Consolidated Financial Statements BioNTech SE, Mainz as of December 31, 2021

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Statements of Profit or Loss

(in millions, except per share data)	Note	Years ended December 31, 2021	2020	2019
Revenues				
Research & development revenues	6	€102.7	€178.8	€84.4
Commercial revenues	6	18,874.0	303.5	24.2
Total revenues		**€18,976.7**	**€482.3**	**€108.6**
Cost of sales	7.1	(2,911.5)	(59.3)	(17.4)
Research and development expenses	7.2	(949.2)	(645.0)	(226.5)
Sales and marketing expenses	7.3	(50.4)	(14.5)	(2.7)
General and administrative expenses	7.4	(285.8)	(94.0)	(45.5)
Other operating expenses	7.5	(94.4)	(2.4)	(0.7)
Other operating income	7.6	598.4	250.5	2.7
Operating income / (loss)		**€15,283.8**	**€(82.4)**	**€(181.5)**
Finance income	7.7	67.7	1.6	4.1
Finance expenses[1]	7.8	(305.1)	(65.0)	(2.0)
Profit / (loss) before tax		**€15,046.4**	**€(145.8)**	**€(179.4)**
Income taxes	8	(4,753.9)	161.0	0.2
Profit / (loss) for the period		**€10,292.5**	**€15.2**	**€(179.2)**
Attributable to:				
Equity holders of the parent		10,292.5	15.2	(179.1)
Non-controlling interests		—	—	(0.1)
Profit / (loss) for the period		**€10,292.5**	**€15.2**	**€(179.2)**
Earnings per share[2]				
Basic profit / (loss) for the period per share		€42.18	€0.06	€(0.85)
Diluted profit / (loss) for the period per share		€39.63	€0.06	€(0.85)

[1] Finance expenses disclosed separately in prior periods have been condensed. Please refer to Note 7.8 for further details on finance expenses.

[2] Capital increase due to 1:18 share split occurred on September 18, 2019. Retroactive effect is reflected in number of shares which relate to the period before the share split.

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statements of Comprehensive Income / (Loss)

(in millions)	Note	Years ended December 31, 2021	2020	2019
Profit / (loss) for the period		**€10,292.5**	**€15.2**	**€(179.2)**
Other comprehensive income / (loss)				
Other comprehensive income / (loss) that may be reclassified to profit or loss in subsequent periods, net of tax				
Exchange differences on translation of foreign operations		8.4	(11.1)	0.1
Net other comprehensive income / (loss) that may be reclassified to profit or loss in subsequent periods		**€8.4**	**€(11.1)**	**€0.1**
Other comprehensive loss that will not be reclassified to profit or loss in subsequent periods, net of tax				
Remeasurement income / (loss) on defined benefit plans		0.3	(0.3)	—
Net other comprehensive income / (loss) that will not be reclassified to profit or loss in subsequent periods		**€0.3**	**€(0.3)**	**€—**
Other comprehensive income / (loss) for the period, net of tax		**€8.7**	**€(11.4)**	**€0.1**
Comprehensive income / (loss) for the period, net of tax		**€10,301.2**	**€3.8**	**€(179.1)**
Attributable to:				
Equity holders of the parent		10,301.2	3.8	(179.0)
Non-controlling interests		—	—	(0.1)
Comprehensive income / (loss) for the period, net of tax		**€10,301.2**	**€3.8**	**€(179.1)**

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statements of Financial Position

