

This Prospectus is dated August 23, 2024.



Merck KGaA

(incorporated in Germany as a corporation with general partners)

**EUR 800,000,000 Subordinated Fixed to Reset Rate Notes due August 2054
with a First Optional Redemption Date in August 2029**

ISIN XS2879811987, Common Code 287981198, WKN A383GP

Issue price: 99.432%

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 August 27, 2024 (the "**Issue Date**") EUR 800,000,000 in aggregate principal amount of subordinated notes subject to interest rate reset at 5 year intervals commencing on the first reset date on November 27, 2029 (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 November 27, 2029 (the "**First Reset Date**") at a rate of 3.875% *per annum* (the "**Fixed Interest Rate**"); (ii) from and including the First Reset Date to but excluding November 27, 2034 at the relevant 5 year swap rate for the relevant reset period plus a margin of 1.54% basis points *per annum* (the "**Initial Margin**"); (iii) from and including November 27, 2034 to but excluding November 27, 2049 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 November 27, 2049 to but excluding August 27, 2054 (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 November 27 of each year (each an "**Interest Payment Date**"), commencing on November 27, 2024 (short first coupon).

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 August 27, 2029 (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.LuxSE.com).

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 not be considered as an endorsement of the Issuer or of the quality of the Notes. By approving this Prospectus, the CSSF does not give any undertaking as to the economic and financial soundness of the operation or the quality or solvency of the Issuer in accordance with Article 6(4) of the Luxembourg act relating to prospectuses for securities dated 16 July 2019 (*Loi du 16 juillet 2019 relative aux prospectus pour valeurs mobilières et portant mise en œuvre du règlement (UE) 2017/1129*). Investors should make their own assessment as to the suitability of investing in the Notes.

This Prospectus will be valid until August 23, 2025 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 list the Notes on the official list of the Luxembourg Stock Exchange (the "**Official List**") and to admit the Notes to trading on the regulated market "Bourse de Luxembourg", operated by the Luxembourg Stock Exchange. 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 of America ("**United States**" or "**U.S.**") or to, or for the account or benefit of, U.S. persons.

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 9 of this Prospectus.

Joint Lead Managers

Barclays
BNP PARIBAS
Mizuho

Deutsche Bank
Goldman Sachs Bank Europe SE
BBVA

SEB

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 authorized 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 authorized by or on behalf of the Issuer or Barclays Bank Ireland PLC, BNP PARIBAS, Deutsche Bank Aktiengesellschaft, Goldman Sachs Bank Europe SE, Mizuho Securities Europe GmbH, Banco Bilbao Vizcaya Argentaria, S.A. or Skandinaviska Enskilda Banken AB (publ) (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 authorized 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 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 the product approval process conducted by each Joint Lead Manager who is a manufacturer for the purposes of EU Delegated Directive 2017/593, 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. The Issuer is not a manufacturer or distributor for the purposes of MiFID II.

UK MIFIR 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 only eligible counterparties, as defined in the FCA Handbook Conduct of Business Sourcebook (COBS), and professional clients, as defined in Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 ("**UK MiFIR**"); 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 the FCA Handbook Product Intervention and Product Governance Sourcebook (the UK MiFIR Product Governance Rules) 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. The Issuer is not a manufacturer or distributor for the purposes of UK MiFIR.

PRIIPS REGULATION / PROHIBITION OF SALES TO EEA 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 European Economic Area ("**EEA**"). 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) 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 has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA 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.

UK PRIIPS REGULATION / PROHIBITION OF SALES TO 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 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 (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 ("**EUWA**"); or (ii) a customer within the meaning of the provisions of the FSMA and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA. Consequently, no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law by virtue of the EUWA (the "**UK PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK 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.

SINGAPORE SECURITIES AND FUTURES ACT PRODUCT CLASSIFICATION

In connection with Section 309B of the Securities and Futures Act 2001 of Singapore, as modified or amended from time to time (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).

NOTICE TO CANADIAN INVESTORS

The Notes may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the Notes must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this Prospectus (including any supplement hereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

BENCHMARKS 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 ICE Benchmark Administration Limited ("**IBA**"). The annual swap rate for swap transactions denominated in Euro is calculated by reference to the EURIBOR (Euro Interbank Offered Rate) which is provided by the European Money Market Institute ("**EMMI**"). As at the date of this Prospectus, EMMI 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 "**Benchmarks Regulation**") while IBA does not appear on the ESMA register.

STABILISATION

IN CONNECTION WITH THE ISSUE OF THE NOTES, BARCLAYS BANK IRELAND PLC (THE "STABILISATION MANAGER") (OR ANY PERSON ACTING ON BEHALF OF ANY STABILISATION 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 STABILISATION MANAGER (OR ANY PERSON ACTING ON BEHALF OF THE STABILISATION 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 recognized 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. A forward-looking statement is a statement that does not relate to historical facts and events. They are based on analyses or forecasts of future results and estimates of amounts not yet determinable or foreseeable. These forward-looking statements are identified by the use of terms and phrases such as "anticipate", "believe", "could", "estimate", "expect", "intend", "may", "plan", "predict", "project", "will" and similar terms and phrases, including references and assumptions. 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.

Forward-looking statements in this Prospectus are based on current estimates and assumptions that the Issuer makes to the best of his present knowledge. These forward-looking statements are subject to risks, uncertainties and other factors which could cause actual results, including the Group's financial condition and results of operations, to differ materially from and be worse than results that have expressly or implicitly been assumed or described in these forward-looking statements. The Group's business is also subject to a number of risks and uncertainties that could cause a forward-looking statement, estimate or prediction in this Prospectus to become inaccurate. Accordingly, investors are strongly advised to read the following sections of this Prospectus: "*Risk Factors*" and "*Description of the Issuer and the Group*". These sections include more detailed descriptions of factors that might have an impact on the Group's business and the markets in which it operates.

In light of these risks, uncertainties and assumptions, future events described in this Prospectus may not occur. In addition, neither the Issuer nor the Joint Lead Managers assume any obligation, except as required by law, to update any forward-looking statement or to conform these forward-looking statements to actual 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 materialize, 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.

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 rebate groups. With globally rising healthcare expenditures, both in absolute amounts and relative to gross domestic product, healthcare budgets around the globe face increasing pressure. An important example is the volume-based procurement initiative in the People's Republic of China as well as a pricing reform on prescription drugs currently on the agenda of the administration in the United States.

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 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), the Healthcare Business Sector 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.

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.

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 Electronics Business Sectors.

In its chemicals business, the Group must adhere to a multitude of regulatory requirements 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. Similar regulations are emerging globally in relevant markets, in particular in Asia. These regulations demand comprehensive tests procedures, that can be costly and time-intensive and may lead to a rise in production costs. Moreover, the use of chemicals, such as per- and polyfluorinated alkyl substances, in production could be restricted, which would negatively impact the ability to manufacture and market certain products. With the EU Chemicals Strategy for Sustainability, an initiative of the European Green Deal, the Group expects increasing demands concerning the substitution of specific hazardous substances. Any of the factors mentioned above could still have a significant 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 current political and macroeconomic situation, characterized by high uncertainty and volatile global developments, is a strategic factor for the Group as potential negative developments can also impact its businesses. The ongoing trend of bloc building and reshoring of critical supplies and processes is leading to a further increase in the establishment of trade barriers, sanctions and foreign exchange policy changes. Additionally, the increased threat from armed conflicts including the resurgent conflict in the Middle East as well as the rising tensions between the United States and China could lead to further sanctions and economic measures that harm global trade and affect bilateral and multilateral relationships. For example, multiple countries have already implemented measures to restrict the export and transfer of technology to China, particularly in relation to advanced chips that could be utilized for artificial intelligence, quantum computing and military applications. These risks can have a negative impact on the Group's supply chains and can lead as well to declines in sales in the Group's key countries and regions.

The Group's business is subject to risks from international conflicts, such as the Russia-Ukraine war, the conflict over Taiwan, the tensions in the Middle East, and other geopolitical tensions and uncertainties. The Russia-Ukraine war in particular has a significant impact on the economic environment, amongst others, increase in energy and raw material prices and disruptions of the supply chain. While the Group's direct exposure to Russia and Ukraine has been relatively limited, the military actions between Russia and Ukraine and the related rapidly evolving and increasingly severe economic sanctions and export controls imposed on Russia and certain Russian companies and individuals, as well as related countermeasures adopted by the governments of Russia or other jurisdictions, have severely restricted the level of economic activity in those countries, increased volatility and uncertainty in the global financial markets and adversely affected the operations of many of the Group's customers. In addition, further economic sanctions and export controls may further strain the world economy. Owing to this limited business volume, the Russian-Ukraine war has not had any material effects on Merck's net assets, financial position or results of operations. However, it cannot be excluded that the continuation of the Russia-Ukraine war will directly or indirectly negatively impact the Group's business. Any of the factors described above could adversely affect the Group's operations, revenue and profitability. The same holds true if the conflict over Taiwan intensifies or if the tensions in the Middle East mount up to a regional conflict, disrupting global supply chains and increasing production prices.

Global economic growth is projected to slow down with growing regional divergences. Weak economic growth or even a recession might lead to less public spending or other cost-containment policies. Global inflation declined gradually in 2023, but remained significantly above target levels, keeping costs at an elevated level which could negatively impact the Group's business. Persistently high inflation could increase the Group's operating expenses (e.g. raw materials, utilities, and logistics) as well as capital expenditures. It could also prompt central banks to increase interest rates further and curb

fiscal policy for some economies. In the course of 2022 and 2023, the European Central Bank as well as the U.S. Federal Reserve increased key interest rates significantly, which may affect the Group's refinancing costs. Financial markets remain volatile with several potential impacts. The net risks of negative geopolitical and macroeconomic developments are seen as possible and might have significant to critical effects.

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 Electronics Business Sector is exposed to the cyclical nature of the industries in which its key customers operate (in particular in the semiconductor industry) 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.

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 pandemics.

Pandemics, such as the outbreak of SARS-CoV-2 first identified in December 2019 and its associated disease ("Covid-19"), are likely to have a material adverse effect on the global economy and international financial markets in general and on the markets in which the Group operates as well as Merck's business. Most notably, they present a risk related to more restrictive regulatory requirements regarding drug pricing and reimbursement, the demand for the Group's products, business interruptions at the Group's production facilities, lack of availability of good quality materials or services, risks related to research and development, and negative macroeconomic developments. Additionally, they can subject the forecast of the Group to a higher degree of estimation uncertainty.

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, wastewater 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 the date of this Prospectus, the Group operated various 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 significant 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 are exposed 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 and generics. 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.

In the Life Science and Electronics business sectors, risks are posed by not only cyclical business fluctuations but also changes in the technologies used or customer sourcing strategies. The occurrence of these risks is possible to likely and could have a significant impact, for instance on the sales and earnings of the two sectors.

The liquid crystals business, which contributes a substantial part of the Electronics 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 Electronics 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 five products.

In the fiscal year 2023, the Healthcare Business Sector generated EUR 709 million (9% of its net sales) from the sale of Rebif®, EUR 956 million (12% of its net sales) from the sale of Mavenclad®, EUR 1,025 million (13% of its net sales) from the sale of Erbitux®, EUR 882 million (11% of its net sales) from the sale of Glucophage® and EUR 847 million (11% of its net sales) from the sale of Gonal-f®. In the year ended December 31, 2023, the Healthcare Business Sector generated 38.36% 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® cannot be sufficiently enforced in the United States. The U.S. formulation patent expired in 2022. Thus, in the United States, Rebif® is currently only protected by a covenant not to sue 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 United States in June 2033. This U.S. patent is an important property right relating to interferon beta, which is also the active ingredient of Rebif®. In the event of infringement of this U.S. 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. This could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

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 August 2021, Merck decided amicably with GlaxoSmithKline plc to discontinue the Phase II INTR@PID BTC 055 study evaluating bintrafusp alfa with gemcitabine plus cisplatin in the first-line treatment of patients with locally advanced or metastatic biliary tract cancer (BTC), and in June 2024, Merck decided to discontinue the Phase III randomized TrilynX study evaluating xevinapant plus chemoradiotherapy (CRT) in patients with unresected locally advanced squamous cell carcinoma of the head and neck (LA SCCHN). The Phase III clinical trial XRay Vision evaluating xevinapant plus radiotherapy in patients with resected LA SCCHN was also discontinued. In these cases, the studies were unlikely to achieve their primary objectives of securing overall survival or, respectively, prolonging survival.

As a further example, Merck decided, following an interim analysis of a global Phase II study of the ATR inhibitor berzosertib in combination with topotecan in patients with a certain form of lung cancer (relapsed, platinum-resistant small cell lung cancer), to discontinue the study owing to the low probability of achieving the predefined objective of this trial. More recently, Merck announced a negative outcome of its two pivotal Phase III EVOLUTION clinical trials (evolutionRMS 1 and evolutionRMS 2) investigating the efficacy and safety of evobrutinib, a drug considered to be a potential treatment for relapsing multiple sclerosis ("**RMS**"). Both clinical trials did not meet the primary endpoint of reducing annualized relapse rates in people with RMS compared to teriflunomide for up to 156 weeks.

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 and 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 some cases by a single supplier or source only. 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. Furthermore, in the past few years an increasing number of events, from the Covid-19 pandemic to the war in Ukraine, represented an additional force, highlighting the potential risks of the single-source strategies.

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 considerable 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 Electronics 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.

As a manufacturer and supplier of high-quality pharmaceuticals and chemicals, the Group – like other companies in the chemical and pharmaceutical industries – faces various security- and crime-related risks. Due to the complexity of global trade, the Group's products are particularly at risk from counterfeiting, theft, illegal diversion, and misuse. 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. Nevertheless, these measures taken by the Group are costly and may ultimately prove inadequate. Product-related crime could cause the Group to incur reputational damage, litigation and loss of revenues, any of which could materially adversely affect the Group's business, financial condition, results of operations and prospects.

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 Data Theft 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 risks 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 moderate effects on the Group.

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 and assets.

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 specifically 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 Exelead Inc. ("**Exelead**") in 2022 or of Mirus Bio LLC ("**Mirus Bio**") in 2024, as well as intangible assets related to the healthcare drug development pipeline. For instance, the impairment loss due to the termination of the xevinapant program in June 2024 amounted to EUR 140 million.

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.

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 integration budget is exceeded, 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.

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 the Group's competitors, United States-based MSD (Merck Sharp & Dohme), operates under a similar name in the United States 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 United States 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 Electronics. 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.

Risk of failure of business-critical applications.

Globally used IT applications form the basis for the contractual delivery of Merck's products and solutions. The failure of business-critical IT applications could therefore have a direct influence on Merck's ability to deliver and on the quality of its products. This also applies to the failure of a data center. Likewise, complications with the changeover of IT systems could negatively impact the earnings situation. Any failure of business-critical IT applications could have a material adverse effect on the net assets, financial position, and results of operations.

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 terms and conditions of the Notes provide that, upon issuance and until the Change of Ranking Day (as defined in the terms and conditions of the Notes and as further described in the following paragraph), the Issuer's obligations under the Notes are unsecured deeply subordinated obligations of the Issuer ranking 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 (the "**Claims under the Equity Instruments**"), *pari passu* amongst themselves and with all present unsecured obligations of the Issuer which, at the relevant time, rank *pari passu* with the obligations under the Notes, and junior to all unsubordinated obligations and to all subordinated obligations of the Issuer, except as otherwise provided by mandatory provisions of law or as expressly provided for by the terms of the relevant instrument.

