Merck FS	750	July 16, 2028

Issuer	Principal amount in EUR million	Maturity
Merck FS	800	July 5, 2031

USD Bonds

In 2015, EMD Finance LLC, a wholly-owned subsidiary of the Issuer, issued a total of USD 4,000 million (USD 1,400 million of which have already been repaid) in fixed and floating rate notes with varying maturities each with an unconditional and irrevocable guarantee from the Issuer

Issuer	Principal amount in EUR million	Maturity
EMD Finance LLC	1,000	March 19, 2022
EMD Finance LLC	1,600	March 19, 2025

Hybrid Bonds

In December 2014, the Issuer has issued subordinated hybrid bonds in an aggregated principal amount of EUR 1,000 million with a first call date in 2021 and final maturity in 2074 and EUR 500 million with a first call date in 2024 and a final maturity in 2074.

In 2019, the Issuer has issued subordinated hybrid bonds for the financing of the acquisition of Versum in an aggregated principal amount of EUR 1,000 million with a first call date in 2029 and a final maturity in 2079 and EUR 500 million with a first call date in 2024 and a final maturity in 2079.

Commercial Paper Program

In order to meet short-term capital requirements, the Group established a commercial paper program in 2011 with a volume of up to EUR 2.0 billion (or its equivalent in other currencies) with Merck FS as issuer and the Issuer as issuer and guarantor. As of June 30, 2020, the utilisation under the commercial paper program amounted to EUR 228 million including accrued interest.

Bilateral Loan Agreements

The Issuer respectively, Merck FS, have agreed on bilateral loan agreements with several banks in a total amount of nearly EUR 1,600 million. Approximately EUR 1,400 million of the aforementioned loan agreements are committed and approximately EUR 200 million are uncommitted. As of June 30, 2020, approximately EUR 950 million have been drawn under these facilities.

Group companies in China have entered into financing arrangements in local currency which, as of June 30, 2020, amounted to the equivalent of EUR 411 million.

Term Loan

In October 2019, the Issuer entered into a USD 2.30 billion term loan which was partially drawn to finance the acquisition of Versum. As of June 30, 2020 USD 1.140 billion are outstanding under the agreement.

Other Material Agreements

Commercialization Agreement with Pfizer

On November 17, 2014, the Group entered into a global agreement with Pfizer to jointly develop and market MSB0010718C, an investigational anti-PD-L1 (avelumab) antibody currently in development by the Group as a potential treatment for multiple tumour types to accelerate the two companies' presence in immuno-oncology. Under the terms of the agreement, the Group received an upfront payment of USD 850 million and is eligible to receive regulatory and commercial milestone payments up to USD 2.0 billion. The Group and Pfizer jointly fund all development and commercialization costs and all sales obtained from selling any anti-PD-L1 or anti-PD-1 products generated from this collaboration will be shared. See also "*Principal Industries — Healthcare — Biopharma*" and "*Intellectual Property Rights — Licenses*".

Commercialization Agreement with GlaxoSmithKline

On February 5, 2019, the Group entered into a global agreement in the field of immune-oncology with GlaxoSmithKline to jointly develop and market the drug candidate Bintrafusp alfa (known as M7824), a novel immunotherapy with potential in multiple difficult-to-treat cancers. Under the terms of the agreement, the Group received an upfront payment of EUR 300 million, another up to EUR 500 million payment if the treatment reaches certain development milestones and up to another EUR 2.9 billion if approval and commercial milestones are achieved. Merck and GlaxoSmithKline are jointly responsible for the development and possible later marketing. According to the collaboration agreement, during the development period each company bears one half of the development expenses. While Merck will realize the net sales in the United States and GlaxoSmithKline in all other countries in the event of regulatory approval, the collaboration agreement provides for the partners to evenly split the net results of net sales less defined expense components. See also "*Principal Industries — Healthcare — Biopharma*".

Description of the Governing Bodies of the Issuer

In accordance with German law, Merck has three corporate bodies:

- the general partners (*persönlich haftende Gesellschafter*),
- the supervisory board (*Aufsichtsrat*) (the "**Supervisory Board**"), and
- the general meeting (*Hauptversammlung*) (the "**General Meeting**").

According to the Articles of Association, the general partners not holding an equity interest (*persönlich haftende Gesellschafter ohne Kapitalanteil*) are responsible for the management of Merck and thus form the executive board (*Geschäftsleitung*) (the "**Executive Board**"). The administrative bodies consist of the Executive Board and the Supervisory Board. They are separate corporate bodies; no individual can be a member of both bodies.

The group of general partners (*persönlich haftende Gesellschafter*) currently comprises six partners: five members of the Executive Board and E. Merck. Only general partners of E. Merck may be general partners not holding an equity interest in Merck.

E. Merck is generally excluded from managing and representing Merck. However, on account of its substantial capital investment and unlimited personal liability, E. Merck advises and supervises the Executive Board in addition to the expertise and activities of the Supervisory Board. Furthermore, under the Articles of Association, E. Merck has extensive consultation, decision-making and veto rights with respect to the business of Merck.

Executive Board (General Partners not holding an Equity Interest)

The table below lists the members of the Executive Board as of the date of this Prospectus.

Name	Position	Responsibilities	Other current activities outside of the Issuer or the Group*
Stefan Oschmann	Chairperson of the Executive Board	Chief Executive Officer Responsibility for Group functions: Group Strategy & Transformation Group Legal & Compliance Group Internal Auditing Group Communications Group Corporate Affairs	No positions on external boards

Name	Position	Responsibilities	Other current activities outside of the Issuer or the Group*
Belén Garijo Lopez	Deputy Chairperson of the Executive Board	CEO Healthcare Responsibility for Group functions: Group Human Resources Environment, Health, Safety, Security, Quality	(b) Banco Bilbao Vizcaya Argentaria S. A., Bilbao, Spain L'Oréal S.A., Clichy, France
Kai Beckmann	Member	CEO Performance Materials Responsibility for Group functions: Patents & Scientific Services Site Management Inhouse Consulting	(a) Bundesdruckerei GmbH, Berlin
Marcus Kuhnert	Member	Chief Financial Officer Responsibility for Group functions: Group Accounting Group Controlling & Divisional Controlling Group Tax Group Treasury Finance Operations Mergers & Acquisitions Investor Relations Merck Business Services Group Procurement Information Technology	No positions on external boards

*) Organized by membership of

a) Other statutory supervisory boards

b) Comparable German and foreign supervisory bodies of corporations.

The members of the Executive Board can be contacted at the business address of Merck, at Frankfurter Strasse 250, 64293 Darmstadt, Germany.