(in millions)		December 31, 2021	December 31, 2020
Assets	**Note**		
Non-current assets			
Intangible assets	11	€202.4	€163.5
Property, plant and equipment	10	322.5	227.0
Right-of-use assets	20	197.9	99.0
Other financial assets	12	21.3	—
Other assets	14	0.8	1.0
Deferred expenses	15	13.6	—
Deferred tax assets	8	—	161.2
Total non-current assets		**€758.5**	**€651.7**
Current assets			
Inventories	13	502.5	64.1
Trade and other receivables	12	12,381.7	165.5
Other financial assets	12	381.6	137.2
Other assets	14	64.9	61.0
Income tax assets	8	0.4	0.9
Deferred expenses	15	48.5	28.0
Cash and cash equivalents	12	1,692.7	1,210.2
Total current assets		**€15,072.3**	**€1,666.9**
Total assets		**€15,830.8**	**€2,318.6**
Equity and liabilities			
Equity			
Share capital	16	246.3	246.3
Capital reserve	16	1,674.4	1,514.5
Treasury shares	16	(3.8)	(4.8)
Retained earnings / (accumulated losses)		9,882.9	(409.6)
Other reserves	17	93.9	25.4
Total equity		**€11,893.7**	**€1,371.8**
Non-current liabilities			
Loans and borrowings	12	171.6	231.0
Other financial liabilities	12	6.1	31.5
Income tax liabilities	8	4.4	—
Provisions	18	184.9	5.5
Contract liabilities	6	9.0	71.9
Other liabilities	19	12.8	0.7
Deferred tax liabilities	8	66.7	0.2
Total non-current liabilities		**€455.5**	**€340.8**
Current liabilities			
Loans and borrowings	12	129.9	9.1
Trade payables	12	160.0	102.3
Other financial liabilities	12	1,190.4	74.1
Government grants	7.5	3.0	92.0
Refund liabilities	6	90.0	—
Income tax liabilities	8	1,568.9	—
Provisions	18	110.2	0.9
Contract liabilities	6	186.1	299.6
Other liabilities	19	43.1	28.0
Total current liabilities		**€3,481.6**	**€606.0**
Total liabilities		**€3,937.1**	**€946.8**
Total equity and liabilities		**€15,830.8**	**€2,318.6**

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statements of Changes in Stockholders' Equity

(in millions)	Note	Equity attributable to equity holders of the parent						Non-controlling interest	Total equity
		Share capital[1]	Capital reserve[1]	Treasury shares[1]	Retained earnings / (accumulated losses)	Other reserves [2]	Total		
As of January 1, 2019		**€193.3**	**€344.1**	**€—**	**€(245.7)**	**€(25.5)**	**€266.2**	**€0.8**	**€267.0**
Loss for the period		—	—	—	(179.1)	—	(179.1)	(0.1)	**€(179.2)**
Other comprehensive income		—	—	—	—	0.1	0.1	—	**€0.1**
Total comprehensive profit / (loss)		**€—**	**€—**	**€—**	**€(179.1)**	**€0.1**	**€(179.0)**	**€(0.1)**	**€(179.1)**
Issuance of share capital		8.1	41.8	—	—	—	49.9	—	**€49.9**
Capital increase Series B	16	18.0	186.4	(5.5)	—	—	198.9	—	**€198.9**
Capital increase initial public offering (referred to as IPO)	16	10.5	132.7	—	—	—	143.2	—	**€143.2**
Acquisition of non-controlling interest	16	2.4	(1.7)	—	—	—	0.7	(0.7)	**€—**
Transaction costs	16	—	(16.6)	—	—	—	(16.6)	—	**€(16.6)**
Share-based payments	17	—	—	—	—	30.2	30.2	—	**€30.2**
As of December 31, 2019		**€232.3**	**€686.7**	**€(5.5)**	**€(424.8)**	**€4.8**	**€493.5**	**€—**	**€493.5**
Profit for the period		—	—	—	15.2	—	15.2	—	**€15.2**
Other comprehensive loss		—	—	—	—	(11.4)	(11.4)	—	**€(11.4)**
Total comprehensive profit / (loss)		**—**	**—**	**—**	**15.2**	**(11.4)**	**3.8**	**—**	**€3.8**
Issuance of share capital and treasury shares	16	14.0	861.0	0.7	—	—	875.7	—	**€875.7**
Transaction costs	16	—	(33.2)	—	—	—	(33.2)	—	**€(33.2)**
Share-based payments	17	—	—	—	—	32.0	32.0	—	**€32.0**
As of December 31, 2020		**€246.3**	**€1,514.5**	**€(4.8)**	**€(409.6)**	**€25.4**	**€1,371.8**	**€—**	**€1,371.8**
Profit for the period		—	—	—	10,292.5	—	10,292.5	—	**€10,292.5**
Other comprehensive income		—	—	—	—	8.7	8.7	—	**€8.7**
Total comprehensive income		**€—**	**€—**	**€—**	**€10,292.5**	**€8.7**	**€10,301.2**	€—	**€10,301.2**
Issuance of treasury shares	16	—	162.6	1.0	—	—	163.6	—	**€163.6**
Transaction costs	16	—	(2.7)	—	—	—	(2.7)	—	**€(2.7)**
Share-based payments	17	—	—	—	—	59.8	59.8	—	**€59.8**
As of December 31, 2021		**€246.3**	**€1,674.4**	**€(3.8)**	**€9,882.9**	**€93.9**	**€11,893.7**	**€—**	**€11,893.7**

(1) Capital increase due to 1:18 share split occurred on September 18, 2019. Retroactive effect is reflected in number of shares which relate to the period before the share split.