The terms and conditions of the Notes provide that, from (but excluding) the Change of Ranking Day, being the first day on which (i) the other hybrid securities of the Issuer existing on the Issue Date are redeemed and/or repurchased and cancelled in full, and/or (ii) the terms of such hybrid securities are validly amended to provide that the obligations thereunder rank senior not only to the Claims under the Equity Instruments but also senior to all deeply subordinated obligations of the Issuer, the Issuer's obligations under the Notes will be unsecured subordinated obligations of the Issuer ranking senior to the Claims under the Equity Instruments and all deeply subordinated obligations of the Issuer, *pari passu* amongst themselves and with all present unsecured obligations of the Issuer which, at the relevant time, rank *pari passu* with the obligations of the Issuer under the Notes, and junior to all other obligations 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, prior to the occurrence of the Change of Ranking Day, all 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 subordinated insolvency claims (*nachrangige Insolvenzforderungen*). According to section 174 paragraph 3 of the German Insolvency Code, 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 August 27, 2054, 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 August 27, 2029 to (and including) November 27, 2029 and on any Interest Payment Date thereafter.

In addition, the Issuer may, at its option, call and redeem 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% 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.

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.

Liquidity Risk.

There is 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.

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.

Holdes 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 June 8, 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 "**Benchmarks 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 Benchmarks 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 authorization 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 Benchmarks Regulation), the administrator is recognized (Article 32 Benchmarks Regulation) or the relevant Benchmark is endorsed (Article 33 Benchmarks 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 Benchmarks 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 Benchmarks 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 Benchmarks 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 or if any other Benchmark Event as defined and specified in the Terms and Conditions has occurred, 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 debt capital markets. Such Independent Adviser will be tasked with determining whether an officially recognized 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 2.460% *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 materialization of the credit risk (for example, because of the materialization 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 materialization of mentioned risk. Under these circumstances, the market value of the Notes is likely to decrease. Other factors that have the potential to affect the market price of the Notes are the policies of central banks, overall economic developments, inflation rates or the lack of or excess demand for the relevant type of Note.

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.

"Ansprüche aus den Eigenkapitalinstrumenten" hat die in § 3(1)(d) festgelegte Bedeutung.

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

"Ausstehende Hybridanleihen" hat die in § 3(1)(d) 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.

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).

"Claims under the Equity Instruments" has the meaning specified in § 3(1)(d).

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

"Outstanding Hybrid Securities" has the meaning specified in § 3(1)(d).

"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).

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

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

"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 real-time gross settlement system des Eurosystems (T2) oder eines Nachfolge- oder Ersatzsystems betriebsbereit sind, um die betreffenden Zahlungen weiterzuleiten.

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

"Gleichrangige Wertpapiere" hat die in § 3(1)(d) 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.

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

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

"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 real-time gross settlement system operated by the Eurosystem (T2), or any successor or replacement system, are operational to forward the relevant payments.

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

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

"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).

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

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

"**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.

"**Rangänderungstag**" hat die in § 3(1)(d) 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.

"**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.

"**Tief-nachrangige Wertpapiere**" hat die in § 3(1)(d) festgelegte Bedeutung.

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

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

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

"**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).

"**Change of Ranking Day**" has the meaning specified in § 3(1)(d).

"**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 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).

"**Deeply Subordinated Securities**" has the meaning specified in § 3(1)(d).

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

"**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.

"**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 27. August 2024.

"**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.

"**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).

"**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 August 27, 2024.

"**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 800.000.000 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

§ 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 800,000,000 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

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 bevollmächtigter Vertreter der Emittentin und sind jeweils von der Hauptzahlstelle oder in deren Namen mit einer Kontrollunterschrift versehen. Einzelurkunden 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 Zinsrückstände 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.

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 authorized signatories of the Issuer and shall each be authenticated by or on behalf of the Principal Paying 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).

"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).

- (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.*
- (a) Für den Zeitraum bis zum Rangänderungstag (einschließlich) gilt Folgendes:
- 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 aus den Eigenkapitalinstrumenten im Rang vorgehen, (ii) untereinander und mit jedem Gleichrangigen Wertpapier im Rang gleich stehen und (iii) allen anderen bestehenden und zukünftigen Verbindlichkeiten der

"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) *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 depositary 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.*
- (a) Until (and including) the Change of Ranking Day the following applies:
- 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 under the Equity Instruments, (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,

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 der Emittentin, eines Vergleichs oder eines anderen der Abwendung der Insolvenz der Emittentin dienenden Verfahrens (i) nur den Ansprüchen aus den Eigenkapitalinstrumenten 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

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, composition or other proceedings for the avoidance of insolvency of the Issuer, rank (i) senior only to the Claims under the Equity Instruments, (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.

gegen die Emittentin nicht zuvor vollständig erfüllt sind.

- (b) Für den Zeitraum ab dem Rangänderungstag (ausschließlich) gilt Folgendes:

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) den Ansprüchen aus den Eigenkapitalinstrumenten sowie den Tief-nachrangigen Wertpapieren im Rang vorgehen, (ii) untereinander und mit jedem Gleichrangigen Wertpapier im Rang gleich stehen und (iii) allen bestehenden und zukünftigen Verbindlichkeiten der Emittentin, die nicht Verbindlichkeiten aus Gleichrangigen Wertpapieren, aus Tief-nachrangigen Wertpapieren oder Ansprüche aus den Eigenkapitalinstrumenten sind, im Rang nachgehen.

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 der Emittentin, eines Vergleichs oder eines anderen der Abwendung der Insolvenz der Emittentin dienenden Verfahrens (i) den Ansprüchen aus den Eigenkapitalinstrumenten sowie den Tief-nachrangigen Wertpapieren im Rang vorgehen, (ii) untereinander und mit jedem Gleichrangigen Wertpapier im Rang gleich stehen und (iii) allen bestehenden und zukünftigen Verbindlichkeiten der Emittentin, die nicht Verbindlichkeiten aus Gleichrangigen Wertpapieren, aus Tief-nachrangigen Wertpapieren oder Ansprüche aus den Eigenkapitalinstrumenten sind, im Rang nachgehen.

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

- (b) From (but excluding) the Change of Ranking Day the following applies:

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 to the Claims under the Equity Instruments and senior to the Deeply Subordinated Securities, (ii) *pari passu* among themselves and *pari passu* with any Parity Securities and, (iii) junior to all present and future obligations of the Issuer other than obligations of the Issuer under Parity Securities, Deeply Subordinated Securities or Claims under the Equity Instruments.

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, composition or other proceedings for the avoidance of insolvency of the Issuer, rank (i) senior to the Claims under the Equity Instruments and senior to the Deeply Subordinated Securities, (ii) *pari passu* among themselves and *pari passu* with any Parity Securities and, (iii) junior to all present and future obligations of the Issuer other than obligations of the Issuer under Parity Securities, Deeply Subordinated Securities or Claims under the Equity Instruments.

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

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 Gläubiger der Emittentin nach, die nicht Ansprüche aus Gleichrangigen Wertpapieren, Ansprüche aus Tief-nachrangigen Wertpapieren oder Ansprüche aus den Eigenkapitalinstrumenten sind, so dass Zahlungen auf die Schuldverschreibungen solange nicht erfolgen, wie die Ansprüche dieser Gläubiger gegen die Emittentin nicht zuvor vollständig erfüllt sind.

- (c) 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.

- (d) *Definitionen.*

"Ansprüche aus den Eigenkapitalinstrumenten" bezeichnet die Ansprüche der persönlich haftenden Gesellschafter und der Kommanditaktionäre aus deren jeweiliger Beteiligung am Eigenkapital der Emittentin.

"Tief-nachrangige Wertpapiere" bezeichnet (i) jedes von der Emittentin begebene Wertpapier oder andere Instrument und gegen sie gerichtete Forderungen, die zum jeweils maßgeblichen Zeitpunkt nur den Ansprüchen aus den Eigenkapitalinstrumenten im Rang vorgehen, 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 die Verbindlichkeiten der Emittentin aus der maßgeblichen Garantie oder Patronatserklärung zum jeweils maßgeblichen Zeitpunkt nur den Ansprüchen aus den Eigenkapitalinstrumenten im Rang vorgehen.

"Rangänderungstag" bezeichnet den ersten Tag, an dem (i) die Ausstehenden

Holders towards the Issuer shall, pursuant to section 39 paragraph 2 of the German Insolvency Regulation (*Insolvenzordnung*), be subordinated to the claims of all creditors of the Issuer that are not claims under Parity Securities, claims under Deeply Subordinated Securities or Claims under the Equity Instruments so that in any such case no amounts shall be payable in respect of the Notes until the claims of such creditors of the Issuer shall have first been satisfied in full.

- (c) 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.

- (d) *Definitions.*

"Claims under the Equity Instruments" means 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.

"Deeply Subordinated Securities" means (i) any securities or other instruments issued by the Issuer and claims towards the Issuer which, at the relevant time, rank senior only to the Claims under the Equity Instruments, 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 or keep well agreement at the relevant time rank senior only to the Claims under the Equity Instruments.

"Change of Ranking Day" means the first day on which (i) the Outstanding Hybrid Securities are

Hybridanleihen vollständig zurückgezahlt und/oder zurückerworben und eingezogen sind, und/oder (ii) die Bedingungen der Ausstehenden Hybridanleihen wirksam geändert werden und vorsehen, dass die durch die Ausstehenden Hybridanleihen begründeten Verbindlichkeiten nicht nur den Ansprüchen aus den Eigenkapitalinstrumenten, sondern auch den Tief-nachrangigen Wertpapieren im Rang vorgehen.

"Gleichrangige Wertpapiere" bezeichnet (i) jedes von der Emittentin begebene Wertpapier oder andere Instrument und gegen sie gerichtete Forderungen, die zum jeweils maßgeblichen Zeitpunkt 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 die Verbindlichkeiten der Emittentin aus der maßgeblichen Garantie oder Patronatserklärung zum jeweils maßgeblichen Zeitpunkt 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 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, die nicht besicherten nachrangigen Schuldverschreibungen der Emittentin erstmals kündbar im Jahr 2026, fällig im Jahr 2080, ISIN XS2218405772 und die nicht besicherten nachrangigen Schuldverschreibungen der Emittentin erstmals kündbar im Jahr 2029, fällig im Jahr 2079, ISIN XS2011260705. Diese am Ausgabetag der Schuldverschreibungen

redeemed and/or repurchased and cancelled in full, and/or (ii) the terms and conditions of the Outstanding Hybrid Securities are validly amended to provide that the obligations under the Outstanding Hybrid Securities rank senior not only to the Claims under the Equity Instruments but also to the Deeply Subordinated Securities.

"Parity Securities" means (i) any securities or other instruments issued by the Issuer and claims towards the Issuer which, at the relevant time, 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 or keep well agreement at the relevant time 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 2024, due in 2074, ISIN XS1152343668, the unsecured subordinated notes with a first call date in 2024, due in 2079, ISIN XS2011260531, its unsecured subordinated notes with a first call date in 2026, due in 2080, ISIN XS2218405772 and its unsecured subordinated notes with a first call date in 2029, due in 2079, ISIN XS2011260705. These Parity Securities of the Issuer outstanding on the issue date of the Notes are collectively referred to as the **"Outstanding Hybrid Securities"**.

existierenden Gleichrangigen Wertpapiere der Emittentin werden zusammen als die "**Ausstehenden Hybridanleihen**" bezeichnet.

"**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 27. November eines jeden Jahres (jeweils ein "**Zinszahlungstag**") zur Zahlung vorgesehen, erstmals am 27. November 2024 (erste kurze Zinsperiode), 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 27.

"**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 November 27 of each year (each an "**Interest Payment Date**"), commencing on November 27, 2024 (short first coupon), and will fall due and payable (*fällig*) in 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

November 2029 (der "**Erste Resettermin**") (ausschließlich) fällt, entspricht der Anwendbare Zinssatz 3,875% *per annum*.

(b) *Erster Resetzeitraum.* Für jeden Zinszeitraum, der in den Resetzeitraum ab dem Ersten Resettermin (einschließlich) bis zum 27. November 2034 (dem "**Ersten Step-Up Tag**") (ausschließlich) fällt, entspricht der Anwendbare Zinssatz dem Referenzsatz für diesen Resetzeitraum zuzüglich 1,54% *per annum* (die "**Anfängliche Marge**").

(c) *Erster Step-Up Zeitraum.* Für jeden Zinszeitraum, der in einen Resetzeitraum ab dem Ersten Step-Up Tag (einschließlich) bis zum 27. November 2049 (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) *Zweiter Step-Up Zeitraum.* 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).

"**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:

to but excluding November 27, 2029 (the "**First Reset Date**"), the Prevailing Interest Rate shall be equal to a rate of 3.875 % *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 November 27, 2034 (the "**First Step-Up Date**"), the Prevailing Interest Rate shall be equal to the Reference Rate for such Reset Period plus 1.54% *per annum* (the "**Initial Margin**").

(c) *First Step-Up Period.* For any Interest Period falling in a Reset Period from and including the First Step-Up Date to but excluding November 27, 2049 (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) *Second Step-Up 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).

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

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 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.

"Resetzeitraum" bezeichnet jeden Zeitraum ab dem Ersten Resettermin (einschließlich) bis zum

- (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 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).

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 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

nächstfolgenden Resettermin (ausschließlich) und nachfolgend ab jedem Resettermin (einschließlich) bis zu dem jeweils nächstfolgenden Resettermin (ausschließlich).

"T2-Geschäftstag" bezeichnet einen Tag, an dem das real-time gross settlement system des Eurosystems (T2) oder ein Nachfolge- oder Ersatzsystem betriebsbereit ist.

"Zinsfeststellungstag" bezeichnet den zweiten T2-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 hat; oder
 - (ii) der ernannte Unabhängige Berater keinen Neuen Benchmarksatz, keine Anpassungsspanne oder keine Benchmark-Änderungen (sofern erforderlich) gemäß diesem § 4(4) festgelegt hat,

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

next following Reset Date and thereafter from and including each Reset Date to but excluding the next following Reset Date.

"T2 Business Day" means a day on which the real-time gross settlement system operated by the Eurosystem (T2), or any successor or replacement system, is operational.

"Interest Determination Date" means the second T2 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 has not appointed an Independent Adviser; or
 - (ii) the Independent Adviser appointed by it has not determined a New Benchmark Rate, no Adjustment Spread or no Benchmark Amendments (if required) in accordance with this § 4(4),

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 2,460% *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.

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

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

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.

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

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 2.460% *per annum*.

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

- (i) there is a Successor Benchmark Rate, then such Successor Benchmark Rate shall subsequently be the New Benchmark Rate; or
- (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 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 Amendments.* If any relevant New Benchmark Rate and the applicable 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

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; 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 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

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; 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, 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

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.

(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

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) *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

Nachfolge-Benchmarksatz von dem Nominierungsgremium empfohlen wird; oder	Successor Benchmark Rate by any Relevant Nominating Body; or
(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	(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) (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.	(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 recognized 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 Anleihekapitalmärkten zur Bestimmung von Reset-Zinssätzen in Euro angewendet wird, wobei sämtliche Feststellungen durch den Unabhängigen Berater nach billigem Ermessen vorgenommen werden.

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

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

"**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 in its reasonable discretion.