The following potential conflict of interest exists:

According to the Articles of Association, members of the Executive Board are appointed by E. Merck, together with a simple majority vote of the other general partners. Each general partner of Merck must at the same time be a general partner of E. Merck. Thus, E. Merck de facto appoints the members of the Executive Board. The legal relationships between Merck and the general partners not holding an equity interest, i.e. the members of the Executive Board, are governed by separate agreements between E. Merck and the general partner in question. E. Merck is entitled to terminate these agreements for good cause.

There are no other conflicts of interest between the duties of the Executive Board members and their respective personal interests and/or other duties.

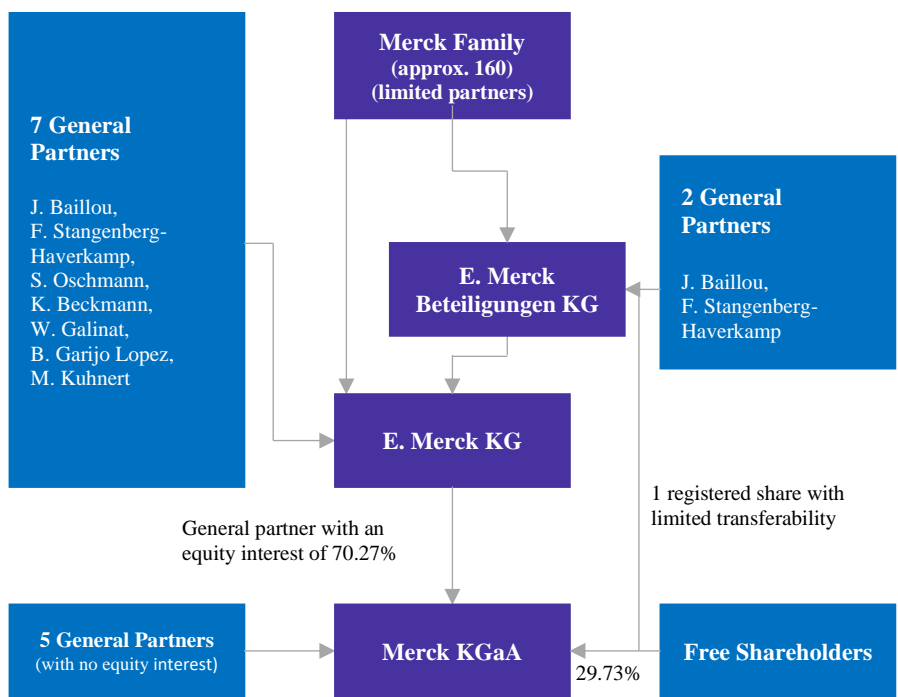
E. Merck (General Partner holding an Equity Interest)

E. Merck currently holds approximately 70% of the total capital of the Issuer and does not have any operating activities itself. Under the Articles of Association, E. Merck has extensive consultation, decision-making and veto rights with respect to the business of the Issuer.

E. Merck and its general partners appoint the members of the Executive Board with the approval of a simple majority of the other general partners of the Issuer. The only persons who can be members of the Executive Board are those who are also general partners of E. Merck. This creates a close relationship between the Executive Board and E. Merck. Other individuals may only become members of the Executive Board if they are nominated by E. Merck and receive the approval of all general partners with no equity interest.

Moreover, the Executive Board requires the consent of E. Merck for all transactions that are beyond the scope of the ordinary business of the Issuer.

The following chart shows the relationship between the Issuer, E. Merck and E. Merck Beteiligungen KG:



Supervisory Board

The Supervisory Board of Merck currently consists of sixteen members. Eight members are elected by the employees pursuant to the provisions of the German Co-determination Act (Mitbestimmungsgesetz). Of the eight members elected by the shareholders, six are elected by the shareholders at the General Meeting in accordance with the German Stock Corporation Act (Aktiengesetz). Two members are appointed by the holder of the registered share (currently E. Merck Beteiligungen KG) provided that a general partner is not the holder of the registered share. If a general partner holds the registered share, these two members are elected by the General Meeting.

The table below lists the members of the Supervisory Board as of the date of this Prospectus.

Name	Position	Year of initial election	Profession/ occupation	Other current activities outside of the Issuer or the Group*
Wolfgang Büchele	Chairman	2009	Chairman of Exyte AG	(a) Gelita AG Eberbach, Germany (b) Kemira Oyi, Helsinki, Finland Wegmann Unternehmens-Holding GmbH & Co. KG, Fürstenfeldbruck, Germany
Alexander Putz ⁽¹⁾	Member	2020	Full-time works council member of Merck KGaA	No positions on external boards
Gabriele Eismann ⁽¹⁾	Member	2014	Senior Product Manager	No positions on external boards
Jürgen Glaser ⁽¹⁾	Member	2019	Regional Director of IG Bergbau, Chemie, Energie (IG BCE)	(a) SIRONA Dental Systems GmbH, Germany Vice Chairman Supervisory Board of HFC Prestige Service Germany GmbH, Germany (b) Merck BKK, Germany
Edeltraud Glänzer ⁽¹⁾	Member	2008	Chairperson of the Board of Directors at the August-Schmitt-Stiftung, Bochum, Germany	(a) B. Braun Melsungen AG, Melsungen, Germany Vice Chairperson Supervisory Board of Evonik Industries AG, Essen, Germany
Sascha Held ⁽¹⁾	Member	2019	Full-time member of the Merck Joint Works Council	No positions on external boards
Michael Kleinemeier	Member	2019	Member of the Executive Board of SAP SE, Walldorf, Germany, SAP Digital Business Services	No positions on external boards
Renate Koehler	Member	2019	Pharmacist and Manager of Engel-Apotheke pharmacy, Darmstadt, Germany	No positions on external boards
Anne Lange ⁽¹⁾	Member	2019	Full-time member of the Merck Joint Works Council	No positions on external boards
Peter Emanuel Merck	Appointed Member	2019	Managing Partner of Golf-Lounge GmbH, Hamburg, Germany	No positions on external boards
Dietmar Oeter ⁽¹⁾	Member	2014	Vice President of Corporate Quality Assurance	No positions on external boards

Name	Position	Year of initial election	Profession/ occupation	Other current activities outside of the Issuer or the Group*
Christian Raabe ⁽¹⁾	Member	2019	IT Business Partner	No positions on external boards
Helene von Roeder	Member	2019	Member of the Executive Board (CFO) of Vonovia SE, Bochum, Germany	(b) Vonovia Finance B.V. Amsterdam, Netherlands AVW Versicherungsmakler GmbH, Hamburg, Germany Victoria Park AB, Malmö, Sweden Hembla AB, Stockholm, Sweden
Helga Rübsamen-Schaeff	Member	2014	Chairperson of the Advisory Board of AiCuris Antiinfective Cures GmbH, Wuppertal, Germany	(a) 4SC AG, Martinsried, Germany Bonn University Hospital, Germany
Daniel Thelen	Member	2019	Head of Infrastructure Development for western region at DB Netz AG, Frankfurt am Main/Duisburg, Germany	No positions on external boards
Simon Thelen	Appointed Member	2019	Chief Physician for Hand Surgery at the Clinic for Trauma and Hand Surgery, University Hospital Düsseldorf	No positions on external boards

*) Organized by membership of

a) Other statutory supervisory boards

b) Comparable German and foreign supervisory bodies of corporations.