(2) Includes foreign currency translation reserve which was presented separately in prior periods.

Consolidated Statements of Cash Flows

(in millions)	Years ended December 31, 2021	2020	2019
Operating activities			
Profit / (loss) for the period	€10,292.5	€15.2	€(179.2)
Income taxes	4,753.9	(161.0)	(0.2)
Profit / (loss) before tax	**€15,046.4**	**€(145.8)**	**€(179.4)**
Adjustments to reconcile profit / (loss) before tax to net cash flows:			
Depreciation and amortization of property, plant, equipment, intangible assets and right-of-use assets	75.2	38.7	33.9
Share-based payment expense	80.5	32.1	30.2
Net foreign exchange differences	(387.5)	41.3	0.1
Gain on disposal of property, plant and equipment	4.6	0.6	0.5
Finance income	(1.5)	(1.6)	(1.8)
Finance expense	305.2	22.3	2.0
Movements in government grants	(89.0)	92.0	—
Other non-cash income	(2.2)	1.7	—
Net loss on derivative instruments at fair value through profit or loss	57.3	—	—
Working capital adjustments:			
Decrease / (Increase) in trade and other receivables, contract assets and other assets	(11,808.1)	(247.9)	2.9
Increase in inventories	(438.4)	(49.8)	(5.8)
(Decrease) / Increase in trade payables, other financial liabilities, other liabilities, contract liabilities, refund liabilities and provisions	1,516.1	204.6	(80.6)
Interest received	1.2	1.4	1.3
Interest paid	(12.2)	(3.6)	(2.0)
Income tax received / (paid), net	(3,457.9)	0.5	0.2
Net cash flows from / (used in) operating activities	**€889.7**	**€(13.5)**	**€(198.5)**
Investing activities			
Purchase of property, plant and equipment	(127.5)	(66.0)	(38.6)
Proceeds from sale of property, plant and equipment	3.4	1.2	—
Purchase of intangibles assets and right-of-use assets	(26.5)	(19.4)	(32.5)
Acquisition of subsidiaries and businesses, net of cash acquired	(20.8)	(60.6)	(6.1)
Investment into equity instruments designated at fair value through OCI	(19.5)	—	—
Investment into cash deposit with an original term of six months	(375.2)	—	—
Net cash flows used in investing activities	**€(566.1)**	**€(144.8)**	**€(77.2)**
Financing activities			
Proceeds from issuance of share capital and treasury shares, net of costs	160.9	753.0	375.4
Proceeds from loans and borrowings	—	156.0	11.0
Repayment of loans and borrowings	(52.6)	(1.6)	—
Payments related to lease liabilities	(14.1)	(12.7)	(3.1)
Net cash flows from / (used in) financing activities	**€94.2**	**€894.7**	**€383.3**
Net increase / (decrease) in cash and cash equivalents	417.8	736.4	107.6
Change in cash and cash equivalents resulting from exchange rate differences	64.7	(45.3)	—
Cash and cash equivalents at the beginning of the period	1,210.2	519.1	411.5
Cash and cash equivalents at December 31	**€1,692.7**	**€1,210.2**	**€519.1**

The accompanying notes form an integral part of these consolidated financial statements.

1 Corporate Information

BioNTech SE is a limited company incorporated and domiciled in Germany. American Depositary Shares (ADS) representing BioNTech SE's ordinary shares have been publicly traded on Nasdaq Global Select Market since October 10, 2019. The registered office is located in Mainz, Germany (An der Goldgrube 12, 55131 Mainz). BioNTech SE is registered in the commercial register B of the Mainz Local Court under the number HRB 48720. These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as endorsed by the European Union (EU), and give a true and fair view of the financial position and results of operations of the Group in accordance with International Financial Reporting Standards (IFRS) and the results of operation of BioNTech SE and its subsidiaries, hereinafter also referred to as "BioNTech," the "Group," "we" or "us".