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

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

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| <p>(1) eine öffentliche Erklärung oder eine Veröffentlichung von Informationen durch oder im Namen der für den Administrator des Ursprünglichen Benchmarksatzes zuständigen Aufsichtsbehörde vorgenommen wird, (x) aus der hervorgeht, dass dieser Administrator die Bereitstellung des Ursprünglichen Benchmarksatzes dauerhaft oder auf unbestimmte Zeit eingestellt hat oder einstellen wird, es sei denn, es gibt einen Nachfolgeadministrator, der den Ursprünglichen Benchmarksatz weiterhin bereitstellt, oder (y) aufgrund derer der Ursprüngliche Benchmarksatz allgemein oder in Bezug auf die Schuldverschreibungen nicht mehr verwendet werden darf; oder</p> <p>(2) eine öffentliche Erklärung oder eine Veröffentlichung von Informationen durch oder im Namen des Administrators des Ursprünglichen Benchmarksatzes vorgenommen wird, die besagt, dass der Administrator die Bereitstellung des Ursprünglichen Benchmarksatzes dauerhaft oder auf unbestimmte Zeit eingestellt hat oder einstellen wird, es sei denn, es gibt einen Nachfolgeadministrator, der den Ursprünglichen Benchmarksatz weiterhin bereitstellt; oder</p> <p>(3) eine öffentliche Erklärung der Aufsichtsbehörde des Administrators des Ursprünglichen Benchmarksatzes veröffentlicht wird, wonach der Ursprüngliche Benchmarksatz ihrer Ansicht nach nicht mehr repräsentativ für den zugrunde liegenden Markt, den er zu messen vorgibt, ist oder sein wird, und keine von der Aufsichtsbehörde des Administrators des Ursprünglichen Benchmarksatzes geforderten Maßnahmen zur Behebung einer solchen Situation</p> | <p>(1) a public statement or publication of information by or on behalf of the regulatory supervisor of the Original Benchmark Rate administrator is made, (x) stating that said administrator has ceased or will cease to provide the Original Benchmark Rate permanently or indefinitely, unless there is a successor administrator that will continue to provide the Original Benchmark Rate, or (y) as a consequence of which the Original Benchmark Rate will be prohibited from being used either generally or in respect of the Notes; or</p> <p>(2) a public statement or publication of information by or on behalf of the Original Benchmark Rate administrator is made, stating that said administrator has ceased or will cease to provide the Original Benchmark Rate permanently or indefinitely, unless there is a successor administrator that will continue to provide the Original Benchmark Rate; or</p> <p>(3) a public statement by the supervisor of the Original Benchmark Rate administrator is made that, in its view, the Original Benchmark Rate is no longer representative, or will no longer be representative, of the underlying market it purports to measure and no action to remediate such a situation is taken or expected to be taken as required by the regulatory supervisor of the Original Benchmark Rate administrator; or</p> |
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ergriffen worden sind oder zu erwarten sind; oder

- (4) die Verwendung des Ursprünglichen Benchmarksatzes aus irgendeinem Grund nach einem Gesetz oder einer Verordnung, die in Bezug auf die Hauptzahlstelle, die Berechnungsstelle, die Emittentin oder einen Dritten anwendbar sind, rechtswidrig geworden ist; oder
- (5) der Ursprüngliche Benchmarksatz ohne vorherige offizielle Ankündigung durch die zuständige Behörde oder den Administrator dauerhaft nicht mehr veröffentlicht wird; oder
- (6) eine wesentliche Änderung der Methodologie des Ursprünglichen Benchmarksatzes vorgenommen wird.

"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 oder mitgeführt von oder gebildet von (a) der Zentralbank für die Währung in der die Benchmark oder der Bildschirmsatz dargestellt wird,

- (4) it has become, for any reason, unlawful under any law or regulation applicable to the Principal Paying Agent, the Calculation Agent, the Issuer or any other party to use the Original Benchmark Rate; or

- (5) the Original Benchmark Rate is permanently no longer published without a previous official announcement by the competent authority or the administrator; or

- (6) a material change is made to the Original Benchmark Rate methodology.

"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 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

(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 den internationalen Anleihekapitalmärkten.

(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, an dem die Veröffentlichung des Ursprünglichen Benchmarksatzes eingestellt wird bzw. an dem der Ursprüngliche Benchmarksatz eingestellt wird bzw. ab dem der Ursprüngliche Benchmarksatz nicht mehr repräsentativ ist oder sein wird, wenn das Benchmark-Ereignis aufgrund der Absätze (1), (2) oder (3) der Definition des Begriffs "Benchmark-Ereignis" eingetreten ist; oder
- (ii) den Tag, ab dem der Ursprüngliche Benchmarksatz nicht mehr verwendet werden darf, wenn das Benchmark-Ereignis aufgrund des Absatzes (4) der Definition des Begriffs "Benchmark-Ereignis" eingetreten ist; oder
- (iii) den Tag des Eintritts des Benchmark-Ereignisses, wenn das Benchmark-Ereignis aufgrund der Absätze (5) oder (6) der Definition des Begriffs

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 debt 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), (2) or (3) of the definition of the term "Benchmark Event", the date of cessation of publication of the Original Benchmark Rate, the date of the discontinuation of the Original Benchmark Rate or the date as from which the Original Benchmark Rate is or will no longer be representative, as the case may be; or
- (ii) if the Benchmark Event has occurred as a result of clause (4) of the definition of the term "Benchmark Event", the date from which the prohibition applies; or
- (iii) if the Benchmark Event has occurred as a result of clauses (5) or (6) of the definition of the term "Benchmark

"Benchmark-Ereignis" eingetreten ist.	Event", the date of the occurrence of the Benchmark Event.
(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.	(h) If a Benchmark Event occurs in relation to any New Benchmark Rate, § 4(4) shall apply <i>mutatis mutandis</i> 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) <i>Berechnung der Zinsen.</i> 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.	(5) <i>Calculation of Interest.</i> 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) <i>Zinsen nach Eintritt eines Kontrollwechselereignisses.</i> 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 <i>per annum</i>. 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	(6) <i>Interest following the occurrence of a Change of Control Event.</i> 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 <i>per annum</i> 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, the otherwise applicable Prevailing Interest Rate will only be increased once.

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).

- (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 27. November.

- (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 Bezug

"**Determination Date**" means each November 27.

- (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

	auf die betreffende Zinsperiode aufzuschieben; oder	Notes in respect of the relevant Interest Period; or
(iv)	der fünfte Jahrestag des Zinszahlungstages, an dem der älteste der ausstehenden Zinsrückstände entstanden ist; oder	(iv) the fifth anniversary of the Interest Payment Date on which the earliest of the outstanding Deferred Interest Payments came into existence; or
(v)	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).	(v) 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).
(c)	Ein " Obligatorisches Zahlungsereignis " gilt bei Eintritt eines der folgenden Ereignisse als eingetreten:	(c) A " Compulsory Payment Event " shall be deemed to have occurred upon any of the following events:
(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	(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

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|--|--|
| <p>(ii) die Emittentin erwirbt Kommanditaktien der Emittentin zurück oder zahlt einen Kapitalanteil eines persönlich haftenden Gesellschafters zurück oder eine ihrer Tochtergesellschaften kauft 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 Aktiengattung 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</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 its Subsidiaries repurchases or otherwise acquires any of the outstanding 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>) (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 (<i>Kapitalanteil</i>) of a general partner (<i>persönlich haftender Gesellschafter</i>) or limited partnership shares (<i>Kommanditaktien</i>) of the Issuer as consideration for a sale of assets to third parties); or</p> |
| <p>(iii) der Tag, an dem die Emittentin oder eine Tochtergesellschaft eine Zahlung oder Ausschüttung auf ein Gleichrangiges Wertpapier vornimmt; oder</p> | <p>(iii) the date on which the Issuer or any Subsidiary makes any payment or distribution in respect of any Parity Security; or</p> |
| <p>(iv) der Tag, an dem die Emittentin oder eine Tochtergesellschaft (jeweils direkt oder indirekt) ein Gleichrangiges Wertpapier oder Schuldverschreibungen zurückzahlt, zurückkauft oder anderweitig erwirbt; oder</p> | <p>(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; or</p> |
| <p>(v) nach dem Rangänderungstag, der Tag, an dem die Emittentin oder eine Tochtergesellschaft eine Zahlung oder Ausschüttung auf ein Tief-nachrangiges Wertpapier vornimmt; oder</p> | <p>(v) after the Change of Ranking Day, the date on which the Issuer or any Subsidiary makes any payment or distribution in respect of any Deeply Subordinated Security; or</p> |

- (vi) nach dem Rangänderungstag, der Tag, an dem die Emittentin oder eine Tochtergesellschaft (jeweils direkt oder indirekt) ein Tief-nachrangiges Wertpapier 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 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

- (vi) after the Change of Ranking Day, the date on which the Issuer or any Subsidiary redeems, repurchases or otherwise acquires (in each case directly or indirectly) any Deeply Subordinated Security,

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 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

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 27. August 2054 (der "**Endfälligkeitstag**") zurückzahlen.

- (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 Kündigungsmitteilung 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

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 August 27, 2054 (the "**Maturity Date**").

- (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

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 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

described in § 8) in question on payments due in respect of the Notes.

A "**Gross-up Event**" will occur if an opinion of a recognized 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 or regulations by any legislative body, court, or taxing 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

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

- (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

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) an opinion of a recognized 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

aufsichtsrechtlicher Entscheidungen), die an oder nach dem Ausgabetag der Schuldverschreibungen erlassen, verkündet oder anderweitig wirksam wird; oder	otherwise on or after the issue date of the Notes; or
(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 im Hinblick auf diese Gesetze oder Vorschriften von der früheren allgemein anerkannten Rechtslage abweicht;	(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 which is issued or announced on or after the issue date of the Notes;
der Zinsaufwand aus den Schuldverschreibungen von der Emittentin nicht mehr für die Zwecke der deutschen Körperschaftssteuer voll abzugsfähig sind, bzw. innerhalb von 90 Tagen nach dem Datum dieses Gutachtens nicht mehr voll abzugsfähig sein werden; und	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) die Emittentin dieses Risiko nicht durch das Ergreifen zumutbarer Maßnahmen vermeiden kann.	(ii) such risk cannot be avoided by the Issuer taking reasonable measures available to it.
Ein " Ratingagenturereignis " tritt ein, wenn entweder:	A " Rating Agency Event " will occur if either:
(x) eine Ratingagentur eine Methodologieänderung (wie nachstehend definiert) veröffentlicht, wodurch ein Verlust der Eigenkapitalanrechnung (wie nachstehend definiert) der Schuldverschreibungen eintritt; oder	(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) eine Ratingagentur eine Methodologieänderung veröffentlicht, die zu einem Verlust der Eigenkapitalanrechnung der Schuldverschreibungen geführt hätte, wenn sich die den Schuldverschreibungen zugeordnete "Eigenkapitalanrechnung" nicht	(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

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 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, France Branch oder eine Nachfolgesellschaft ("**S&P**") Moody's France SAS 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.

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.

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, France Branch or any of its successors ("**S&P**"), Moody's France SAS ("**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.

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 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

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
- (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

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.

"**Optionaler Rückzahlungstag**" bezeichnet

- (i) jeden Geschäftstag während des Zeitraums ab dem 27. August 2029 (der "**Erste Optionale Rückzahlungstag**") (einschließlich) bis zum Ersten Resettermin (ausschließlich);
 - (ii) den Ersten Resettermin; und
 - (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

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 August 27, 2029 (the "**First Optional Redemption Date**") to but excluding the First Reset Date;
 - (ii) the First Reset Date; and
 - (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

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 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

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**").

(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.

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 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

(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 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

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.

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.

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.

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
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 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

§ 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.
- (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
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 (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.

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 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) 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 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

- (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 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 (*Solidarit tszuschlag*) and the German Church Tax (*Kirchensteuer*) or any other tax which may substitute the German *Kapitalertragsteuer* or *Solidarit tszuschlag* 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 (*Verm gensteuer*), 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

(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 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

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 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

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
- (8) Zahlungen, soweit der Einbehalt oder Abzug vorzunehmen ist, weil der Gläubiger (oder ein Treuhänder, Treugeber, Begünstigter, Mitglied oder Gesellschafter eines Gläubigers, sofern es sich bei dem Gläubiger um eine Vermögensmasse, ein Treuhandvermögen, eine Personengesellschaft oder eine Kapitalgesellschaft handelt) in einem nicht kooperativen Steuerhoheitsgebiet im Sinne des Gesetzes zur Abwehr von Steuervermeidung und unfairem Steuerwettbewerb (Steueroasenabwehrgesetz), einschließlich der aufgrund von diesem Gesetz ergangenen Verordnungen, und/oder der EU-Liste nicht kooperativer Länder und Gebiete für Steuerzwecke des Rats der Europäischen Union, wie jeweils geändert oder ersetzt, ansässig ist oder war; oder
- (9) jegliche Kombination der Absätze (1)-(8).

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

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) payments to the extent such withholding or deduction is payable because the 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 or was resident in a non-cooperative country or territory (*nicht kooperatives Steuerhoheitsgebiet*) within the meaning of the act to prevent tax evasion and unfair tax competition (*Steueroasen-Abwehrgesetz*), including any ordinance (*Verordnung*) enacted based on this act, and/or the EU list of non-cooperative jurisdictions for tax purposes of the Council of the European Union, in each case as amended or replaced from time to time; or
- (9) any combination of items (1)-(8).

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

Gesellschafter 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 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

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);
- (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

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 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.

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.

§ 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.

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 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

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 seqq. 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 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

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 an 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 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)

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 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

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.

§ 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

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

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.

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.LuxSE.com) elektronisch zu veröffentlichen. Jede derartige Mitteilung gilt mit dem dritten Tag nach dem Tag der Veröffentlichung (oder bei mehrfacher Veröffentlichung 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 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

- (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.LuxSE.com). 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.
- (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

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 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.

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

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.

§ 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.

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, a Gross-up Event, a Change of Control Event or in the case of minimal outstanding aggregate principal amount, 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 792,256,000. The Issuer intends to use the net proceeds for general corporate purposes, including the refinancing of outstanding subordinated fixed to reset rate notes.

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 ("**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

KPMG AG Wirtschaftsprüfungsgesellschaft, Klingelhöferstraße 18, 10785 Berlin, Germany ("**KPMG**") was the auditor of the Issuer's annual and consolidated financial statements for the fiscal year 2022. The annual financial statements according to the German Commercial Code (*Handelsgesetzbuch*, "**HGB**"), as well as the consolidated financial statements of the Issuer according to the International Financial Reporting Standards as adopted by the European Union ("**IFRS**") for the 2022 fiscal year, were audited by KPMG and provided with an unqualified auditor's opinion. KPMG is a member of the German Chamber of Auditors (*Wirtschaftsprüferkammer*).

Due to a mandatory audit rotation under German and European law, the Annual General Meeting in 2022 elected Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Rosenheimer Platz 4, 81669 Munich, Germany ("**Deloitte**") as the auditor for Merck KGaA's annual financial statements, and the consolidated financial statements for the fiscal year 2023. The annual financial statements according to HGB, as well as the consolidated financial statements of Merck KGaA according to IFRS for the 2023 fiscal year, were audited by Deloitte and provided with an unqualified auditor's opinion. Deloitte 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, 2024 the Group included 300 fully consolidated subsidiaries.