1) Employee representatives

The members of the Supervisory Board can be contacted at the business address of Merck, at Frankfurter Strasse 250, 64293 Darmstadt, Germany.

There are no possible conflicts of interest between the duties of the Supervisory Board members and/or their respective private interests or other duties.

There are no permanent committees such as an audit committee or a compensation committee due to the restrictions of rights and obligations of the Supervisory Board. In particular, the Supervisory Board is not responsible for appointing the general partners who form the Executive Board, or for regulating the terms and conditions of their contracts. However, the board of partners of E. Merck, the entity responsible for the appointment and dismissal of the members of the Executive Board, has set up committees, namely a Personal Committee, a Finance Committee and a Research & Development Committee. The Supervisory Board has formed a Nomination Committee comprising three shareholder representatives. The Nomination Committee is responsible for proposing to the Supervisory Board suitable candidates for its proposal to the Annual General Meeting.

Corporate Governance

The German Corporate Governance Code (the "**German Corporate Governance Code**") is geared exclusively towards the conditions found in a German stock corporation (*Aktiengesellschaft*) and not towards a corporation with general partners (*Kommanditgesellschaft auf Aktien*) such as the Issuer. The Issuer has resolved to apply the German Corporate Governance Code logically to serve the interests of its shareholders. On February 28, 2020, Merck issued the following statement of compliance:

"Since the last Declaration of Conformity on February 26, 2019, we have complied with the recommendations of the Government Commission of the German Corporate Governance Code in the version dated February 7, 2017 published in the official section of the German Federal Gazette with the following exception:

Merck KGaA had a D&O insurance policy for the members of its Supervisory Board that did not include a deductible in the amount recommended in accordance with section 3.8 (2) and 3.8 (3) of the German Corporate Governance Code. The powers of the Supervisory Board of Merck KGaA are more restricted than those of the supervisory board of a German stock corporation. Accordingly, the steering effect of a deductible that section 3.8 (2) and 3.8 (3) of the German Corporate Governance Code seeks to achieve is not obtained in the case of the Supervisory Board of Merck KGaA to the sought-for extent. Contrary to section 5.3.2 of the German Corporate Governance Code, the Supervisory Board has not established an audit committee. However, an audit committee does exist in the form of the Finance Committee of the Board of Partners of E. Merck KG, which to a large extent exercises the duties described in section 5.3.2 of the Code. Due to the relatively limited authority of the supervisory board of a KGaA in comparison with that of an AG, this therefore satisfies the requirements of the German Corporate Governance Code.

In view of future compliance with the current recommendations of the Government Commission of the German Corporate Governance Code, the Executive Board and the Supervisory Board declare the following: With the exception of the aforementioned deviation from sections 3.8 (2) and 3.8 (3) (D&O deductible) and 5.3.2 (audit committee), the company will comply with the recommendations of the Code in the version dated February 7, 2017."

Recent developments

Merck is continuously reviewing the potential impact of the Covid-19 pandemic on the Group. As of the date of this Prospectus, reductions in orders received due to Covid-19 have mainly been recorded with strong impacts in the Fertility franchise within the Healthcare business sector, which was affected the most by the Covid-19 pandemic since many practices and clinics closed temporarily or reduced their treatment activities, as well as with significant negative effects in the Surface Solutions and negative impacts on the Display Solutions business units within the Performance Materials business sector. This was partly related to mandatory workplace closures, for example the closure of practices and limitation on visits as impact on the the Neurology & Immunology business and the closure of electronic retail as impact on the Display Solutions business. Additionally, the Research Solutions business unit of the Life Science business sector saw a negative impact from weaker demand from academic laboratories due to temporary closures in connection with Covid-19. Whereas, Merck considers itself as well positioned in the essential industries, since the governments moved from mandatory workplace closures to mandatory workplace measures which lead to an immediate restoration of business. Apart from the resulting sales declines, further impacts in the reporting period were immaterial; primarily owing to higher logistic expenses and a slight increase in loss allowances for trade accounts receivable. Moreover, contractually agreed payment terms were extended in individual cases.

As of the date of this Prospectus, Merck assumes that the global outbreak of the Covid-19 pandemic will be a significant burden on global economic growth, which could affect all of the Group's businesses, particularly however Healthcare and, intensified due to other longer-lasting changes in the display and automotive end markets, Performance Materials. Merck presumes varying dynamics with respect to the outbreak in the different regions of the world. For China, Merck assumes that the Covid-19 pandemic reached its peak at the end of the first quarter 2020 and that the economic recovery began in the second quarter. For Europe and the United States, the Group expects an economic recovery in the second half of the year 2020, even if the situation following the initial outbreak of the pandemic has not yet normalized throughout these regions by the beginning of the third quarter 2020. Moreover, the Group assumes that there will be no widespread

lockdowns owing to further disease waves in any of the named regions leading to considerably negative consequences for the economic recovery.

However, due to the high level of uncertainty with respect to the further development of the Covid-19 pandemic, any estimate of the ultimate impact on the Group's results is subject to a high degree of uncertainty. For the full year 2020, Merck expects an up to mid single-digit percentage sales impact related to the Covid-19 pandemic, still leaving the Group with a moderate organic growth of sales and EBITDA pre. After a negative trend in the months of April and May in 2020, there is a positive trend and the Group saw a recovery of sales in June 2020, which it assumes to continue for the second half of the financial year 2020. Merck continues to expect that Life Science will be a major driver of this organic growth due to the high demand in the Process Solutions business related to the Covid-19 pandemic, whereas the Applied Solutions business and the Research Solutions business, which was affected the most in the Life Science business sector, are recovering since June 2020. Against the backdrop of the Covid-19 pandemic, Merck expects that the Healthcare business sector will see a slight organic increase in net sales, since the clinics are opening up again, which eases the impact on the Fertility franchise, and other businesses are normalizing. Indeed, significant earnings contributions from new products of the Group, particularly Mavenclad®, will still have a mitigating effect, albeit to a lower extent owing to the negative impact of the Covid-19 pandemic here as well. Merck expects that the Performance Materials business will see a moderate to strong organic decline in net sales in 2020, the strong growth of the Semiconductor Materials business will not be able to compensate this. While there is an indication for some ease of impact of the Covid-19 pandemic on the Display Solutions business, Merck expects a slight relief on the end markets of the Surface Solutions business for the further course of the business year.