During the year ended December 31, 2021, the following changes to the Group structure occurred:

- In March 2021, BioNTech Turkey Tıbbi Ürünler Ve Klinik Araştirma Ticaret Anonim Şirketi, which translates into English as BioNTech Turkey Pharmaceutical Products and Clinical Trials Trading JSC, Istanbul, Turkey, was founded and is a wholly owned consolidated subsidiary of BioNTech SE.
- In June 2021, BioNTech Austria Beteiligungen GmbH, Vienna, Austria, was liquidated.
- In June 2021, the merger agreement between BioNTech RNA Pharmaceuticals GmbH, Mainz, Germany, and BioNTech SE was registered within the commercial register *(Handelsregister)* of BioNTech SE under BioNTech RNA Pharmaceuticals GmbH was effectively merged onto BioNTech SE.
- In July 2021, BioNTech (Shanghai) Pharmaceuticals Co. Ltd., Shanghai, China, was founded and is a wholly owned subsidiary of BioNTech Pharmaceuticals Asia Pacific Pte. Ltd., a wholly owned consolidated subsidiary of BioNTech SE.
- In September 2021, BioNTech Services Marburg GmbH, Marburg, Germany, was founded and is a wholly owned consolidated subsidiary of BioNTech SE. In December 2021, the entity was renamed to BioNTech Innovation and Services Marburg GmbH.
- In October 2021, BioNTech SE acquired PhagoMed Biopharma GmbH, Vienna, Austria (subsequently renamed to BioNTech R&D (Austria) GmbH).
- In October 2021, BioNTech Real Estate an der Goldgrube 12 GmbH & Co. KG, Holzkirchen, Germany, was founded and is wholly owned by its limited partner BioNTech Real Estate Holding GmbH, a wholly owned consolidated subsidiary of BioNTech SE.
- In November 2021, BioNTech Innovation GmbH i.G. (in establishment), Mainz, Germany, was founded and is a wholly owned consolidated subsidiary of BioNTech SE.

All entities listed above are included in our consolidated financial statements.

During the year ended December 31, 2020, two entities were acquired: Neon Therapeutics, Inc. (subsequently renamed BioNTech US Inc.) and Novartis Manufacturing GmbH (subsequently renamed BioNTech Manufacturing Marburg GmbH). Additionally, BioNTech UK Limited., BioNTech Pharmaceuticals Asia Pacific Pte. Ltd, BioNTech Real Estate Haus Vier GmbH & Co. KG, BioNTech Real Estate An der Goldgrube GmbH & Co. KG and BioNTech Real Estate Adam Opel Straße GmbH & Co. KG were established.

Information on the Group's structure is provided in Note 4.

Our consolidated financial statements for fiscal year 2021 were prepared by the Management Board on March 30, 2022.

2 Significant Accounting Policies

2.1 Basis of Preparation

General

The consolidated financial statements have been prepared on a going concern basis in accordance with the IFRS as issued by the International Accounting Standards Board (IASB) as endorsed by the European Union and applied on a mandatory basis, and with the supplementary requirements of German commercial law pursuant to Section 315e of the German Commercial Code (*HGB*).

We prepare and publish our consolidated financial statements in Euros and round numbers to thousands or millions of Euros, respectively. Accordingly, numerical figures shown as totals in some tables may not be exact arithmetic aggregations of the figures that preceded them and figures presented in the explanatory notes may not add up to the rounded arithmetic aggregations. Rounding applied may differ from rounding published in different units in the previous years.

Segment Information

Decisions with respect to business operations and resource allocations are made by our Management Board, as the chief operating decision maker (CODM) based on BioNTech as a whole. Accordingly, we operate and make decisions as a single operating segment, which is also our reporting segment.

2.2 Basis of Consolidation

The consolidated financial statements comprise the financial statements of BioNTech SE and its controlled investees (subsidiaries).

The Group controls an investee if, and only if, the Group has

- power over the investee (*i.e.*, existing rights that give it the current ability to direct the relevant activities of the investee);
- exposure, or rights, to variable returns from its involvement with the investee; and
- the ability to use its power over the investee to affect its returns.