Legal Structure and Share Capital

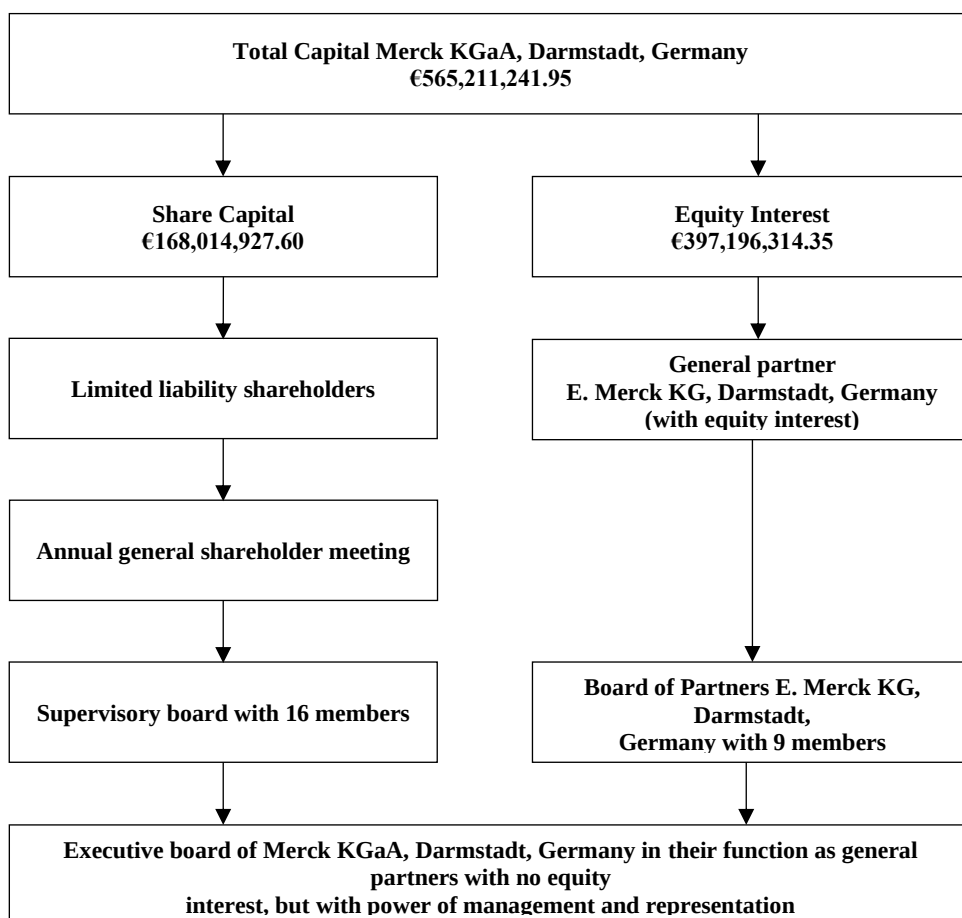
The Issuer is a corporation with general partners (*Kommanditgesellschaft auf Aktien*). A corporation with general partners is a company with its own legal personality, having two types of stakeholders. One group comprises one or more partners having unlimited liability for the company's creditors (general 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, 2023, 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, 2023 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 Index is the German stock index that tracks the price developments of the largest and most actively traded German equities and was extended to 40 companies in September 2021.

Major Shareholders

Based on notices Merck KGaA received pursuant to section 33 et seq. of the German Securities Trading Act (*Wertpapierhandelsgesetz* - WpHG) until March 26, 2024, no other shareholders held (directly or indirectly) as per the day of the notice, 10% or more of its outstanding voting rights.

All notifications made by shareholders in accordance with the WpHG are published on the website of Merck www.merckgroup.com under Investors/Corporate Governance/Voting Rights Notifications. In furnishing Merck's website address in this document, however, Merck does not intend to incorporate any information on its website into this document, and no information on its website should be considered to be part of this document.

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 this Prospectus:

Rating Agency	Long-term Rating	Outlook	Short-term Rating
S&P Global Ratings Europe Limited, France Branch ("Standard & Poor's").....	A ¹	stable	A-1 ²
Moody's France SAS ("Moody's")	A3 ³	stable	P-2 ⁴

S&P and Moody's are established in the European Union 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").⁵

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 company in life science, healthcare and electronics. About 62,000 employees in 65 countries work to further develop technologies that improve and enhance life - from tools and services for scientific research and production, to biopharmaceutical therapies to treat cancer or multiple sclerosis, 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 growing and aging populations as well as better access to healthcare and technology market trends such as autonomous driving, electric vehicles, the Internet of Things, 5G, artificial intelligence and big data.

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

In fiscal year ended December 31, 2023, the Group posted net sales of EUR 20,993 million (fiscal year ended December 31, 2022: EUR 22,232 million).

Business Sectors

The business of the Group comprises three business sectors.

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

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 "A3" as follows: "Obligations rated 'A' are considered upper-medium grade and are subject to low credit risk. 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 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.

manufacture of biotechnological and pharmaceutical drug therapies and for general laboratory applications and workflows, lab connectivity and digitalization. In addition, the business sector's products and services also reach a diverse set of adjacent markets such as food and beverage, industrial and testing.

The Life Science Business Sector contributed 44% of total net sales of the Group in the fiscal year ended December 31, 2023 (fiscal year ended December 31, 2022: 47%).

- The **"Healthcare Business Sector"** stands for innovative therapies focusing on people. The business sector comprises discovering, developing, manufacturing and marketing innovative pharmaceutical and biological prescription drugs to treat cancer, multiple sclerosis, infertility, growth disorders as well as certain cardiovascular and metabolic diseases.

The Healthcare Business Sector contributed 38% of total net sales of the Group in the fiscal year ended December 31, 2023 (fiscal year ended December 31, 2022: 35%).

- The **"Electronics 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. After closing the acquisition of Versum Materials on October 7, 2019, the newly integrated organization went live on June 1, 2020. Until March 2021, the Electronics Business Sector was named "Performance Materials Business Sector".

The Electronics Business Sector contributed 18% of total net sales of the Group in the fiscal year ended December 31, 2023 (fiscal year ended December 31, 2022: 18%).

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 six-month period ended June 30, 2024 and for the fiscal years 2023 and 2022:

Six-month period ended June 30, 2024	Life Science	Health Care (in EUR million)	Electronics
Net sales	4,402	4,184	1,886
EBIT ^{1*}	748	1,119	202
EBITDA pre ^{2*}	1,266	1,428	492

Fiscal Year ended December 31, 2023	Life Science	Health Care (in EUR million)	Electronics
Net sales	9,281	8,053	3,659
EBIT ^{1*}	1,850	2,225	248
EBITDA pre ^{2*}	2,820	2,543	913

Fiscal Year ended December 31, 2022	Life Science	Health Care (in EUR million)	Electronics
Net sales	10,380	7,839	4,013
EBIT ^{1*}	2,808	1,895	572
EBITDA pre ^{2*}	3,760	2,477	1,192

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

- 1) "EBIT" is defined as a key figure for earnings before interest and taxes on income and is calculated as profit before income tax adding back financial result and is presented as the operating result in the consolidated income statement. A reconciliation of EBIT for the segments for the fiscal years ended December 31, 2023 and 2022 can be found under note 8 to the audited consolidated financial statements for the Group as of and for the fiscal year ended December 31, 2023. A reconciliation of EBIT for the segments for the six-month periods ended 30 June, 2024 and 2023 can be found on page 47 of the unaudited consolidated half-year financial statements for the Group as of June 30, 2024. See also "Non-IFRS measures" below.
- 2) "EBITDA pre" is calculated as EBIT adding back depreciation, amortization, impairment losses and reversals of impairment losses and certain adjustments. The adjustments include specific income and expense of a one-time nature such as integration and restructuring expenses, acquisition-related items, and other one-time items. A reconciliation of EBIT for the segments for the fiscal years ended December 31, 2023 and 2022 can be found under note 8 to the audited consolidated financial statements for the Group as of and for the fiscal year ended December 31, 2023. A reconciliation of EBIT for the segments for the six-month periods ended 30 June, 2024 and 2023 can be found on page 47 of the unaudited consolidated half-year financial statements for the Group as of June 30, 2024. See also "Non-IFRS measures" below.

The following provides an overview of the geographic distribution of net sales and research and development costs (both based on customer location) for the fiscal years 2023 and 2022:

Fiscal Year ended December 31, 2023	Europe	North America	Asia-Pacific <i>(in EUR million)</i>	Latin America	Middle East and Africa
Net sales	6,037	5,952	6,936	1,331	737
Research and development costs ¹	-2,004	-349	-63	-18	-11

Fiscal Year ended December 31, 2022	Europe	North America	Asia-Pacific <i>(in EUR million)</i>	Latin America	Middle East and Africa
Net sales	6,248	6,361	7,697	1,231	695
Research and development costs ¹	-2,051	-372	-69	-17	-12

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). See also "Non-IFRS measures" below.

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:

Growing and aging populations as well as better access to healthcare: Merck is expecting that the growing and aging populations as well as better access to healthcare will continue to drive 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 (autonomous driving, electric vehicles, Internet of Things, 5G, artificial intelligence and big data): Merck is expecting that market trends such as autonomous driving, electric vehicles, the Internet of Things, 5G, artificial intelligence and big data will lead to high innovation pressure and drive the growth of data from every side. With its Electronics Business, Merck believes it is well positioned to participate in these trends and targets the electronic material market.

Megatrends in Life Science: The fundamental drivers of demand in Life Science are research funding, the pharma pipeline, and healthcare utilization in terms of the volume of prescription medicines, especially biologics, and diagnostic tests used in patient care. Furthermore, growth in Life Science is expected to be driven by novel drug modalities, including monoclonal antibodies, high-potency active pharmaceutical ingredients (HPAPIs) and antibody-drug conjugates as well as viral and gene therapies such as mRNA. Merck is investing continually in expanding its portfolio and production capabilities in this field. In the first half of 2024, its Life Science Business Sector launched nearly 4,500 products, including those launched through Merck's "faucet program" for antibodies, reference materials and nanomaterials.

Principal Industries

Life Science

Overview

In the Life Science Business Sector, Merck is, in its own assessment, a leading global provider of products and services for a wide range of customers, including academic labs, biotech and pharmaceutical companies, diagnostic labs, as well as the industrial sector. With its business units Life Science Services, Process Solutions and Science and Lab Solutions, the business sector offers innovative solutions for scientists and engineers at every stage. The portfolio of more than 300,000 products ranges from lab water systems to microbiology and biomonitoring products and fit-for-purpose products for the efficient manufacturing of novel modalities, such as viral vectors, and mRNA and cell therapies. The business continues to invest in building new capacity in single-use, filtration and cell culture media to support the end-to-end bioprocessing manufacturing needs of both emerging biotech and large pharma. In addition, the business sector's products and services also reach a diverse set of adjacent markets such as food and beverage, industrial and testing.

In May 2023, Merck announced an investment of EUR 35 million in biosafety testing at its Glasgow and Stirling sites in Scotland. Through the expansion, Merck plans to create nearly 500 new jobs, bringing their Life Science workforce to over 1,200 employees across the two sites. The investment follows Merck's recent testing expansions in Rockville, Maryland (USA) and Shanghai, China.

In June 2023, Merck announced an investment of approximately EUR 70 million to expand production for highly purified reagents at Merck's manufacturing site in Nantong, China. The facility, which is expected to be operational by 2026, will cover 40,000 square meters and offer high-performance products for quality control and testing to customers in the pharmaceutical, food and beverage industries.

In July 2023, Merck announced a EUR 23 million expansion of its Life Science facility in Lenexa, Kansas, USA, adding lab space and production capacity to manufacture cell culture media. Cell culture media is used in processes as varied as vaccine manufacturing, gene therapy and monoclonal antibody manufacturing. Merck's strategic investments to expand capacity in existing production facilities in the Lenexa, Kansas, USA, and Nantong, China, sites with dry powder media manufacturing lines are expected to increase both local and global production capacity.

Since September 2023, Contract Testing, Development, and Manufacturing Organization Services ("CTDMO") can offer integrated services for all critical stages of mRNA development, manufacturing and commercialization, including products and testing, with the opening of two new GMP-grade mRNA drug substance manufacturing sites in Darmstadt and Hamburg, Germany. The new sites are part of the company's ongoing EUR 1 billion investment to advance mRNA technologies and build its global mRNA network and capabilities in addition to key acquisitions such as AmpTec and Exelead.

In February 2024, Merck opened a new, distribution center costing in excess of EUR 20 million and spanning more than 10,000 square meters in Cajamar, São Paulo, Brazil, to better serve its Life Science customers in the region and to meet the country's growing demand for life science products.

In March 2024, Merck announced the expansion of its M LabTM Collaboration Center as part of the Shanghai Technical Application and Testing Center, which includes several laboratories of the BioReliance[®] Biologics Testing Center. In the course of the EUR 14 million investment plan, the center will be expanded to include a new biology application lab, a process development training center and an upstream application lab. M LabTM in Shanghai, China, is the largest of Merck's customer cooperation centers worldwide.

Also in March 2024, Merck announced an investment of more than EUR 300 million in a new Bioprocessing Production Center in Daejeon, South Korea. The new site is the largest investment in Asia-Pacific as to the date of this Prospectus and demonstrates Merck's intention to expanding its capacities in the growing region. The facility will include production of essential products, such as dry powder cell culture media and process liquids, as well as sterile sampling systems and small-scale pre-GMP production. By the end of 2028, the center will also have a distribution center and an automated warehouse.

In April 2024, Merck announced the investment of more than EUR 300 million in a new research center in Darmstadt, Germany, named the Advanced Research Center. Starting in 2027, the building will be home to more than 500 employees focusing on researching solutions for manufacturing antibodies, mRNA applications and additional products required for biotechnological production.

In May 2024, Merck signed a non-binding memorandum of understanding with the Korea Advanced Institute of Science and Technology ("KAIST"). This academia-industry cooperation aims to advance the research and development ecosystem in Korea for industrial applications. Through the partnership, Merck will provide researchers at KAIST's labs with products from Merck's chemistry and biology portfolios. A research partnership will also be established for joint R&D projects, focusing on advancing innovation in prioritized research areas.

In June 2024, Merck announced an investment in a new quality control building at its global headquarters in Darmstadt, Germany, which has been increased to EUR 68 million as to the date of this Prospectus. The facility will bring together approximately 135 employees across several departments in a single state-of-the-art collaborative space.

Also in June 2024, Merck opened its newly expanded distribution center in Schnelldorf, Germany. With an investment of more than EUR 180 million, Merck has almost doubled its space. Alongside a new manual down-filling facility, the site provides more space for the distribution of a wide range of products to laboratories and research facilities around the world. The Schnelldorf site employs more than 400 engineers and experts in manufacturing and distribution.

The Life Science Business Sector generates recurring sales, attractive cash flows in an industry characterized by stringent regulatory requirements. A diversified and loyal customer base additionally ensures a low-risk profile. Merck benefits from a broad and relevant portfolio, a dynamic supply chain that includes a robust eCommerce platform and global reach. In 2023, Life Science generated 44% of Group sales as well as 45% of EBITDA pre (excluding Corporate and Other).

Business Units

Life Science Services business unit fully integrates CTDMO services to meet the evolving needs of Merck's global customers across all stages of drug development, from pre-clinical to commercialization. Merck's CTDMO services cover a wide range of modalities, including monoclonal antibodies, high-potency active pharmaceutical ingredients, antibody-drug conjugates ("ADC"), viral and gene therapies, and end-to-end mRNA offerings. Merck continually invests in expanding its portfolio and production capabilities to offer specialized solutions for both traditional and innovative therapies. For example, Merck's mRNA offering was strengthened through the acquisition of AmpTec in 2021 and further complemented through the acquisition of Exelead in February 2022, for approximately USD 793 million (EUR 702 million) in cash. This positions Merck to seize the potential of the growing biopharmaceutical markets by providing leading CTDMO services to its customers.

In April 2024, Life Science Services launched a first-of-its-kind, all-in-one, validated genetic stability assay. The Aptegra™ Chinese hamster ovary genetic stability platform replaces five different assays and four different technologies with one assay utilizing a next-generation sequencing technology digital platform. This approach reduces testing time by 66% compared with traditional methods. The platform meets all regulatory requirements for genetic stability assurance, including copy number assessment.

Process Solutions markets products and services for the pharmaceutical production value chain. Merck offers a diverse range of products to pharmaceutical and biotechnology companies that enable customers to develop large- and small-molecule drugs safely, effectively and cost-efficiently. The approximately 25,000 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 January 2023, Merck introduced the Pellicon® Capsule with Ultracel® membrane, fulfilling the single-use tangential flow filtration ("TFF") device requirements for the ADC manufacturing process. Engineered with operator safety in mind, the Pellicon® Capsule features for easy connection to a single-use TFF system. The capsules are resistant to organic solvents commonly used in the ADC manufacturing process.

In April 2023, Merck launched Ultimus® single-use process container film, designed to provide extreme durability and leak resistance for single-use assemblies used for bioprocessing liquid applications. Ultimus® film provides an animal-origin-free contact resin that demonstrates a low extractable profile and supports healthy cell growth performance. This technology is now available in Mobius® 3D process containers.