Trend information and significant changes

Except for the potential impact of the Covid-19 pandemic, as described under "*Recent Developments*" above, there has been no material adverse change in the prospects of the Issuer since December 31, 2019.

There has been no significant change in the financial performance of the Group since June 30, 2020.

There has been no significant change in the financial position of the Group since June 30, 2020.

Selected Consolidated Financial Information

The following selected historical financial information for the Group is based on the audited consolidated financial statements of the Issuer for the fiscal years ended December 31, 2018 and December 31, 2019 ("**Consolidated Annual Financial Statements**") and the unaudited consolidated half-year financial statements as of June 30, 2020 ("**Consolidated H1 2020 Interim Statements**") all of which are incorporated by reference in this Prospectus, and should be read together with them. The Consolidated Annual Financial Statements and the Consolidated H1 2020 Interim Statements were prepared in accordance with International Financial Reporting Standards (IFRS) as adopted in the European Union.

The Consolidated Annual Financial Statements were audited by KPMG AG Wirtschaftsprüfungsgesellschaft and issued in each case with an unqualified auditor's opinion.

The Consolidated Annual Financial Statements and the Consolidated H1 2020 Interim Statements were prepared using the cost of sales method, that is expenses are classified according to their function (production, marketing and sales, administration and research and development) and the costs directly incurred to generate the sales for the reporting period are presented as cost of sales.

	Six-month period ended June 30,		Financial year ended December 31,	
	2020	2019	2019	2018
<i>(amounts in EUR million; earnings per share in EUR)</i>	<i>(unaudited)</i>		<i>(audited unless labelled otherwise)</i>	
Net sales ¹	8,489	7,717	16,152	14,836
Operating result (EBIT) ^{1, 2 *}	1,207	997	2,120	1,727
<i>Margin (% of net sales)^{1 *}</i>	<i>14.2%</i>	<i>12.9%</i>	<i>13.1%</i>	<i>11.6%</i>
EBITDA ^{1, 3 *}	2,195	1,927	4,066	3,528
<i>Margin (% of net sales)^{1 *}</i>	<i>25.9%</i>	<i>25.0%</i>	<i>25.2%⁴</i>	<i>23.8%⁴</i>
EBITDA pre ^{1, 5 *}	2,256	2,068	4,385	3,800
<i>Margin (% of net sales)^{1 *}</i>	<i>26.6%</i>	<i>26.8%</i>	<i>27.1%</i>	<i>25.6%</i>
Earnings per share ^{6, 7} (in EUR)	1.72	1.52	3.04	7.76
Net cash flows from operating activities ⁷	1,019	1,235	2,856	2,219

*) Not defined by International Financial Reporting Standards (IFRS).

1) The net sales refer to the continuing business areas of the Group. Net sales of the Consumer Health business for the financial year 2018 were no longer reported in Group sales, as this business was to be classified as a discontinued operation pursuant to IFRS 5 during 2018 and sold as of December 1, 2018.

2) EBIT is defined as a key figure for earnings before interest and taxes on income. Equals the operating result.

3) EBITDA is defined as a key figure for earnings before interest, taxes on income, depreciation, amortization, impairments and reversals of impairments: depreciation, amortization, impairments and reversals of impairments are added back to EBIT.

4) Unaudited.

5) "EBITDA pre" excludes in addition to EBITDA specific income and expense of a one-time nature such as integration and restructuring costs, acquisition-related items, and other one-time items.

6) Earnings per share, calculated as specified in IAS 33 by dividing the Group profit by the weighted average number of shares.

7) Including discontinued operations.

Reconciliation EBITDA PRE to PROFIT BEFORE INCOME TAX

	Six-month period ended June 30,		Financial year ended December 31,	
	2020	2019	2019	2018
<i>(amounts in EUR million)</i>	<i>(unaudited)</i>		<i>(unaudited unless labelled otherwise)</i>	
EBITDA pre of the operating business ^{1 *}	2,492	2,292	4,854	4,181
Corporate and Other	(236)	(224)	(469)	(381) ³
EBITDA pre of the Merck Group ^{1 *}	2,256	2,068	4,385	3,800
Depreciation/amortization/impairment losses/reversals of impairment losses	(988)	(929)	(1,946) ³	(1,801) ³
Adjustments*	(60)	(141)	(318)	(272)
Operating result (EBIT) ^{2 *}	1,207	997	2,120 ³	1,727 ³
Financial result	(201)	(174)	(385) ³	(266) ³
Profit before income tax	1,006	824	1,735 ³	1,461 ³

*) Not defined by International Financial Reporting Standards (IFRS).

1) "EBITDA pre" excludes in addition to EBITDA specific income and expense of a one-time nature such as integration and restructuring costs, acquisition-related items, and other one-time items.

2) EBIT is defined as a key figure for earnings before interest and taxes on income. Equals the operating result.

3) audited

The adjustments comprised the following

	Six-month period ended June 30,		Financial year ended December 31,	
	2020	2019	2019	2018
<i>(amounts in EUR million)</i>	<i>(unaudited)</i>			
Restructuring expenses	(37)	(100)	(120)	(46)
Integration expenses/ IT expenses	(59)	(35)	(95)	(142)
Gains (+) / losses (-) on the divestment of businesses	28	-	(6)	(25)
Acquisition-related adjustments	11	-	(84)	(2)
Other adjustments	(4)	(5)	(13)	(58)
Adjustments before impairment losses / reversals of impairment losses*	(60)	(141)	(318)	(272)
Impairment losses	(114)	-	(9)	(55)
Reversals of impairment losses	-	-	-	-
Adjustments (total)*	(174)	(141)	(328)	(327)

*) Not defined by International Financial Reporting Standards (IFRS).

NET FINANCIAL DEBT and WORKING CAPITAL

	As of June 30,	As of December 31,	
	2020	2019	2018
<i>(amounts in EUR million)</i>	<i>(unaudited)</i>		
Net financial debt ^{1*}	12,560	12,363	6,701
Working capital ^{2*}	4,474	3,944	3,486

* Not defined by International Financial Reporting Standards (IFRS).