Generally, there is a presumption that a majority of voting rights results in control.

Whether an investee is controlled is re-assessed if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when control is obtained over the subsidiary and ceases when control of the subsidiary is lost.

The profit / (loss) and each component of other comprehensive income / (loss) for the period are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the consolidated financial statements of subsidiaries to bring their accounting policies in line with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If control over a subsidiary is lost, the related assets (including goodwill), liabilities, non-controlling interests and other components of equity are derecognized, while any resultant gain or loss is recognized in the consolidated statements of profit or loss. Any investment retained is recognized at fair value.

2.3 Summary of Significant Accounting Policies

2.3.1 Business Combinations and Goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree.

Goodwill is initially measured at cost as the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests and any previous interest held over the net identifiable assets acquired and liabilities assumed.

After initial recognition, goodwill is tested at least annually or when there is an indication for impairment. See Note 2.3.13. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a cash-generating unit (CGU) and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

2.3.2 Current versus Non-Current Classifications

Assets and liabilities in the consolidated statements of financial position are presented based on current or non-current classification.

An asset is current when it is either: (i) expected to be realized or intended to be sold or consumed in the normal operating cycle, (ii) held primarily for the purpose of trading, (iii) expected to be realized within twelve months after the reporting period or (iv) cash or cash equivalents, unless it is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period. All other assets are classified as non-current.

A liability is current when it is either: (i) expected to be settled in the normal operating cycle, (ii) held primarily for the purpose of trading, (iii) due to be settled within twelve months after the reporting period, or (iv) there is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period. The terms of the liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification. The Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities, respectively.

2.3.3 Fair Value Measurement

Fair value is a market-based measurement. For some assets and liabilities, observable market transactions or market information is available. For other assets and liabilities, observable market transactions or market information might not be available. When a price for an identical asset or liability is not observable, another valuation technique is used. To increase consistency and comparability in fair value measurements, there are three levels of the fair value hierarchy:

- Level 1 contains the use of quoted prices in active markets for identical assets or liabilities.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability either directly or indirectly.
- Level 3 inputs are unobservable.

Within this hierarchy, estimated values are made by management based on reasonable assumptions, including other fair value methods.

For assets and liabilities that are recognized in the financial statements at fair value on a recurring basis, we determine whether transfers have occurred between levels in the fair value hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

For the purpose of fair value disclosures, classes of assets and liabilities have been determined on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy, as explained above.

2.3.4 Revenue from Contracts with Customers

Revenue Recognition

We generate revenues from collaboration and license agreements, which contain multiple elements, including licenses to use, research, develop, manufacture and commercialize candidates and products, research and development services as well as obligations to develop and manufacture preclinical and clinical material and products. We determined that those collaboration and license agreements qualify as contracts with customers. If the grant of a license is bundled together with the rendering of services, it is assessed whether these agreements are comprised of more than one performance obligation. A performance obligation is only accounted for as the grant of a license if the grant of a license is the sole or the predominant promise of the performance obligation.

If the consideration in an agreement includes a variable amount, we estimate the amount of consideration to which we will be entitled in exchange for transferring the goods to the customer. At contract inception, the variable consideration is estimated based on the most likely amount of consideration expected from the transaction and constrained until it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with respect to the variable consideration is subsequently resolved. The estimated revenue is updated at each reporting date to reflect the current facts and circumstances.

If a contract with a customer contains more than one performance obligation, the transaction price is allocated to each performance obligation based on relative standalone selling prices.

For each separate performance obligation, it is evaluated whether control is transferred either at a point in time or over time. For performance obligations that are satisfied over time, revenue is recognized based on a measure of progress, which depicts the performance in transferring control to the customer. Under the terms of our licensing arrangements, we provide the licensee with a research and development license, which represents a right to access our intellectual property as it exists throughout the license period (as our intellectual property is still subject to further research). Therefore, the promise to grant a license is accounted for as a performance obligation satisfied over time as our customer simultaneously receives and consumes the benefits from our performance.