In July 2023, Merck launched the Mobius® iFlex Bioreactor as the latest addition to the BioContinuum™ Production and Harvest Platform, Merck's integrated solution for perfusion process development and manufacturing. Alongside Merck's portfolio of EX-CELL® Advanced HD Perfusion, Mobius® Breez Microbioreactor and Cellicon® Cell Retention Solution, the Mobius® iFlex Bioreactor enables customers to realize the efficiency gains and cost savings of production intensification and continuous monoclonal antibody manufacturing.

In May 2024, Merck signed a definitive agreement to acquire the life science company Mirus Bio for a purchase price of USD 600 million (around EUR 550 million). Based in Madison, Wisconsin, USA, Mirus Bio specializes in the development and commercialization of transfection reagents, such as its own TransIT-VirusGEN®. These transfection

reagents are used to help introduce genetic material into cells and thus play a key role in the production of viral vectors for cell and gene therapies.

Science and Lab Solutions serves customers in the pharmaceutical and biotech industries and other industries in production, testing and research, as well as public authorities and research institutions, providing customers a more seamless experience and access to a broad portfolio including reagents, consumables, devices, instruments, software, and services for scientific discovery, in addition to lab water instruments, consumables and services, microbiology and bio-monitoring products, test assays, analytical reagents, and flow cytometry kits and instruments.

In February 2023, Merck launched M-TRACE® All-in-One Computer solution. M-TRACE® offers a cleanroom-friendly way to create test records used during sterility testing and other quality control workflows. Compliant with the quality control sterility testing environment, it enables full data traceability.

In March 2023, Merck opened the Lateral Flow Assay Development Lab in St. Louis, Missouri, USA. This is an innovative space where customers collaborate with Merck's technical experts to troubleshoot point-of-care tests.

In June 2023, Merck launched mPAGE® Lux electrophoresis gel. The gel decreases the time-consuming and key step of gel casting for western blotting, a method for protein separation.

In November 2023, Merck launched ChemisTwin™, an online digital reference materials platform. The platform can perform automatic analysis of samples' purity, identification, and degradation of compounds through over 1,500 calibrated algorithm-based digital references. Reference materials ensure the quality and safety of medicines and other products (such as water, food and beverage) from the earliest stages of research and development through quality control and quality assurance testing.

In December 2023, Merck launched the AIDDISON™ drug discovery software, the first AI-powered software-as-a-service platform that bridges the gap between virtual molecule design and real-world manufacturability through Synthia™ retrosynthesis software Application Programming Interface (API) integration. It combines generative AI, machine learning, and computer-aided drug design to speed up drug screening. Trained on more than two decades of experimentally validated datasets from pharmaceutical R&D, AIDDISON™ identifies compounds from more than 60 billion possibilities that have key properties of a successful drug, such as non-toxicity, solubility, and stability in the body. The platform then proposes ways to best synthesize these drugs.

Also in December 2023, Merck launched the Milli-Q® SQ 2series systems. With eight patents for its innovative features, this ultrapure lab water equipment offers greater flexibility, autonomy and sustainability, with less energy and water consumption. Researchers can easily dispense ultrapure water away from the tap water source, without any plumbing in between.

During 2023, Merck launched twenty pancreatic and twenty colorectal organoids, along with 3dGRO™Wnt3a conditioned media supplement used for organoids. These complex, multicellular 3-dimensional in vitro cell models used in biomedical research that closely mimic in vivo organs are a powerful way to study drug responses, disease progression, and more. An important tool in cancer research, organoids provide a more relevant, phenotypic model of cancer than traditional 2D cell culture models.

In the first half of 2024, Merck introduced its M-Trace® software and the associated mobile app for microbiological quality control, a comprehensive data tracking solution to digitalize sterility testing. The software helps ensure overall process safety by automatically documenting data for every step of the testing process. This reduces the risk of deviations, false positive results and human error.

In June 2024, Merck announced a collaboration with the Michael J. Fox Foundation, New York City, New York, USA, aimed at advancing Parkinson's research to slow the progression of the disease, leveraging Merck's SMCxPRO® immunoassay technology to help detect low levels of a biomarker associated with cell dysfunction in patients. As of the date of this Prospectus, the service is available to the scientific community, making it possible to track the response of different therapeutic options to disease progression.

Research & Development

Across the three business lines Process Solutions, Life Science Services, and Science and Lab Solutions in 2023, the Life Science Business Sector spent EUR 396 million in research and development ("**R&D**"). Its R&D personnel comprises engineers, chemists, and biologists across five global hubs.

Merck continued to focus on impacting life and health with science, in collaboration with the global scientific community. With more than 8,500 products launched in 2023 and nearly 4,500 products in the first half of 2024, Merck's Life Science Business Sector responds to growth trends, including those launched through Merck's "faucet program" for antibodies, reference materials and nanomaterials.

Healthcare

Overview

The Healthcare Business Sector 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. Healthcare operates across four therapeutic areas: Neurology and Immunology, Oncology, Fertility, and Cardiovascular, Metabolism & Endocrinology. The streamlined R&D pipeline positions the Group with a clear focus on strengthening its leadership position in oncology, neurology, and immunology.

In June 2023, Merck inaugurated its Biotech Development Center located at its campus in Corsier-sur-Vevey, Switzerland. With the new Biotech Development Center, which represents an investment of over EUR 250 million, Merck is aiming to support its ambition to bring more medicines to more patients faster.

In 2023, Healthcare generated 38% of Group sales and 41% of EBITDA pre (excluding Corporate and Other). The regions Europe and North America (based on customer location) generated 53% of Healthcare's net sales in 2023. In recent years, Merck has steadily expanded its presence in growth markets. In 2023, Asia-Pacific and Latin America (based on customer location) accounted for 40% of Healthcare's net sales.

Therapeutic areas

Neurology and Immunology: Merck develops innovative treatments to help patients with neurodegenerative diseases such as multiple sclerosis ("**MS**"). As of the date of this Prospectus, Merck has received regulatory approvals for Mavenclad® (cladribine tablets) in 95 countries, including those of the European Union, the United States, Australia, Canada, and Switzerland. Together with the well-established interferon beta therapy Rebif® (interferon beta-1a), Mavenclad® is a complementary and recently approved treatment option in Merck's MS product portfolio and represents the only short-course oral therapy for the treatment of adults with relapsing form of MS. With respect to evobrutinib as a potential treatment for relapsing multiple sclerosis, Merck in December 2023 announced that the results of its two pivotal Phase III EVOLUTION clinical trials (evolutionRMS 1 and evolutionRMS 2) investigating the efficacy and safety of evobrutinib did not meet the primary endpoint of reducing the annualized relapse rates in people with RMS compared to oral teriflunomide.

In addition to Merck's commitment to MS, the Group also has a pipeline focusing on discovering new therapies that have potential in other neuroinflammatory and immune-mediated diseases, including systemic lupus erythematosus ("**SLE**") and cutaneous lupus erythematosus ("**CLE**") and generalized myasthenia gravis ("**gMG**").

Enpatoran, a highly specific potential first-in-class immune modulator blocking the activation of Toll-like receptor (TLR 7 and TLR8), is being developed as a potential new oral therapy for SLE and CLE. It aims to overcome limitations of available lupus therapies by providing selective inhibition of lupus-relevant disease drivers, which may increase efficacy while preserving immunity against infections. Merck anticipates data from Phase II clinical trials for enpatoran in cutaneous and systemic lupus in early 2025.

Merck is also exploring the potential of oral cladribine beyond MS, developing it for the treatment of gMG, which affects an estimated 700,000 people and where a high unmet need remains, particularly regarding oral treatment options. Cladribine targets subsets of B cells and T cells important in the pathology of gMG. In June 2023, the U.S. Food and

Drug Administration ("FDA") granted Orphan Drug Designation for cladribine for the treatment of myasthenia gravis. The global Phase III clinical trial program started in June 2024.

Oncology is focused on developing novel cancer-specific therapies that provide beneficial therapeutic outcomes and create new options for cancer patients.

Erbix® (cetuximab) remains the best-selling cancer drug in terms of revenue in the portfolio of the Healthcare Business Sector and the flagship product in oncology, generating around EUR 1 billion in sales in 2023 and in 2022. The product is a standard of care for patients with epidermal growth factor receptor (EGFR)-expressing, RAS wildtype metastatic colorectal cancer (mCRC), as well as both recurrent and/or metastatic and locally advanced squamous cell carcinoma of the head and neck ("SCCHN"). Merck continues to advance its broad lifecycle management strategy as well, with nearly 200 active clinical trials involving Erbix® including more than 15 Phase III studies.

Merck – until June 30, 2023 in collaboration with Pfizer Inc. – has made progress in changing the standard of care globally for patients with locally advanced or metastatic urothelial carcinoma ("UC") as Merck continues to obtain additional regulatory approvals and reimbursement decisions with the anti-PD-L1 antibody Bavencio® (avelumab). As of the date of this Prospectus, Bavencio® is approved as a first-line maintenance treatment for advanced UC in more than 70 countries. It has become a standard of care in the treatment of this disease, based on the results of the JAVELIN Bladder 100 trial, the only Phase III study of an immunotherapy to demonstrate a significant overall survival benefit in the first-line maintenance setting. Bavencio® clinical data confirm the acceptable long-term benefit-risk profile as well as the net benefit estimate of Bavencio® first-line maintenance, further supporting its use as a standard of care for advanced UC. In combination with Inlyta, Bavencio® is also approved in the first-line treatment of advanced renal cell carcinoma in combination with axitinib, and it is considered a standard of care as monotherapy in metastatic Merkel cell carcinoma ("MCC"), a rare form of skin cancer. In September 2023, Merck received FDA approval of a supplemental Biologics Licensing Application for Bavencio®, converting the MCC indication from accelerated approval into full approval approximately four years earlier than anticipated. As a result, Bavencio® is the first MCC treatment to receive full approval in the U.S. market.

In 2023, Merck also continued to expand the availability of Tepmetko® (tepotinib), Merck's oral MET inhibitor designed to inhibit the oncogenic MET receptor signaling caused by MET (gene) alterations. Approved by the European Commission as monotherapy for the treatment of adult patients with advanced non-small cell lung cancer ("NSCLC") harboring alterations leading to mesenchymal-epithelial transition factor gene exon (METex 14) skipping, Tepmetko® is the first and only oral MET inhibitor to be approved in the European Economic Area for treating adult patients with advanced NSCLC harboring alterations leading to METex14 skipping, who require systemic therapy following prior treatment. Tepmetko® is now available in approximately 40 markets globally, also including the U.S. since February 2024.

In 2023, Merck also continued to advance its efforts in novel medicines. For the first ADC developed in Merck's labs, the anti-CEACAM5 ADC M9140, it completed the dose-finding portion of Merck's Phase I study. In addition, in the first half of 2024, Merck presented results from a Phase Ia study of the anti-CEACAM5 ADC M9140 in advanced CRC in an oral presentation at the 2024 annual meeting of the American Society of Clinical Oncology. This is the first ADC developed in Merck's labs to enter clinical development. Merck has progressed this asset to Phase Ib in CRC. Beyond its ADC platform, the Group is also evaluating small-molecule DNA damage response ("DDR") inhibitors, as this therapeutic class has the potential for better outcomes in patients with cancer. Within the DDR portfolio, Merck continues to advance the development of potent and selective inhibitor of ataxia telangiectasia and Rad3-related ("ATR"), tuvusertib (M1774). In 2023, Merck initiated the Phase Ib/IIa DDRiver NSCLC 322 study of tuvusertib (M1774), its potentially best-in-class, potent and selective inhibitor of ATR, in combination with Regeneron Pharmaceutical's PD-1 inhibitor cemiplimab in patients with non-squamous NSCLC that has progressed on prior anti-PD-(L)1 and platinum-based therapies. Dosing of the first patient in this study occurred in October 2023, and as of the date of this Prospectus, Merck is exploring tuvusertib (M1774) in four combinations across three Phase II clinical studies. In 2024, Merck also opened the DDRiver EOC 302 study combining tuvusertib (M1774) with lartisertib (M4076) or niraparib in biomarker-selected PARP-resistant ovarian cancer as well as the JAVELIN DDRiver Bladder study of tuvusertib (M1774) in combination with Bavencio® in advanced UC.

In June 2024, Merck announced the discontinuation of the randomized Phase III TrilynX study evaluating xevinapant plus chemoradiotherapy in patients with unresected locally advanced squamous cell carcinoma of the head and neck (LA SCCHN). The Phase III clinical trial XRay Vision evaluating xevinapant plus radiotherapy in patients with resected LA SCCHN was also discontinued. The termination of the program led to an impairment loss of EUR 140 million on an intangible asset, which was recorded under other operating expenses, as well as the recognition of a provision amounting to a mid double-digit million-euro figure for subsequent costs, the addition of which was disclosed in research and development costs.

Fertility is an important contributor to the Healthcare Business Sector, offering products that help couples to conceive a child. According to the latest data, more than five million babies have been born worldwide with the help of Gonal-f®, a therapeutic within Merck's Fertility portfolio. Gonal-f® contains the active ingredient follitropin alfa (r-hFSH alfa), which is a recombinant form of the natural hormone FSH and is available in a convenient and ready-to-use pre-filled injection pen. In addition to Gonal-f®, Merck offers another key product called Pergoveris®. It is a product that combines recombinant human follicle-stimulating hormone and recombinant human luteinizing hormone. This represents another treatment option for women with severe FSH and LH deficiency. Pergoveris® is also available in a ready-to-use liquid version in a pre-filled pen, eliminating the need for mixing.

Cardiovascular, Metabolism & Endocrinology is the largest business therapeutic area of the Healthcare segment in terms of sales, contributing significantly to the overall profitability of the Healthcare Business Sector 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. As of the date of this Prospectus, Concor® (beta-blocker for chronic cardiovascular diseases), Euthyrox® (treatment for hypothyroidism), Glucophage® (first-line treatment of type 2 diabetes), and Saizen® (Merck's main endocrinology product, for treatment of growth hormone deficiency) are, in Merck's own assessment, high-value brands and leaders in many key markets around the world. As of the date of this Prospectus, Glucophage® is approved in 81 countries for prediabetes when lifestyle intervention is not enough to control the condition. It is also approved in more than 100 countries for type 2 diabetes.

Research and Development

In 2023, the Healthcare Business Sector spent EUR 1,657 million in R&D. In addition to in-house research, the Healthcare Business Sector 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 therapeutic areas 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 Healthcare, 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, Healthcare R&D aims to accelerate its pipeline.

The main research areas of the Healthcare Business Sector include oncology and immunology including multiple sclerosis.

In September 2023, Merck celebrated the topping-out for its Launch and Technology Center in Darmstadt, Germany. This investment of approximately EUR 160 million is intended to ensure that Merck's next generations of innovative small-molecule medicines (including high-potency compounds) are available for clinical trials, global launches and commercial supply on time and in the required quality and quantity, with accelerated timelines compared with the past. The Launch and Technology Center is anticipated to be fully operational by the end of 2025 following validation by regulatory authorities. It forms part of an investment package which also includes the Translational Science Center, a research centre expected to be fully operational by the end of 2025 at Merck's Darmstadt, Germany campus.

In October 2023, Merck announced a strategic collaboration with Jiangsu Hengrui Pharmaceuticals Co. Ltd. ("**Hengrui**") The partnership includes an exclusive global license (excluding mainland China) to develop, manufacture and commercialize Hengrui's next-generation potent and selective poly ADP-ribose polymerase 1 trapping inhibitor HRS-1167. The agreement also includes an option to an exclusive global license (excluding mainland China) to develop, manufacture and commercialize Hengrui's Claudin-18.2 antibody-drug conjugate SHR-A1904.