1 Please refer to "Reconciliation Net Financial Debt to Financial Liabilities" below.

2 Please refer to "Composition of Working Capital" below.

Reconciliation NET FINANCIAL DEBT to FINANCIAL LIABILITIES

	As of June 30, 2020	As of December 31, 2019 2018	
<i>(amounts in EUR million)</i>		<i>(unaudited)</i>	
Current financial liabilities	4,009	4,550	2,215
Non-current financial liabilities	10,081	8,644	6,681
Financial liabilities	14,090	13,194	8,896
Less:			
Cash and cash equivalents	1,512	781	2,170
Current financial assets	18	50	24
Net financial debt *	12,560	12,363	6,701

* Not defined by International Financial Reporting Standards (IFRS).

Composition of WORKING CAPITAL

	As of June 30, 2020	As of December 31, 2019 2018	
<i>(amounts in EUR million)</i>		<i>(unaudited)</i>	
Trade accounts receivable	3,272	3,174	2,931
Receivables from royalties and licenses	25	45	29
Inventories	3,537	3,342	2,764
Trade accounts payable/Refund liabilities	-2,360	-2,618	-2,238
Working Capital *	4,474	3,944	3,486

* Not defined by International Financial Reporting Standards (IFRS).

TAXATION

The tax legislation of the state of residence of a prospective Holder, or of a jurisdiction where a prospective Holder is subject to taxation, and the tax legislation of the Issuer's country of incorporation may have an impact on the income received from the Notes.

Prospective Holders should consult their own tax advisers as to the particular tax consequences of subscribing, purchasing, holding and disposing the Notes, including the application and effect of any federal, state or local taxes, under the tax laws of each country of which they are residents or citizens, or of a jurisdiction where a prospective Holder is subject to taxation.

Taxation in Germany

The following is a general discussion of certain German tax consequences of the acquisition, holding and disposal of the Notes. It does not purport to be a comprehensive description of all German tax considerations that may be relevant to a decision to purchase Notes, and, in particular, does not consider any specific facts or circumstances that may apply to a particular purchaser. This discussion of the tax consequences of an investment in the Notes is based on the tax laws of Germany currently in force and as applied on the date of this Prospectus, which are subject to change, possibly with retroactive or retrospective effect.

The information contained in this section is limited to taxation issues and prospective investors should not apply any information set out below to other areas, including (but not limited to) the legality of transactions involving the Notes.

Tax resident Holders of the Notes

The section "*Tax resident Holders of the Notes*" refers to persons who are tax residents of Germany (i.e. persons whose residence, habitual abode, statutory seat, or place of effective management is located in Germany).

Withholding tax on interest payments and capital gains

Interest payments received by an individual Holder of the Notes will be subject to German withholding tax if the Notes are kept or administrated in a custodial account with a German branch of a German or non-German credit institution or financial services institution, a German securities trading company or a German securities trading bank (each a "**Disbursing Agent**", *auszahlende Stelle*). The flat income tax rate is 25% (plus 5.5% solidarity surcharge thereon, the total withholding being 26.375%). An electronic information system for withholding of church tax will apply to individuals subject to church tax in relation to investment income, with the effect that church tax will be collected by the Disbursing Agent by way of withholding unless the investor has filed a blocking notice (*Sperrvermerk*) with the German Federal Central Tax Office (*Bundeszentralamt für Steuern*) in which case the investor will be assessed to church tax.

The same treatment applies to capital gains (i.e. the difference between the proceeds from the disposal, redemption, repayment or assignment after deduction of expenses directly related to the disposal, redemption, repayment or assignment and the cost of acquisition) derived by an individual Holder provided the Notes have been held in a custodial account with a Disbursing Agent since the time of their acquisition. If Notes held or administrated in the same custodial account have been acquired at different points in time, the Notes first acquired will be deemed to have been sold first for the purposes of determining the capital gains. Where Notes are acquired and/or sold or redeemed in a currency other than Euro, the sales/redemption price and the acquisition costs have to be converted into Euro on the basis of the foreign exchange rates prevailing on the sale or redemption date and the acquisition date respectively. If interest coupons or interest claims are disposed of separately (i.e. without the Notes), the proceeds from the disposition are subject to withholding tax. The same applies to proceeds from the payment of interest coupons or interest claims if the Notes have been disposed of separately.

To the extent the Notes have not been kept in a custodial account with a Disbursing Agent since the time of their acquisition, upon the disposal, redemption, repayment or assignment withholding tax applies at a rate of 26.375% (including solidarity surcharge, plus church tax, if applicable) on 30% of the disposal proceeds (plus interest accrued on

the Notes ("**Accrued Interest**", *Stückzinsen*), if any), unless the investor or the previous depository bank was able and allowed to prove evidence for the investor's actual acquisition costs to the Disbursing Agent.

In computing any German tax to be withheld, the Disbursing Agent may generally deduct from the basis of the withholding tax negative investment income realised by the individual Holder of the Notes via the Disbursing Agent (*e.g.* losses from the sale of other securities with the exception of shares). The Disbursing Agent may also deduct Accrued Interest on the Notes or other securities paid separately upon the acquisition of the respective security via the Disbursing Agent. In addition, subject to certain requirements and restrictions the Disbursing Agent may credit foreign withholding taxes levied on investment income in a given year regarding securities held by the individual Holder in the custodial account with the Disbursing Agent.

Individual Holders may be entitled to an annual allowance (*Sparer-Pauschbetrag*) of EUR 801 (EUR 1,602 for jointly assessed individual Holders) for all investment income received in a given year. Upon the individual Holder filing an exemption certificate (*Freistellungsauftrag*) with the Disbursing Agent, the Disbursing Agent will take the allowance into account when computing the amount of tax to be withheld. No withholding tax will be deducted if the Holder of the Notes has submitted to the Disbursing Agent a certificate of non-assessment (*Nichtveranlagungsbescheinigung*) issued by the competent local tax office.

German withholding tax will not apply to gains from the disposal, redemption, repayment or assignment of Notes held by a corporation as Holder while ongoing payments, such as interest payments, are subject to withholding tax (irrespective of any deductions of foreign tax and capital losses incurred). With regard to gains from the disposal, repayment or assignment of Notes held by an individual Holder, a business partnership or through the permanent establishment of a non-resident taxpayer, the same may apply upon application where the Notes form part of a trade or business, subject to further requirements being met.

The Issuer is not obliged under German law to withhold any withholding tax (*Kapitalertragsteuer*) on interest payments and on capital gains upon the sale or redemption of the Notes.