Earnings based on the collaboration partners' gross profit, which is shared under the respective collaboration agreements are recognized based on the sales-based or usage-based royalty exemption; i.e. when, or as, the underlying sales occur, which is when the performance obligation has been satisfied. As described further in Note 3, we use certain information from our collaboration partners, some of which is based on preliminary data shared between the partners and might vary once final data is available.

Revenue arrangements that involve two or more partners who contribute to the provision of a specific good or service to a customer are assessed in terms of principal-agent considerations in order to determine the appropriate treatment for the transactions between us and the collaborator and the transactions between us and other third parties. The classification of transactions under such arrangements is determined based on the nature and contractual terms of the arrangement along with the nature of the operations of the participants. Any consideration related to activities in which we are considered the principal, which includes being in control of the good or service before such good or service is transferred to the customer, are accounted for as gross revenue. Any consideration related to activities in which we are considered the agent, are accounted for as net revenue.

Revenue from the sale of pharmaceutical and medical products (*e.g.* COVID-19 vaccine sales and other sales of peptides and retroviral vectors for clinical supply) is recognized when we transfer control of the product to the customer. Control of the product normally transfers when the customer gains physical possession and we have not retained any significant risks of ownership or future obligations with respect to the product. A receivable is recognized, as the consideration is unconditional and only the passage of time is required before payment is due. The transaction price is

quoted in the relevant price lists in force at the date of customer placing the respective order for such products. In general, payments from customers are due within 30 days after invoice. However, with respect to our collaboration with Pfizer Inc., or Pfizer, a significant time span between when revenues are recognized and the payments are received exists. The contractual settlement of the gross profit share has a temporal offset of more than one calendar quarter. As Pfizer's fiscal quarter for subsidiaries outside the United States differs from ours, it creates an additional time lag between the recognition of revenues and the payment receipt.

Contract Balances

Contract Assets

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If we transfer goods or services to a customer before the customer pays the respective consideration or before payment is due, a contract asset is recognized for the earned consideration that is conditional.

Trade Receivables

A receivable represents our right to an amount of consideration that is unconditional (*i.e.*, only the passage of time is required before payment of the consideration is due).

Contract Liabilities

A contract liability is the obligation to transfer goods or services to a customer for which we have received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before we transfer goods or services to the customer, a contract liability is recognized when the payment is made or when the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when we perform our performance obligations under the contract.

Refund Liabilities

A refund liability is a consideration which has been received but which will need to be refunded to the customer in the future as it represents an amount to which we are ultimately not entitled to under the contract. A refund liability is measured at the amount of consideration received (or receivable) for which we do not expect to be entitled (i.e., amounts not included in the transaction price). We update our estimates of refund liabilities (and the corresponding change in the transaction price) at the end of each reporting period.

2.3.5 Government Grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as other income on a systematic basis over the periods that the related costs, for which the grant is intended to compensate, are expensed. When the grant relates to an asset, it is recognized as deferred income within the consolidated statements of financial position. Other income is subsequently recognized in profit or loss over the useful live of the underlying asset subject to funding.

2.3.6 Taxes

Current Income Tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Group operates and generates taxable income.

In addition, current income taxes presented for the period include adjustments for uncertain tax payments or tax refunds for periods not yet finally assessed by tax authorities, excluding interest expenses and penalties on the underpayment of taxes. In the event that amounts included in the tax return are considered unlikely to be accepted by the tax authorities (uncertain tax positions), a provision for income taxes is recognized.

Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred Tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; or
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint arrangements, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, the carry forward of unused tax credits and unused tax losses can be utilized, except:

- when the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; or
- in respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint arrangements, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year in which the asset is realized, or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Recognition of Taxes

Current and deferred tax items are recognized similar to the underlying transaction either in profit or loss, other comprehensive income or directly in equity.

Current tax assets and current tax liabilities are offset if, and only if, we have a legally enforceable right to set off the recognized amounts and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously. Deferred tax assets and deferred tax liabilities are only offset when we have a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either (i) the same taxable entity or (ii) different taxable entities, which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Sales Tax

Expenses and assets are recognized net of sales tax, except when the sales tax incurred on a purchase of assets or services is not recoverable from the taxation authority.

The net amount of sales tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the consolidated statements of financial position.