In December 2023, Merck announced a license agreement with Abbisko Therapeutics Co. Ltd., China, for pimicotinib (ABSK021), which is currently being evaluated in a Phase III study for the treatment of tenosynovial giant cell tumor ("**TGCT**"). TGCT is a benign tumor of the joints that can cause swelling, pain, stiffness, and limited mobility of the affected joints. The agreement grants Merck a license to commercialize pimicotinib in mainland China, Hong Kong, Macau and Taiwan, with an option for the rest of the world.

In January 2024, Merck announced the conclusion of an in-licensing agreement with Inspirna, Inc., USA, for ompenaclid (RGX-202), a first-in-class oral inhibitor of the creatine transport channel SLC6A8, and SLC6A8-targeting follow-on compounds. Ompenaclid is currently being evaluated in a Phase II study for the second-line treatment of RAS-mutated (RASmut) advanced or metastatic colorectal cancer (mCRC).

Electronics

Overview

The Electronics Business Sector comprises Merck's entire specialty chemicals business. The portfolio includes high-tech chemicals and services for applications in fields such as semiconductors, displays, consumer electronics, coatings, and cosmetics.

On September 20, 2021 Merck announced its plans to invest significantly more than EUR 3 billion in innovation and capacities in the course of the next five years. These investments are an essential part of the Level Up growth program to invest in lockstep with the customers in order to support their growth and new fabs with a reliable supply of innovative materials and systems. Within the scope of the program, Merck is addressing four mutually reinforcing key priorities: Scale, Technology, Portfolio, and Capabilities. The Group is investing in digital business models and data analysis competencies, as well as expanding its production and innovation capacities and footprints in close proximity to its customers.

To benefit from the strong electronics industry growth, Merck is continuously expanding its capacities and capabilities. Merck will continue to invest in its geographic proximity to its customers while boosting R&D and innovation. Electronics also seeks to exploit attractive external growth opportunities through acquisitions.

Electronics consists of three business lines: Semiconductor Solutions, Display Solutions and Surface Solutions. In 2023, the Electronics Business Sector's share of Group sales amounted to 18% and its share of EBITDA pre (excluding Corporate and Other) was 15%. The EBITDA pre-margin amounted to 25% of net sales.

Business Units

Semiconductor Solutions is the largest business unit in terms of sales within Electronics. It comprises Merck's product and service offering for the semiconductor industry. The Semiconductor Materials unit supplies products for every major step in the wafer processing, including doping, patterning, deposition, planarization, etching, and cleaning. It also supplies delivery equipment for semiconductor manufacturing. Specialty cleaners, photoresists, and chemical mechanical planarization slurries for semiconductor packaging round off the portfolio. The Delivery Systems & Services ("**DS&S**") business develops and installs safe and reliable delivery equipment to ensure the safe and responsible handling of speciality chemicals and gases for semiconductor manufacturing. In the area of deposition materials, the Group is continuously looking for both new organosilanes and organometallic materials as well as liquid phase silicon formulations for processes with low resistance and various dielectric characteristics for faster and better processors, as well as higher data storage density. At many customer sites, semiconductor technologies and equipment are operated and maintained by Merck's MEGASYS® Total Gas and Chemical Services team. As part of a global operations infrastructure, Merck is supplier of semiconductor fab and sub-fab services to the worldwide electronics industry.

In April 2023, Merck announced to expand manufacturing capacities at its site in Hometown, Pennsylvania, USA, thus increasing domestic production capacity for electronics components. The roughly EUR 300 million investment in the Hometown site is intended to further develop Merck's largest integrated Specialty Gases facility. Furthermore, in June 2023, Merck commissioned a new production facility for DS&S in Chandler, Arizona, USA.

Display Solutions comprises the businesses with liquid crystals ("LC"), display patterning materials, organic light-emitting diodes ("OLED"), photoresists, reactive mesogens and liquid crystal glazing. While lockdowns and working from home pulled forward demand for TVs and IT devices during the Covid-19 pandemic, this trend has meanwhile reversed. The industry saw a significant reduction in demand during 2023, resulting in a decline in customer factory utilization. However, in 2023, Merck has maintained its position as manufacturer of innovative LC materials with its XtraBright™ products, winning new projects for large-area displays as well as high-resolution mobile devices.

Surface Solutions aims at helping customers with the Group's materials and solutions to create functional and decorative surfaces of all kinds. Its materials enable more beautiful, more resistant or more effective product designs. Merck focuses on markets for automotive coatings, cosmetics, and, to a smaller extent, industrial applications. Merck is serving these markets with functional and decorative solutions. With a broad portfolio of active ingredients, Merck enables cosmetics manufacturers to enrich their skin care products with moisturizing, protecting, and anti-aging effects. Moreover, Merck's functional solutions serve many innovative applications, from dirt-repellent and easy-care surfaces to laser markings of plastic parts and cables.

In July 2024, Merck announced that it had signed an agreement to divest the Surface Solutions business unit of the Electronics Business Sector to Global New Material International Holdings Ltd., Cayman Islands, for an agreed purchase price of EUR 665 million. The agreement comprises the majority of the global production, sales and development activities of the Surface Solutions business. The transaction is expected to close in the course of 2025 and is subject to regulatory approvals and the satisfaction of certain other customary closing conditions. The sales of the Surface Solutions business unit and the assets to be disposed of, including goodwill of the Electronics Business Sector to be disposed of on a pro-rata basis, each comprised less than 2.5% of the corresponding value of the Merck Group in the first half of 2024 as of the date of this Prospectus.

Research & Development

In 2023, R&D expenditures in the Electronics Business Sector amounted to EUR 297 million. R&D activities of Electronics are primarily located in Germany, Japan, the United States, South Korea, Taiwan, China, France, and Israel. The R&D strategy follows Merck's overall Electronics technology strategy, which aims to enhance and expand Merck's capabilities, drive organic growth and enable new technology platforms. Merck's Chief Technology Office ("CTO") identifies trends and vetting technologies that are beyond the time horizon or scope of Merck's business units. As a dedicated technology organization, the CTO is managing research partnerships, shaping Merck's technology roadmaps and managing its long-term R&D portfolio.

Other Material Investments in Electronics

In July 2024, Merck announced that it intends to acquire Unity SC SAS, France, a provider of metrology and inspection instrumentation for the semiconductor industry. The transaction amount includes a payment of EUR 155 million as well as further milestone-based payments. The highly precise metrology measurement devices of Unity-SC make it possible to further optimize the quality, yield, and manufacturing costs of chips used in applications related to artificial intelligence (AI), high-performance computing (HPC), and high-bandwidth memory (HBM). The combination of Unity-SC's measurement technologies with Merck's offering in the field of semiconductor materials will contribute to the development of computer chips required for the next steps in innovating AI and other applications. The intended acquisition requires a French works council's consultation and would remain subject to regulatory approval and other closing conditions. Subject to meeting the relevant requirements, it is expected to be completed by the end of 2024.

Sustainability

Merck Group considers sustainability an integral part of its business model with its ambition being to leverage science and technology to achieve progress for mankind. Thus, the Group has integrated sustainability into its enterprise strategy as an essential component and has set three strategic sustainability goals:

- In 2030, the Group aims to achieve human progress for more than one billion people through sustainable science and technology.
- By 2030, the Group aims to fully integrate sustainability into its value chains.
- By 2040, the Group aims to be climate neutral and reduce its resource consumption.

In order to reach its sustainability goals, the Group is concentrating on seven focus areas in which the Group is pursuing numerous initiatives and projects, measuring its progress. These efforts ensure that sustainability will become a key indicator of the Group's success across all its business sectors. The seven focus areas are as follows:

- Sustainable innovations and technologies for the Group's customers.
- Impact of the Group's products on health and well-being.
- Sustainability in the Group's ways of working and decision-making.
- The Group's people and communities; providing a diverse and inclusive environment.
- Sustainable and transparent supply chain.
- Climate change and emissions.
- Water and resource intensity.

The Group believes that, as a sustainable enterprise, it creates long-term value through its core business while seeking to balance environmental, social and governance aspects. Through its business activities, the Group wants to be economically successful and create value for society.

Material Investments

Merck KGaA announced in March 2024 the investment of more than EUR 300 million into a new Bioprocessing Production Center in Daejeon, South Korea. The facility will support biotechnology and pharmaceutical companies in process development, clinical research and commercial manufacturing of biologics.

Merck KGaA announced in May 2024 that it signed a definitive agreement to acquire life science company Mirus Bio for USD 600 million (around EUR 550 million) from Gamma Biosciences US Holdco LP, USA. Based in Madison, Wisconsin, USA, Mirus Bio is a specialist in the development and commercialization of transfection reagents, which are used to help introduce genetic material into cells. These reagents play a key role in the production of viral vectors for cell and gene therapies. On August 1, 2024, Merck announced the closing of the transaction for the acquisition of Mirus Bio, which was subject to regulatory clearances and other customary closing conditions.

In July 2024, Merck announced that it intends to acquire Unity SC SAS, France, a provider of metrology and inspection instrumentation for the semiconductor industry. The transaction amount includes a payment of EUR 155 million as well as further milestone-based payments. The highly precise metrology measurement devices of Unity-SC make it possible to further optimize the quality, yield, and manufacturing costs of chips used in applications related to artificial intelligence (AI), high-performance computing (HPC), and high-bandwidth memory (HBM). The combination of Unity-SC's measurement technologies with Merck's offering in the field of semiconductor materials will contribute to the development of computer chips required for the next steps in innovating AI and other applications. The intended acquisition requires a French works council's consultation and would remain subject to regulatory approval and other closing conditions. Subject to meeting the relevant requirements, it is expected to be completed by the end of 2024.

Risk Management

Risk management within the Group is described for all risk owners in its internal standard for risk management. It defines the principles of risk management, outlines roles and responsibilities, and helps 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 in a timely manner. The internal auditing department reviews the risk management system on a regular basis. Furthermore, it is subject to external audit in accordance with Section 317 (4) of the HGB as part of the year-end audit of Merck KGaA.

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, Japan and a number of other countries. 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 Healthcare Business Sector, the top-selling and thus most important products in 2023 were Erbitux®, Mavenclad®, Glucophage®, Gonal-f®, Bavencio®, Rebif®, Concor®, 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 850 patent families. Life Science holds patents across all of its businesses, including bioprocessing, lab water solutions, biomonitoring, lipids and gene editing technologies.

The protection of the products of the Group's Electronics Business Sector by currently more than 2,900 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 devices with enhanced features. The Group holds more than 5,100 patents and patent applications worldwide in the field of materials for display applications, such as for example OLEDs and high-tech liquid crystal mixtures used in LCD televisions. Furthermore, the Group holds more than 2,800 patents and patent applications relating to materials for the Semiconductor Industry, mostly protecting process chemicals or their application for the 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.

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 Healthcare Business Sector and depending on the structure and availability of licensees and licensors affects the business differently. Also, in the Life Science Business Sector licensing-in is a valuable tool to establish a broad product portfolio for customers and access to key technologies such as our CHOZN® platform or CRISPR for gene editing. 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 Electronics Business Sector.

The most important licensed products, excluding in-licensed and out-licensed development projects, are Erbitux® (in-license), Avonex® / Plegridy® (in- and out-license), Viibryd® (out-license) and Mavenclad® (in-license), with different licensors (in-license) or licensee (out-license) as well as varying the licensed territory and the area of application.

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.

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 Electronics 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. Merck is faced with challenges by generic companies through Inter Partes Review actions ("IPRs") and Abbreviated New Drug Application ("ANDA") filings in the US for its product Mavenclad®. Merck is defending the IPRs and has filed ANDA complaints against the generic competitors.

Antitrust and other government proceedings

In connection with the generics business that was divested in 2007, Merck was accused of breaching EU antitrust law through agreements entered into by its former subsidiary Generics (UK) Ltd., United Kingdom, relating to the antidepressant Citalopram patented by Lundbeck A/S, Denmark. The European Commission imposed a fine in June 2013. Appeals against the decision were unsuccessful. Following the payment of the fine of around EUR 18 million, British health authorities brought legal claims for damages against Merck and other companies in a mid-triple-digit million-euro amount in fiscal year 2023 due to alleged infringements of competition law. In addition, there were further claimants from various other jurisdictions who have not yet quantified their claims. In response to the latest developments in the proceedings, the provision was adjusted as of December 31, 2023, and is now recognized in a high-single-digit million-euro amount. A cash outflow within the next 12 months is considered possible.

Trademark rights / breach of agreement

Merck is involved in various legal disputes with Merck & Co. Inc., Rahway, New Jersey (USA) (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

Syndicated Loan Facility

The Group has a EUR 2.5 billion syndicated loan facility with Merck Financial Services GmbH ("**Merck FS**") and Merck KGaA as borrowers and Merck KGaA as guarantor. It is in place until 2028 to cover any unexpected cash needs. As of the date of this Prospectus, the credit facility is undrawn.

Notes issued under the Debt Issuance Programme of the Issuer

In the fiscal years 2019, 2020 and 2022 Merck FS issued notes under the EUR 30 billion Debt Issuance Program of the Group. These notes are guaranteed by Merck KGaA and are listed on the Luxembourg Stock Exchange.

The following table provides a summary of the notes issued under the Debt Issuance Program currently outstanding:

Issuer	Principal amount in EUR million	Maturity
Merck FS	750	July 16, 2025
Merck FS	500	June 15, 2026
Merck FS	600	July 5, 2027
Merck FS	750	July 16, 2028
Merck FS	500	June 15, 2030
Merck FS	800	July 5, 2031

All such notes issued by Merck FS are guaranteed by Merck KGaA.

USD Bonds

In 2015, EMD Finance LLC, a wholly-owned subsidiary of the Issuer, issued a total of USD 4,000 million (USD 2,400 million of which have already been repaid) in fixed and floating rate notes with varying maturities each with an unconditional and irrevocable guarantee from Merck KGaA. In the first half of 2022, a tranche with a nominal volume of USD 1 billion was prepaid. Currently, there are notes with a principal amount of USD 1,600 million outstanding that mature on March 19, 2025.

Hybrid Bonds

In December 2014, Merck KGaA issued subordinated hybrid bonds in an aggregated principal amount of EUR 1,000 million with a first call date in 2021 and a final maturity in 2074 and EUR 500 million with a first call date in 2024 and a final maturity in 2074. The subordinated hybrid bond with a first call date in 2021 was partially repurchased and redeemed in September 2020 and the remainder was fully repaid in June 2021.

In 2019, Merck KGaA 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. The subordinated hybrid bond with a first call date in 2029 was partially repurchased and redeemed in an amount of EUR 249.4 million in September 2022 and in an amount of EUR 116.7 million in November 2023. Following the completion of these two offers with respect to this bond, an amount of EUR 633.9 million remains outstanding.

In September 2020, Merck KGaA issued subordinated hybrid bonds with an aggregated principal amount of EUR 1,000 million with a first call date in 2026 and a final maturity in 2080. Following a repurchase and redemption totalling EUR 158.3 million in November 2023, an amount of EUR 841.7 million remains outstanding.

Commercial Paper Program

In order to meet short-term capital requirements, the Group has established a commercial paper program under the Short-term European Paper (STEP) label. The program has a volume of up to EUR 2.5 billion (or its equivalent in other currencies), with Merck FS as issuer and Merck KGaA as issuer and guarantor. As of December 31, 2023, the program was unutilized.

Material Bilateral Loan Agreements

Merck KGaA respectively, Merck FS, have agreed on bilateral loan agreements with several banks in a total amount of EUR 375 million, of which all agreements were committed. As of December 31, 2023, no amount has been drawn under these facilities.