Taxation of current income and capital gains

The income tax liability of an individual Holder deriving income from capital investments under the Notes is, in principle, settled by the tax withheld. To the extent withholding tax has not been levied, such as in the case of Notes kept in custody abroad or if no Disbursing Agent is involved in the payment process, the individual Holder must report his or her income and capital gains derived from the Notes on his or her tax return and then will also be taxed at a rate of 25% (plus solidarity surcharge and church tax thereon, where applicable). If the withholding tax on a disposal, redemption, repayment or assignment has been calculated from 30% of the disposal proceeds (rather than from the actual gain), an individual Holder may and in case the actual gain is higher than 30% of the disposal proceeds must also apply for an assessment on the basis of his or her actual acquisition costs. Further, an individual Holder may request that all investment income of a given year is taxed at his or her lower individual tax rate based upon an assessment to tax with any amounts over withheld being refunded. In each case, the deduction of expenses (other than transaction costs) on an itemized basis is not permitted.

Please note that the coalition agreement between the German Christian Democratic Party and the German Social Democratic Party for the formation of the current German federal government provides that the flat tax regime shall be partially abolished for certain capital investment income, including interest income. There is, however, no draft bill available yet and a lot of details are hence still unclear. That means, however, that income received by Holders holding the Notes as private assets, depending on the outcome of the legislative process may be taxed at individual progressive income tax rates of up to 45 per cent. in the future (plus a 5.5 per cent. solidarity surcharge thereon, if applicable, and church tax, if applicable to the individual Holder).

Due to the recent amendment of the Solidarity Surcharge Act, the solidarity surcharge will be levied for wage tax and income tax purposes from 2021 onwards if the individual income tax of the investor exceeds the threshold of EUR 16,956 (EUR 33,912 for jointly assessed spouses or registered life partners). Pursuant to the amended law the solidarity surcharge shall remain in place for purposes of the withholding tax, the flat tax regime and the corporate income tax.

Capital losses from the disposal, redemption, repayment or assignment of the Notes held as private assets should generally be tax-recognised irrespective of the holding period of the Notes. The losses may, however, not be used to offset other income like employment or business income but may only be offset against investment income subject to certain limitations. Losses not utilised in one year may be carried forward into subsequent years but may not be carried back into preceding years. However, if the losses result from the full or partial non-recoverability of the repayment claim under the Notes including a default of the Issuer or a (voluntary) waiver, such losses together with other losses of such kind of the same year and loss-carry forwards of previous years can only be offset up to an amount of EUR 10,000 ("**Limitation on Loss Deduction**"). Any exceeding loss amount can be carried forward and offset against future savings income, but again subject to the EUR 10,000 limitation. Pursuant to the legislative reasoning, a non-recoverability shall also be assumed if, based on the overall assessment of the facts and circumstances, it becomes apparent that the Issuer will not redeem the Notes in full, e.g. because the solvency risk has already materialised. Given that the Limitation on Loss Deduction will not be applied by the German Disbursing Agent (as defined above) holding the Notes in custody, investors suffering losses which are subject to the Limitation on Loss Deduction are required to declare such losses in their income tax return. Where Notes form part of a trade or business the withholding tax, if any, will not settle the (corporate) income tax liability. Where Notes form part of a trade or business, interest (accrued) must be taken into account as income. The respective Holder will have to report income and related (business) expenses on the tax return and the balance will be taxed at the Holder's applicable tax rate. Withholding tax levied, if any, will be credited against the (corporate) income tax of the Holder. Where Notes form part of a German trade or business the current income and gains from the disposal, redemption, repayment or assignment of the Notes may also be subject to German trade tax.

Non-resident Holders of the Notes

Interest, including Accrued Interest, and capital gains are not subject to German taxation, unless (i) the Notes form part of the business property of a permanent establishment, including a permanent representative, or a fixed base maintained in Germany by the Holder or (ii) the income otherwise constitutes German-source income. In cases (i) and (ii) a tax regime similar to that explained above under "*Tax resident Holders of the Notes*" applies.

Non-residents of Germany are, in general, exempt from German withholding tax on interest and the solidarity surcharge thereon. However, where the interest is subject to German taxation as set forth in the preceding paragraph and the Notes are held in a custodial account with a Disbursing Agent, withholding tax may be levied under certain circumstances. The withholding tax may fully or partially be refunded based on an assessment to tax or under an applicable tax treaty.

Particularities of Notes with a negative yield

Holders will only realise a taxable capital gain if they receive, upon a disposal of the Notes, an amount (after the deduction of actual expenses directly related thereto) in excess of the issue price (or the purchase price they paid for the Notes).

Contrary thereto, Holders who subscribe the Notes at a negative yield upon issue and hold the Notes until their final maturity will realise a loss. It is not entirely clear, whether for tax purposes such losses are treated as capital losses from the disposal, redemption, repayment or assignment of the Notes or as "negative interest".

- (i) If the Notes are held by tax residents as non-business assets, statements of the German tax authorities regarding "negative interest" incurred on bank deposits made by private investors arguably imply that such losses cannot be fully deducted. Such losses are rather treated as expenses in connection with capital investment income and, are, consequently not tax-deductible except for an annual lump-sum deduction (*Sparer-Pauschbetrag*) of EUR 801 (EUR 1,602 for individuals filing jointly),
- (ii) If the Notes are held by tax residents as business assets, statements of the German tax authorities regarding "negative interest" incurred on bank deposits made by business investors arguably imply that such losses are generally tax deductible.

Substitution of the Issuer

If the Issuer exercises the right to substitute the debtor of the Notes, the substitution might, for German tax purposes, be treated as an exchange of the Notes for new notes issued by the Substitute Debtor and subject to similar taxation rules

like the Notes. In particular, such a substitution could result in the recognition of a taxable gain or loss for any Holder of a Note.

Inheritance and gift tax

The transfer of the Notes to another person by way of gift or inheritance may be subject to German gift or inheritance tax, respectively, if inter alia

- (i) the testator, the donor, the heir, the donee or any other acquirer had his residence, habitual abode or, in case of a corporation, association (*Personenvereinigung*) or estate (*Vermögensmasse*), has its seat or place of management in Germany at the time of the transfer of property,
- (ii) except as provided under (i), the testator's or donor's Notes belong to business assets attributable to a permanent establishment or a permanent representative in Germany.

Special regulations may apply to certain German expatriates.

Other taxes

No stamp, issue, value added, capital transfer or registration taxes or such duties will be payable in Germany in connection with the issuance, delivery or execution as well as the purchase, sale or other disposal of the Notes. However, under certain circumstances entrepreneurs may opt in for German value added tax with regard to the sale of the Notes to other entrepreneurs which would otherwise be tax exempt. Currently, no net assets tax is levied in Germany.