Other Material Agreements

Commercialization Agreement with Pfizer (terminated with effect from June 30, 2023)

With effect from June 30, 2023, the alliance agreement between Merck and Pfizer Inc., USA, was terminated. The alliance agreement had been entered into in November 2014 and had provided for the co-development and co-commercialization of the anti-PD-L1 antibody Bavencio® (avelumab), a drug approved for the treatment of multiple cancer indications. In accordance with the termination agreement, Merck, with effect from June 30, 2023, owns the exclusive worldwide rights to develop, manufacture and commercialize Bavencio®. Pfizer, by contrast, receives a 15% royalty on defined net sales of Bavencio®. While Merck and Pfizer continue to operationalize their respective ongoing clinical trials for Bavencio®, Merck controls all future research and development activities. Likewise, product manufacturing and supply chain operation remain solely with Merck. See also "*Principal Industries — Healthcare*" and "*Intellectual Property Rights — Licenses*".

Commercialization Agreement with Debiopharm

On March 1, 2021, Merck announced its entry into an in-licensing agreement with Debiopharm International SA, Switzerland (Debiopharm), for the exclusive rights for the development and global commercialization of the drug candidate xevinapant (Debio 1143), and for the development of preclinical follow-on compounds. Merck made upfront payments of EUR 188 million in conjunction with the agreement. Moreover, Debiopharm received a right to future milestone payments of up to EUR 710 million in total, dependent on the achievement of certain development and sales milestones, plus royalties on future net sales. The transaction became effective in April 2021. In June 2024, Merck decided to discontinue the xevinapant development program due to the TrilynX study (Phase III) not meeting the clinical endpoints. In June 2024, Merck announced the discontinuation of the randomized Phase III TrilynX study evaluating xevinapant plus chemoradiotherapy in patients with unresected locally advanced squamous cell carcinoma of the head and neck (LA SCCHN). The Phase III clinical trial XRay Vision evaluating xevinapant plus radiotherapy in patients with resected LA SCCHN was also discontinued.

In-licensing Agreement with Jiangsu Hengrui Pharmaceuticals Co. Ltd.

On October 30, 2023, Merck announced the conclusion of an in-licensing agreement with Hengrui, including an exclusive worldwide license (excluding mainland China) to develop, manufacture and commercialize the PARP1 inhibitor HRS-1167 and a corresponding option for SHR-A1904, an antibody-drug conjugate. In addition, Merck has the option to co-promote both assets in China. Merck agreed to make an upfront cash payment of EUR 160 million for acquired rights and future development activities to be performed by the seller. Additional milestone payments will be due on the achievement of certain development, approval, and commercialization milestones. The agreement also includes tiered royalties on potential net sales. The acquisition of the rights resulted in the recognition of an intangible asset not yet available for use in the amount of EUR 147 million.

In-licensing Agreement with Abbisko Therapeutics Co. Ltd.

On December 4, 2023, Merck announced the conclusion of an in-licensing agreement with Abbisko Therapeutics Co. Ltd., China ("**Abbisko**"), including an exclusive license to commercialize pimicotinib in China, Hong Kong, Macau, and Taiwan and an exclusive commercialization option in the rest of the world. Pimicotinib is an orally administered, highly selective and potent small-molecule antagonist of colony stimulating factor-1 receptor (CSF-1R). Merck agreed to make an upfront cash payment of USD 70 million (EUR 64 million) for acquired rights and future development activities to be performed by the seller. An option fee will also be payable to Abbisko if the option is exercised. Abbisko will receive additional payments for the achievement of certain regulatory and commercial milestones as well as tiered royalties on net sales by Merck. The acquisition of the rights resulted in the recognition of an intangible asset not yet available for use in the amount of EUR 45 million. Pimicotinib is currently in a global Phase III study in TGCT.

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*
Belén Garijo	Chairperson	Chief Executive Officer Responsibility for Group functions: Group Legal & Compliance Group Internal Auditing Group Corporate Sustainability, Quality & Trade Compliance Group Communications & Stakeholder Engagement Group Human Resources Group Strategy, M&A and Venturing Group Science & Technology Office	(b) Banco Bilbao Vizcaya Argentaria S. A., Bilbao, Spain L'Oréal S.A., Clichy, France
Kai Beckmann	Member	CEO Electronics Responsibility for Business: Electronics Responsibility for Group functions: Patents & Scientific Services Site Management Inhouse Consulting	(a) Bundesdruckerei GmbH, Berlin, Germany Bundesdruckerei Gruppe GmbH, Berlin, Germany
Peter Guenter	Member	CEO Healthcare Responsibility for Businesses: Healthcare	(b) Galapagos N.V., Mecheln, Belgium Zentiva Group a.s., Prag, Czech Republic
Matthias Heinzl	Member	CEO Life Science Responsibility for Business: Life Science	no positions on external boards
Helene von Roeder	Member	Chief Financial Officer Responsibility for Group functions: Group Accounting Group Controlling & Risk Management Divisional Controlling Group Tax Group Treasury 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.

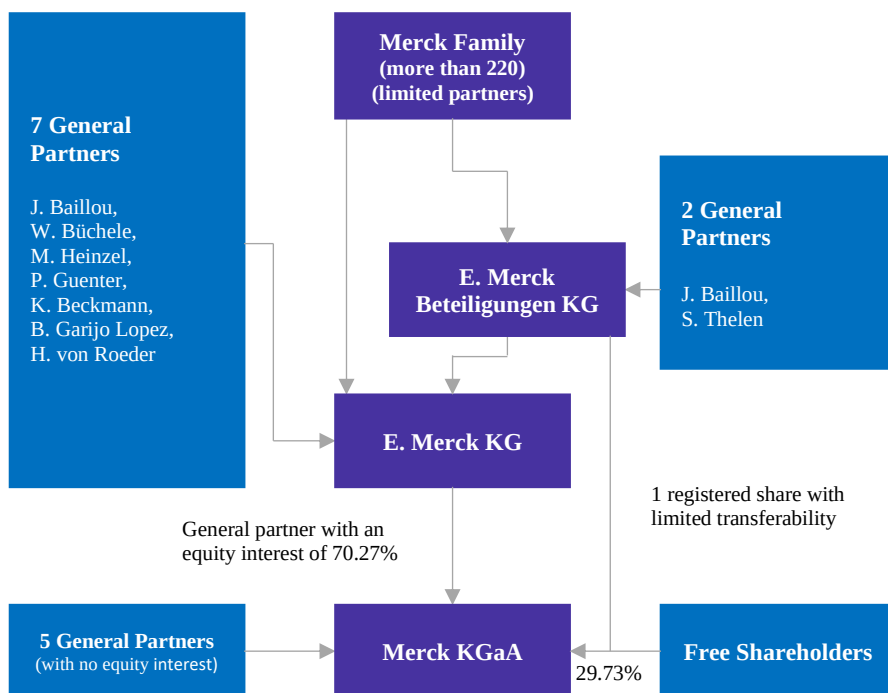
E. Merck (General Partner holding an Equity Interest)

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 Merck KGaA.

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 Merck KGaA. 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 as of August 23, 2024:



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*
Michael Kleinemeier	Chairperson	2019	Managing Director of e-mobiligence GmbH, Heidelberg	(a) Merck Life Science KGaA, Darmstadt, Germany (b) E. Merck KG, Darmstadt, Germany SRH Holding (SdbR), Heidelberg, Germany
Sascha Held ⁽¹⁾	Vice Chairperson	2019	Application Consultant (full-time member and Chairman of the Merck Joint Works Council)	No positions on external boards
Birgit Biermann ⁽¹⁾	Member	2022	Member and Vice Chair of the IGBCE Executive Board	(a) Adidas AG, Herzogenaurach, Germany
Katja Garcia Vila	Member	2024	Member of the Executive Board Group Finance and Controlling, Group IT (CFO), Continental AG	(a) Continental Automotive Technologies GmbH Continental Reifen Deutschland GmbH
Carla Kriwet	Member	2024	Supervisory Board Member and Senior Advisor	No positions on external boards
Barbara Lambert	Member	2023	Independent business consultant	(a) Deutsche Börse AG (listed), Eschborn, Germany (b) Implenia AG, Opfikon, Switzerland UBS Switzerland AG, Switzerland
Anne Lange ⁽¹⁾	Member	2019	Applicant Engineer (full-time member and vice chairwoman of the Merck Joint Works Council)	No positions on external boards

Name	Position	Year of initial election	Profession/ occupation	Other current activities outside of the Issuer or the Group*
Dietmar Oeter ⁽¹⁾	Member	2014	Vice President of Corporate Quality Assurance	No positions on external boards
Stefan Palzer	Member	2024	Executive Vice President and Chief Technology Officer at Nestlé S.A., Switzerland: Head of Innovation, Technology and R&D	No positions on external boards
Alexander Putz ⁽¹⁾	Member	2020	Chemical Laboratory Assistant (full-time member of the Merck Joint Works Council)	No positions on external boards
Christian Raabe ⁽¹⁾	Member	2019	IT Business Partner	No positions on external boards
Michael Reinhart ⁽¹⁾	Member	2024	District Manager IGBCE Darmstadt	(a) CSL Behring, Marburg, Germany
Susanne Schaffert	Member	2024	Board Director and Independent Consultant	(b) Vetter Holding GmbH & Co. KG, Haiger-Kalteiche, Germany E. Merck KG, Darmstadt, Germany Galapagos NV, Mechelen, Belgium Novo Holdings A/S, Hellerup, Denmark ARTBio, Cambridge, Massachusetts, USA Incyte Corporation, Wilmington, Delaware, USA
Sandra Schwebke ⁽¹⁾	Member	2024	Biologist (full-time member of the Merck Joint Works Council)	No positions on external boards
Daniel Thelen	Member	2019	Program Manager Infrastructure at DB InfraGO AG, Frankfurt am Main, Germany	(b) E. Merck KG, Darmstadt, Germany

Name	Position	Year of initial election	Profession/ occupation	Other current activities outside of the Issuer or the Group*
Simon Thelen	Appointed Member	2019	Head of Hand Surgery, Department of Orthopedics and Trauma Surgery, University Hospital Düsseldorf, Germany	(a) Merck Healthcare KGaA, Darmstadt, Germany Merck Life Science KGaA, Darmstadt, Germany Merck Electronics KGaA, Darsmtadt, Germany (b) E. Merck KG, Darmstadt, Germany

*) 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.

The Supervisory Board has formed a Nomination Committee and an Audit Committee. The Nomination Committee comprises shareholder representatives. Its members are yet to be appointed. The Nomination Committee is responsible for proposing to the Supervisory Board suitable candidates for its proposal to the Annual General Meeting. The Audit Committee comprises three shareholder representatives and three employee representatives. The members of the Audit Committee are Barbara Lambert (Chair), Katja Garcia Vila, Sascha Held, Michael Kleinemeier, Christian Raabe, and Michael Reinhart. There is no 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 Personnel Committee, a Finance Committee and a Research & Development Committee.

Corporate Governance

The German Corporate Governance Code (the "**German Corporate Governance Code**") is geared towards the conditions found in a German stock corporation (*Aktiengesellschaft*) and does not take into consideration the special characteristics of a corporation with general partners (*Kommanditgesellschaft auf Aktien*) such as Merck KGaA. Merck KGaA has resolved to apply the German Corporate Governance Code logically to serve the interests of its shareholders. In February 2024, Merck issued the following statement of compliance:

"Since the last Declaration of Conformity in February 2023, we have complied with all recommendations of the Government Commission of the German Corporate Governance Code in the version dated April 28, 2022, as published in the official section of the German Federal Gazette.

With regard to 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: The company will comply with the recommendations of the Code in the version dated April 28, 2022."

Recent developments

As of the date of this Prospectus, the war in Ukraine has not had any material effects on the net assets, financial position or result of operations of Merck owing to the limited business volume in Russia, Ukraine, Belarus, and the Republic of

Moldova. In the financial years ended December 31, 2023 and December 31, 2022, the total share of Group net sales generated in this region amounted to less than 1.5%. Furthermore, the conflict in the Middle East did not have a material impact on the Merck Group's net assets, financial position, and results of operations in the financial year ended December 31, 2023. In the financial years ended December 31, 2023 and December 31, 2022, the share of Group net sales generated with customers in Israel was less than 1%.

Trend information and significant changes

There has been no material adverse change in the prospects of the Issuer since December 31, 2023.

There has been no significant change in the financial performance of the Group since June 30, 2024.

There has been no significant change in the financial position of the Group since June 30, 2024.

Borrowing and Funding

There have been no material changes in the borrowing and funding structure of Merck KGaA since December 31, 2023.

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, 2023 and December 31, 2022 (together, the "**Consolidated Financial Statements**") and the unaudited consolidated half-year financial statements as of June 30, 2024 ("**Consolidated H1 2024 Interim Statements**") all of which are incorporated by reference in this Prospectus, and should be read together with them. The Consolidated Financial Statements and the Consolidated H1 2024 Interim Statements were prepared in accordance with IFRS as adopted in the European Union.

The consolidated financial statements for the fiscal year 2022 were audited by KPMG and KPMG issued an unqualified auditor's opinion. The consolidated financial statements for the fiscal year 2023 were audited by Deloitte and Deloitte issued an unqualified auditor's opinion.

The Consolidated Financial Statements and the Consolidated H1 2024 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.

The financial information marked as "audited" in the tables in this Prospectus is taken from the Consolidated Financial Statements. Financial information marked as "unaudited" in the tables in this Prospectus is not taken from the audited Consolidated Financial Statements. Rather it is taken from the Issuer's internal accounting system or is based on calculations of figures from the abovementioned sources.

	Six-month period ended June 30,		Financial year ended December 31,	
	2024	2023	2023	2022
<i>(amounts in EUR million, unless labelled otherwise)</i>	<i>(unaudited)</i>		<i>(audited, unless labelled otherwise)</i>	
Net sales	10,472	10,595	20,993	22,232
Operating result (EBIT) ^{1 *}	1,724	2,004	3,609	4,474
Margin (% of net sales) *	16.5%	18.9%	17.2% ³	20.1% ³
EBITDA ^{2 *}	2,857	2,942	5,489	6,504

	Six-month period ended June 30,		Financial year ended December 31,	
	2024	2023	2023	2022
<i>(amounts in EUR million, unless labelled otherwise)</i>	<i>(unaudited)</i>		<i>(audited, unless labelled otherwise)</i>	
Margin (% of net sales) *	27.3%	27.8%	26.1% ³	29.3% ³
EBITDA pre ⁴ *	2,963	3,140	5,879	6,849
Margin (% of net sales) *	28.3%	29.6%	28.0%	30.8%
Earnings per share (diluted and undiluted) ⁵ (in EUR)	2.99	3.45	6.49	7.65
Operating cash flow	1,896	1,475	3,784	4,259
Investing cash flow	-719	-1,091	-1,892	-2,743
Financing cash flow	-467	-456	-1,732	-1,555
Net financial debt ⁶ *	7,950	9,355	7,500	8,328

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

- 1) "EBIT" is defined as a key figure for earnings before interest and taxes on income and is calculated as profit before income tax adding back financial result and is presented as the operating result in the consolidated income statement. A reconciliation of EBIT for the segments for the fiscal years ended December 31, 2023 and 2022 can be found under note 8 to the audited consolidated financial statements for the Group as of and for the fiscal year ended December 31, 2023. A reconciliation of EBIT for the segments for the six-month periods ended 30 June, 2024 and 2023 can be found on page 47 of the unaudited consolidated half-year financial statements for the Group as of June 30, 2024. See also "Non-IFRS measures" below.
- 2) 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. See also "Non-IFRS measures" below.
- 3) Unaudited.
- 4) "EBITDA pre" is calculated as EBIT adding back depreciation, amortization, impairment losses and reversals of impairment losses and certain adjustments. The adjustments include specific income and expense of a one-time nature such as integration and restructuring expenses, acquisition-related items, and other one-time items. A reconciliation of EBIT for the segments for the fiscal years ended December 31, 2023 and 2022 can be found under note 8 to the audited consolidated financial statements for the Group as of and for the fiscal year ended December 31, 2023. A reconciliation of EBIT for the segments for the six-month periods ended 30 June, 2024 and 2023 can be found on page 47 of the unaudited consolidated half-year financial statements for the Group as of June 30, 2024. See also "Non-IFRS measures" below.
- 5) Earnings per share, calculated as specified in IAS 33 by dividing the Group profit by the weighted average number of shares.
- 6) Net financial debt is defined as financial debt comprising bonds (current), current financial debt, bonds (non-current) and non-current financial debt less cash and cash equivalents and other current financial assets (excluding current derivatives (operational)). See also "Non-IFRS measures" below.