SUBSCRIPTION AND SALE OF THE NOTES

General

Pursuant to a subscription agreement dated September 7, 2020 (the "**Subscription Agreement**") among the Issuer and the Joint Lead Managers, the Issuer has agreed to sell to the Joint Lead Managers, and the Joint Lead Managers have agreed, subject to certain customary closing conditions, to purchase, the Notes on September 9, 2020. The Issuer has furthermore agreed to pay certain fees to the Joint Lead Managers and to reimburse the Joint Lead Managers for certain expenses incurred in connection with the issue of the Notes.

The Subscription Agreement provides that the Joint Lead Managers under certain circumstances will be entitled to terminate the Subscription Agreement. In such event, no Notes will be delivered to investors. Furthermore, the Issuer has agreed to indemnify the Joint Lead Managers against certain liabilities in connection with the offer and sale of the Notes.

Certain of the Joint Lead Managers and their respective affiliates may be customers of, borrowers from or creditors of the Issuer and its affiliates. In addition, certain Joint Lead Managers and their respective affiliates have engaged, and may in the future engage, in investment banking and/or commercial banking transactions with, and may perform services for, the Issuer and its affiliates in the ordinary course of business. In particular, in the ordinary course of their business activities, the Joint Lead Managers and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of the Issuer or its affiliates. Certain of the Joint Lead Managers or their respective affiliates that have a lending relationship with the Issuer routinely hedge their credit exposure to the Issuer consistent with their customary risk management policies. Typically, such Joint Lead Managers and their respective affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in securities, including potentially the Notes issued. Any such positions could adversely affect future trading prices of the Notes. The Joint Lead Managers and their respective affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

There are no interests of natural and legal persons involved in the issue, including conflicting ones, that are material to the issue.

Selling Restrictions

General

Each Joint Lead Manager has acknowledged that other than explicitly mentioned in this Prospectus no action is taken or will be taken by the Issuer in any jurisdiction that would permit a public offering of the Notes, or possession or distribution of any offering material relating to them, in any jurisdiction where action for that purpose is required.

Each Joint Lead Manager has represented and agreed that it will, to its best knowledge and belief, in all material respects comply with all applicable laws and regulations in each jurisdiction in which it purchases, offers, sells or delivers Notes or has in its possession or distributes any offering material relating to them.

Prohibition of Sales to EEA and UK Retail Investors

Each Joint Lead Manager has represented, warranted and agreed that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes to any retail investor in the European Economic Area or the United Kingdom. For the purposes of this provision the expression retail investor means a person who is one (or more) of the following:

- (i) a retail client as defined in point (11) of Article 4(1) of MiFID II (as amended); or

- (ii) a customer within the meaning of Directive 2016/97/EU, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II.

United States of America and its territories

The Notes have not been and will not be registered under the Securities Act, and may not be offered or sold within the United States or to, or to the account of benefit of, U.S. persons except in transactions exempt from the registration requirements of the Securities Act. Terms used in this paragraph have the meanings given to them by Regulation S.

The Notes are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to a United States person, except in certain transactions permitted by the U.S. tax regulations. Terms used in this paragraph have the meanings given to them by the U.S. Internal Revenue Code of 1986 and regulations thereunder.

Each Joint Lead Manager has represented and agreed that except as permitted by the Subscription Agreement, it has not offered, sold or delivered and will not offer, sell or deliver any Notes (i) as part of their distribution and any time or (ii) otherwise until 40 days after the later of the commencement of the offering and the Issue Date, within the United States or to, for the account of benefit of, U.S. persons, and will have sent to each dealer to which it sells the Notes and any related guarantee during the distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Notes within the United States or to, or for the account or benefit of, U.S. persons. Terms used in this paragraph have the meanings given to them by Regulation S.

In addition, until 40 days after the commencement of the offering of the Notes, an offer or sale of the Notes within the United States by any dealer (whether or not participating in the offering) may violate the registration requirements of the Securities Act.

United Kingdom

Each Joint Lead Manager has represented, warranted and agreed that:

- (i) it has only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the "FSMA")) received by it in connection with the issue or sale of any Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer, and
- (ii) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the Notes in, from or otherwise involving the United Kingdom.

Singapore

Each Joint Lead Manager has acknowledged that this Prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each Joint Lead Manager has represented and agreed that it has not offered or sold any Notes or caused the Notes to be made the subject of an invitation for subscription or purchase and will not offer or sell any Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this Prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the "SFA")) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Notes pursuant to an offer made under Section 275 of the SFA except:

- (i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- (ii) where no consideration is or will be given for the transfer;
- (iii) where the transfer is by operation of law;
- (iv) as specified in Section 276(7) of the SFA; or
- (v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

GENERAL INFORMATION

1. Authorisations: The issue of the Notes was authorized by resolution of the Executive Board of the Issuer on July 23, 2020 and by the Board of Partners of E. Merck KG, dated July 30, 2020 .

2. Expenses related to Admission to Trading: The total expenses related to the admission to trading of the Notes are expected to amount to EUR 15,000.

3. Clearing Systems and Security Codes: Payments and transfers of the Notes will be settled through Euroclear Bank SA/NV, 1 Boulevard du Roi Albert II, B-1210 Brussels, Belgium and Clearstream Banking S.A., 42 Avenue JF Kennedy, L-1855 Luxembourg.

The Notes have the following securities codes:

ISIN: XS2218405772

Common Code: 221840577

German Securities Code (WKN): A289QM

4. Listing and Admission to Trading: Application has been made to the Luxembourg Stock Exchange for the Notes to be admitted to trading on the Luxembourg Stock Exchange's regulated market (which is a regulated market for the purposes of MiFID II) and to be listed on the Official List of the Luxembourg Stock Exchange on or around the Issue Date.

5. Documents on Display: For so long as any Note is outstanding, electronic versions of the following documents are available on the Issuer's website:

- the articles of association of the Issuer (accessed by using the hyperlink "<https://www.merckgroup.com/investors/events-and-presentations/annual-general-meeting-archive/2020/us/AGM-2020-2018-04-27-articles-of-association-en.pdf>"); and
- the documents incorporated by reference into this Prospectus (accessed by using the hyperlinks set out in the section "*Documents Incorporated by Reference*" below).

This Prospectus and any supplement to this Prospectus will be published on the website of the Luxembourg Stock Exchange (www.bourse.lu) and on the website of the Issuer (www.merckgroup.com).

6. Third Party Information: With respect to any information included herein and specified to be sourced from a third party (i) the Issuer confirms that any such information has been accurately reproduced and as far as the Issuer is aware and is able to ascertain from information available to it from such third party, no facts have been omitted the omission of which would render the reproduced information inaccurate or misleading and (ii) neither the Issuer nor any Joint Lead Manager has independently verified any such information and neither the Issuer nor any Joint Lead Manager accepts any responsibility for the accuracy thereof.