Non-IFRS measures

Merck believes that there are certain alternative performance measures (together, the "**Non-IFRS Measures**") which are useful in evaluating Merck's operating performance and cash flows generated by Merck's business. However, the Non-IFRS Measures are not recognized as measures under IFRS and should not be considered as substitutes for figures on result before taxes, net earnings, cash flow from/used in operating activities or other income statement or cash flow data, as determined in accordance with IFRS, or as measures of profitability or liquidity. The Non-IFRS Measures do not necessarily indicate whether cash flow will be sufficient or available for Merck's cash requirements, nor whether any such measure is indicative of Merck's historical operating results. The Non-IFRS Measures are not meant to be indicative of future results. Because not all companies calculate these measures and figures in the same way, Merck's presentation of the Non-IFRS Measures is not necessarily comparable with similarly titled measures used by other companies.

EBIT

"**EBIT**" is defined as earnings before interest and taxes on income and is calculated as profit before income tax adding back financial result. Equals the operating result.

EBITDA

"**EBITDA**" is defined as 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.

EBITDA Pre

"EBITDA pre" is the main performance indicator of Merck, measuring ongoing operational profitability and is used internally and externally. To permit a better understanding of the underlying operational performance of Merck, the operating result is adjusted to exclude depreciation and amortization, impairment losses and reversals of impairment losses, as well as adjustments. These adjustments are restricted to the following categories: integration expenses, IT expenses for selected projects, restructuring expenses, gains/losses on the divestment of businesses, acquisition expenses, and other adjustments. The classification of specific income and expenses as adjustments follows clear rules and is subject to strict governance at the Group level. Within the scope of internal performance management, EBITDA pre allows for necessary changes or restructuring without penalizing the performance of the operating business.

The following table shows the reconciliation from EBITDA pre to "profit before income tax":

Reconciliation EBITDA pre to profit before income tax

	Six-month period ended June 30,		Financial year ended December 31,	
	2024	2023	2023	2022
<i>(amounts in EUR million)</i>	<i>(unaudited)</i>		<i>(audited)</i>	
EBITDA pre of the operating business ^{1 *}	3,186	3,405	6,276	7,428
Corporate and Other [*]	-223	-264	-397	-579
EBITDA pre of the Merck Group ^{1 *}	2,963	3,140	5,879	6,849
Depreciation/amortization/impairment losses/reversals of impairment losses	-1,134	-938	-1,880	-2,030
Adjustments [*]	-106	-198	-390	-345
Operating result (EBIT) ^{2 *}	1,724	2,004	3,609	4,474
Financial result	-39	-98	-125	-187
Profit before income tax	1,684	1,906	3,484	4,287

*) 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 expenses, 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.

The adjustments comprised the following:

	Six-month period ended June 30,		Financial year ended December 31,	
	2024	2023	2023	2022
<i>(amounts in EUR million)</i>	<i>(unaudited)</i>		<i>(audited)</i>	
Restructuring expenses	-79	-84	-249	-198
Integration expenses/ IT expenses	-39	-51	-118	-88
Gains / losses on the divestment of businesses	56	-17	51	38
Acquisition-related adjustments	-3	-14	-18	-29
Other adjustments	-42	-32	-56	-68
Adjustments before impairment losses / reversals of impairment losses[*]	-106	-198	-390	-345
Impairment losses ¹	-223	-48	-88	-232
Reversals of impairment losses	-	1	1	-
Adjustments (total)[*]	-328	-245	-477	-577

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

1) Without impairments of financial assets.

Net financial debt

"**Net financial debt**" is defined as financial debt comprising current financial debt (including bonds (current)) and non-current financial debt (including bonds (non-current)) less cash and cash equivalents and current financial assets (excluding current derivatives (operational) and contingent considerations, which are recognized in the context of business combinations according to IFRS 3). A reconciliation of net financial debt for the fiscal years ended December 31, 2023 and 2022 can be found under note 37 to the audited consolidated financial statements for the Group as of and for the fiscal year ended December 31, 2023. A reconciliation of net financial debt for the six-month periods ended 30 June, 2024 and 2023 can be found on page 18 of the unaudited consolidated half-year financial statements for the Group as of June 30, 2024 and on page 18 of the unaudited consolidated half-year financial statements for the Group as of June 30, 2023.

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 under the basic understanding that the Notes qualify as debt from a German tax perspective. 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 (*Kapitalertragsteuer*) if the Notes are kept or administrated in a custodial account with a German branch of a German or non-German credit institution (*Kreditinstitut*) or financial services institution (*Finanzdienstleistungsinsitut*) or a German securities institution (*Wertpapierinstitut*) (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 realized 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 1,000 (EUR 2,000 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.

Payments made to a Holder of the Notes resident in a so called "non-cooperative jurisdiction" (*nicht kooperatives Steuerhoheitsgebiet*) within the meaning of the German Act to Prevent Tax Evasion and Unfair Tax Competition (*Gesetz zur Abwehr von Steuervermeidung und unfairem Steuerwettbewerb und zur Änderung weiterer Gesetze – "StAbwG"*) should be subject to a (definitive) tax deduction by the Issuer in Germany at a tax rate of 15% (plus solidarity surcharge in an amount of 5.5% of such tax) of the gross payment. However, there should be no obligation to deduct tax in the case of bearer notes (*Inhaberschuldverschreibungen*) represented by a global note (*Globalurkunde*), and held in collective safe custody (*Girosammelverwahrung*) with a central depository or similar instruments that are tradable on certain recognized stock exchanges.

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.

Capital losses from the disposal, redemption, repayment or assignment of the Notes held as private assets should generally be tax-recognized 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 utilized 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 20,000 ("**Limitation on Loss Deduction**"). Any exceeding loss amount can be carried forward and offset against future savings income, but again subject to the EUR 20,000 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 materialized. 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 realize 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 realize 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 1,000 (EUR 2,000 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.

Partial Abolishment of Solidarity Surcharge

The solidarity surcharge has been partially abolished for certain individuals and reduced for certain other individuals, depending on certain income thresholds. The solidarity surcharge continues to apply for capital investment income and, thus, on withholding taxes levied (including the flat tax regime) as well as to corporate income tax. In case the individual income tax burden for an individual holder is lower than 25%, the holder can apply for his or her capital investment income being assessed at his or her individual tariff-based income tax rate in which case solidarity surcharge would be refunded.

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 for value added tax purposes 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 August 23, 2024 (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 August 27, 2024. 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 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. For the purposes of this provision:

- (a) 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 Kingdom

Prohibition of Sales to Retail Investors in the United Kingdom

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 United Kingdom. For the purposes of this provision:

- (a) the expression retail investor means a person who is one (or more) of the following:
 - (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of EUWA; or
 - (ii) a customer within the meaning of the provisions of the FSMA and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA.

Other regulatory restrictions

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 an invitation or inducement to engage in investment activity (within the meaning of section 21 of 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 any Notes in, from or otherwise involving the United Kingdom.

United States of America and its territories

The Notes have not been and will not be registered under the Securities Act, as amended and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in certain transactions exempt from the registration requirements of the Securities Act. Terms used in this paragraph have the meanings given to them by Regulation S under the Securities Act.

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 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 at 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, or for the account or benefit of, U.S. persons, and it 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.

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 2001 of Singapore, as modified or amended from time to time (the "SFA")) pursuant to section 274 of the SFA; or
- (ii) to an accredited investor (as defined in section 4A of the SFA) pursuant to and in accordance with the conditions specified in section 275 of the SFA.

Switzerland

Each Joint Lead Manager has acknowledged, that with regard to Switzerland this Prospectus is not intended to constitute an offer or solicitation to purchase or invest in the Notes described therein. The Notes may not be publicly offered directly or indirectly, in, into or from Switzerland within the meaning of the Swiss Financial Services Act ("**FinSA**") and no application has or will be made to admit the Notes to trading on any exchange or other trading venue (exchange or multilateral trading facility) in Switzerland. Neither this Prospectus nor any other offering or marketing material relating to the Notes constitutes a prospectus pursuant to the FinSA and neither this Prospectus nor any other offering or marketing material relating to the Notes may be publicly distributed or otherwise made publicly available in Switzerland.

Canada

The Notes may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the Notes must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Prohibition of Sales to Investors Resident in Non-Cooperative Jurisdictions

Each Joint Lead Manager has represented and agreed that the Notes may not be offered and this Prospectus may not be distributed to a person resident in a Non-Cooperative Jurisdiction, as defined below. Accordingly, each Joint Lead Manager has represented and agreed that to the best of its knowledge and belief it has not offered or sold and will not offer or sell any Notes:

- (i) to any resident of a Non-Cooperative Jurisdiction (which term as used herein means any person resident in a Non-Cooperative Jurisdiction, also including any corporation or other entity organized under the laws of or having its place of management in a Non-Cooperative Jurisdiction);
- (ii) to any person known by the relevant Joint Lead Manager to be purchasing such Notes for the benefit of any resident of a Non-Cooperative Jurisdiction; and
- (iii) to any other person known by the relevant Joint Lead Manager for the purpose of re-offering or reselling, directly or indirectly, in a Non-Cooperative Jurisdiction or to, or for the benefit of, a resident of a Non-Cooperative Jurisdiction.

"Non-Cooperative Jurisdiction" means a non-cooperative jurisdiction (*nicht kooperatives Steuerhoheitsgebiet*) as defined in the StAbwG, as set out in the German ordinance (*Verordnung*) on the implementation of § 3 StAbwG (*Steuerparadies-Abwehrverordnung*), and/or as defined in the EU list of non-cooperative jurisdictions for tax purposes of the Council of the European Union, in each case as amended from time to time. As of the date of this Prospectus, the

Non-Cooperative Jurisdictions include American Samoa, Anguilla, Antigua and Barbuda, Bahamas, Belize, Fiji, Guam, Palau, Panama, Russian Federation, Samoa, Seychelles, Trinidad and Tobago, Turks and Caicos Islands, Vanuatu and the U.S. Virgin Islands.

A subsequent resale of the Notes by any Holder to a person resident in a Non-Cooperative Jurisdiction is also not permitted.

GENERAL INFORMATION

1. Authorizations: The issue of the Notes was authorized by the Chief Financial Officer of the Issuer on August 14, 2024.

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: XS2879811987

Common Code: 287981198

German Securities Code (WKN): A383GP

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/corporate-governance/satzung/en/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.LuxSE.com) 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 4.000% *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 Notes⁶: The Notes are expected to be rated "BBB+"⁷ by Standard & Poor's and "Baa2"⁸ by Moody's.

Each of these rating agencies are established in the European Community and are registered under the CRA Regulation⁹.

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.

⁶ 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.

⁷ 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."

⁸ Moody's defines "Baa2" as follows: "Obligations rated Baa are subject to moderate credit risk. They are considered medium-grade and as such may possess 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."

⁹ The European Securities and Markets Authority publishes on its website (<https://www.esma.europa.eu/credit-rating-agencies/cra-authorisation>) 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 2023 of Merck KGaA (the "**Annual Report 2023**"), 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, 2023 and the German language independent auditor's report (*Bestätigungsvermerk des unabhängigen Abschlussprüfers*) in respect thereof; and
- ii. Annual Report 2022 of Merck KGaA (the "**Annual Report 2022**"), 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, 2022 and the German language independent auditor's report (*Bestätigungsvermerk des unabhängigen Abschlussprüfers*) in respect thereof.
- iii. Half-Yearly Financial Report 2024 of Merck KGaA (the "**Half-Yearly Financial Report 2024**"), 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, 2024.

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 2023

Consolidated Income Statement.....	page 230
Consolidated Statement of Comprehensive Income.....	page 231
Consolidated Balance Sheet	page 232
Consolidated Cash Flows Statement	page 233
Consolidated Statement of Changes in Net Equity	page 234
Notes to the Consolidated Financial Statements	pages 235 - 347
Unaudited Responsibility Statement	page 349
Auditor's Report*	pages 350 - 361

(ii) Extracted from: Merck KGaA – Annual Report 2022

Consolidated Income Statement.....	page 228
Consolidated Statement of Comprehensive Income.....	page 229
Consolidated Balance Sheet	page 230
Consolidated Cash Flow Statement.....	page 231
Consolidated Statement of Changes in Net Equity	page 232
Notes to the Consolidated Financial Statements	pages 233 - 349
Unaudited Responsibility Statement	page 350
Auditor's Report	pages 351 - 361

(iii) Extracted from: Merck KGaA – Half-Yearly Financial Report 2024

Consolidated Income Statement	page 37
Consolidated Statement of Comprehensive Income.....	page 38
Consolidated Balance Sheet	page 39
Consolidated Cash Flow Statement.....	page 40
Consolidated Statement of Changes in Net Equity	pages 41
Notes to the Consolidated Half-Year Financial Statements as of June 30, 2020	pages 42 – 58
Unaudited Responsibility Statement	page 59
Auditor's Review Report	page 60

*) English language translation of the German language auditor's report. The auditor's report was issued in accordance with section 322 of the German Commercial Code (*Handelsgesetzbuch*) in the German language on the German version of the consolidated financial statements and the combined management report. The combined management report is not incorporated by reference in this Prospectus.

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.LuxSE.com).

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 2023:
<https://dl.luxse.com/dlp/10c95367acc33d4474978d5118f20a7259>
- (ii) Merck KGaA – Annual Report 2022:
<https://dl.luxse.com/dlp/106ad5a81c632a4d39ba5ab5ffac2d1e99>
- (iii) Merck KGaA – Half-Yearly Financial Report 2024
<https://dl.luxse.com/dlp/10b0e75304055e4cbaa5eeb82cb38f618f>

Issuer

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Frankfurter Str. 250
64293 Darmstadt
Federal Republic of Germany

Principal Paying Agent

Deutsche Bank Aktiengesellschaft
Trust & Agency Services
Taunusanlage 12
60325 Frankfurt am Main
Federal Republic of Germany

Listing Agent

Deutsche Bank Luxembourg S.A.
2 Boulevard Konrad Adenauer
1115 Luxembourg
The Grand Duchy of Luxembourg

Joint Lead Managers

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One Molesworth Street
Dublin 2
D02RF29
Ireland

Deutsche Bank Aktiengesellschaft
Taunusanlage 12
60325 Frankfurt am Main
Federal Republic of Germany

BNP PARIBAS
16, boulevard des Italiens
75009 Paris
France

Goldman Sachs Bank Europe SE
Marienurm
Taunusanlage 9-10
60329 Frankfurt am Main
Federal Republic of Germany

Mizuho Securities Europe GmbH
Taunustor 1
60310 Frankfurt am Main
Federal Republic of Germany

Banco Bilbao Vizcaya Argentaria, S.A.
Ciudad BBVA, C/Sauceda, 28
Edificio Asia – 1st Floor
Madrid 28050
Spain

Skandinaviska Enskilda Banken AB (publ)

Kungsträdgårdsgatan 8
10640 Stockholm
Sweden

Auditors to the Issuer

For the financial year ended December 31, 2023

Deloitte GmbH Wirtschaftsprüfungsgesellschaft
Rosenheimer Platz 4
81669 Munich
Federal Republic of Germany

For the financial year ended December 31, 2022

KPMG AG Wirtschaftsprüfungsgesellschaft
Klingelhöferstraße 18
10785 Berlin
Federal Republic of Germany

Legal Advisers

To the Issuer

Freshfields Bruckhaus Deringer Rechtsanwälte
Steuerberater PartG mbB
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To the Joint Lead Managers

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