7. Yield: For the investors, the yield of the Notes until the First Reset Date is 1.625 per cent *per annum*, calculated on the basis of the Issue Price. Such yield is calculated in accordance with the ICMA (International Capital Markets Association) Method. The ICMA method determines the effective interest rate on notes by taking into account accrued interest on a daily basis.

The yield of the Notes for the period after the First Reset Date cannot be determined as of the date of this Prospectus.

8. Ratings of the Notes⁸: The Notes are expected to be rated "BBB+"⁹ by Standard & Poor's, "Baa3"¹⁰ by Moody's and "BBB"¹¹ by Scope.

Each of these rating agencies are established in the European Community and are registered under Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 on credit rating agencies, as amended (the "CRA Regulation")¹².

Investors in the Notes should be aware that a credit rating is not a recommendation to buy, sell or hold securities and may be revised or withdrawn by the rating agency at any time.

9. Legal Entity Identifier: The LEI of Merck KGaA is 529900OAREIS0MOPTW25.

⁸ Rating information is merely an aid for investors for the purposes of decision-making and cannot replace an individual judgment to be made by the investor and may not be taken as a recommendation to purchase or sell certain Notes. Ratings are merely intended as a support when making an investment decision and are only one of the factors relevant to an evaluation, which factor must be seen and weighted in the context of other factors. As ratings often are amended only after the creditworthiness of an issuer or guarantor has changed, investors have to make their own judgments although a rating may exist.

⁹ Standard & Poor's defines "BBB+" as follows: An obligation rated 'BBB' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to weaken the obligor's capacity to meet its financial commitments on the obligation. Ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the rating categories.

¹⁰ Moody's defines "Baa3" as follows: Obligations rated Baa are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics. Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

¹¹ Scope defines "BBB" as follows: Ratings at the BBB level reflect an opinion of good credit quality.

¹² The European Securities and Markets Authority publishes on its website (<https://www.esma.europa.eu/supervision/credit-rating-agencies/risk>) a list of credit rating agencies registered in accordance with the CRA Regulation. That list is updated within five working days following the adoption of a decision under Article 16, 17 or 20 CRA Regulation. The European Commission shall publish that updated list in the Official Journal of the European Union within 30 days following such update.

DOCUMENTS INCORPORATED BY REFERENCE

The pages specified below of the following documents, which have previously been published or are published simultaneously with this Prospectus and which have been filed with the CSSF, are incorporated by reference into this Prospectus:

- i. Annual Report 2019 of Merck KGaA (the "**Annual Report 2019**") as amended May 2020, containing the English language translation of the respective German language audited consolidated financial statements of Merck KGaA as of and for the year ended December 31, 2019 and the German language independent auditor's report (*Bestätigungsvermerk des unabhängigen Abschlussprüfers*) in respect thereof; and
- ii. Annual Report 2018 of Merck KGaA (the "**Annual Report 2018**"), containing the English language translation of the respective German language audited consolidated financial statements of Merck KGaA as of and for the year ended December 31, 2018 and the German language independent auditor's report (*Bestätigungsvermerk des unabhängigen Abschlussprüfers*) in respect thereof.
- iii. Half-Yearly Financial Report 2020 of Merck KGaA (the "**Half-Yearly Financial Report 2020**"), containing the English language translation of the respective German language unaudited consolidated interim financial statements of Merck KGaA as of and for the period ended June 30, 2020.

The non-incorporated parts of such documents, i.e. the pages not listed in the tables below, are either not relevant for the investor or covered elsewhere in the Prospectus.

(i) Extracted from: Merck KGaA – Annual Report 2019 as amended May 2020

Consolidated Income Statement.....	page 174
Consolidated Statement of Comprehensive Income.....	page 175
Consolidated Balance Sheet.....	page 176
Consolidated Cash Flows Statement.....	page 177
Consolidated Statement of Changes in Net Equity.....	pages 178 - 179
Notes to the Group accounts.....	pages 180 - 305
Unaudited Responsibility Statement.....	page 306
Auditor's Report.....	pages 307 - 313

(ii) Extracted from: Merck KGaA – Annual Report 2018

Consolidated Income Statement.....	page 200
Consolidated Statement of Comprehensive Income.....	page 201
Consolidated Balance Sheet.....	page 202
Consolidated Cash Flow Statement.....	page 203
Consolidated Statement of Changes in Net Equity.....	pages 204 – 205
Notes to the Group accounts.....	pages 206 – 321
Unaudited Responsibility Statement.....	page 322
Auditor's Report.....	pages 323 – 329

(iii) Extracted from: Merck KGaA – Half-Yearly Financial Report 2020

Consolidated Income Statement	page 44
Consolidated Statement of Comprehensive Income.....	page 45
Consolidated Balance Sheet	page 46
Consolidated Cash Flow Statement.....	page 47
Consolidated Statement of Changes in Net Equity	pages 48 – 49
Notes to the Consolidated Half-Year Financial Statements as of June 30, 2020	pages 50 – 67
Unaudited Responsibility Statement	page 68
Auditor's Review Report	page 69

All of these pages shall be deemed to be incorporated by reference into, and to form part of, this Prospectus.

Copies of documents incorporated by reference in this Prospectus may be obtained (without charge) from the registered office of the Issuer and the website of the Luxembourg Stock Exchange (www.bourse.lu).

Electronic versions of the documents incorporated by reference are also available on the website of the Group (<https://www.merckgroup.com>) and can be accessed by using the following hyperlinks:

- (i) Merck KGaA – Annual Report 2019 as amended May 2020:
<https://www.merckgroup.com/content/dam/web/corporate/non-images/investors/reports-and-financials/earnings-materials/2019-q4/en/2019-Q4-Report-EN.pdf>
- (ii) Merck KGaA – Annual Report 2018:
https://www.merckgroup.com/en/annualreport/2018/sites/default/files/downloads/en/merck_annual_report_2018.pdf
- (iii) Merck KGaA – Half-Yearly Financial Report 2020
<https://www.merckgroup.com/investors/reports-and-financials/earnings-materials/2020-q2/en/2020-Q2-Report-EN.pdf>

Issuer

Merck KGaA

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Federal Republic of Germany

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Joint Lead Managers

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Société Générale

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75009 Paris
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Bayerische Landesbank

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Federal Republic of Germany

Commerzbank Aktiengesellschaft

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Federal Republic of Germany

Landesbank Hessen-Thüringen Girozentrale

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