2.3.7 Foreign Currencies

Our consolidated financial statements are presented in Euros, which is also our functional currency. For each entity, the Group determines the functional currency, and items included in the consolidated financial statements of such entities are measured using that functional currency. We use the direct method of consolidation and on disposal of a foreign operation, the gain or loss that is reclassified to the consolidated statements of profit or loss reflects the amount that arises from using this method.

Transactions and Balances

Transactions in foreign currencies are initially recorded by the Group's entities at their respective functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

In determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which the Group initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of advance consideration.

Foreign Currency Translation

Foreign currency translation effects from the translation of operating activities include foreign exchange differences arising on operating items such as trade receivables and trade payables and are either shown as other operating income or expenses on a cumulative basis. Foreign currency translation effects presented within finance income and expenses include foreign exchange differences arising on financing items such as loans and borrowings as well as foreign exchange differences arising on cash and cash equivalents and are either shown as finance income or expenses on a cumulative basis.

Foreign Currency Translation on Consolidation

Upon consolidation, the assets and liabilities of foreign operations are translated into Euros at the rate of exchange prevailing at the reporting date and the transactions recorded in their consolidated statements of profit or loss are translated at exchange rates prevailing at the dates of the transactions.

The exchange differences arising on translation for consolidation are recognized in other comprehensive income. On disposal of a foreign operation, the component of other comprehensive income relating to that particular foreign operation is reclassified to profit or loss.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising upon the acquisition are treated as assets and liabilities of the foreign operation and translated at the spot rate of exchange at the reporting date.

2.3.8 Property, Plant and Equipment

Construction in progress is stated at cost. Property, plant and equipment are stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the property, plant and equipment if the recognition criteria are met. All other repair and maintenance costs are expensed as incurred.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, as follows:

Property, plant and equipment	Useful life (years)
Buildings	10-33
Equipment, tools and installations	1-18

An item of property, plant and equipment initially recognized is derecognized upon disposal (*i.e.*, at the date the recipient obtains control) or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the consolidated statements of profit or loss when the asset is derecognized.

The residual values, useful lives and methods of depreciation of property, plant and equipment are reviewed at each financial year-end and adjusted prospectively, if appropriate.

2.3.9 Leases

At the inception of a contract, we assess whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, we assess whether:

- the contract involves the use of an identified asset—this may be specified explicitly or implicitly and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified;
- we have the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and
- we have the right to direct the use of the asset. We possess this right when we hold the decision-making rights that are most relevant to changing how and for what purpose the asset is used. In rare cases where the decision about how and for what purpose the asset is used is predetermined, the Group has the right to direct the use of the asset if either:
    - we have the right to operate the asset; or
    - we designed the asset in a way that predetermines how and for what purpose it will be used.

At inception or on reassessment of a contract that contains a lease component, the consideration in the contract is allocated to each lease component on the basis of their relative standalone prices. However, for the leases of land and buildings in which it is a lessee, we have elected not to separate non-lease components, and instead accounts for the lease and non-lease components as a single lease component.

We recognize a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of the costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received by the Group.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset and the end of the lease term. The estimated useful lives of right-of-use assets are determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the incremental borrowing interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the incremental borrowing rate is used as the discount rate.

Lease payments included in the measurement of the lease liability comprise the following:

- fixed payments, including in-substance fixed payments;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as of the commencement date;
- amounts expected to be payable under a residual value guarantee; and
- the exercise price under a purchase option that is reasonably certain to be exercised, lease payments in an optional renewal period if it is reasonably certain that the extension option is exercised, and penalties for early termination of a lease unless it is reasonably certain that the contract is not terminate early.

The lease liability is subsequently measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the estimate of the amount expected to be payable under a residual value guarantee, or if we change our assessment of whether we will exercise a purchase, extension or termination option. When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the right-of-use asset or is recorded in the consolidated statements of profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

Right-of-use assets are presented separately and lease liabilities are presented in '"Financial Liabilities" in the consolidated statements of financial position.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets or shorter lease term, as follows:

Right-of-use assets	**Useful life or shorter lease term (years)**
Buildings	2-25
Equipment, tools and installations	2-5
Production facilities	2-3
Automobiles	3-4

Short-Term Leases and Leases of Low-Value Assets

We have elected not to recognize right-of-use assets and lease liabilities for short-term leases of machinery that have a lease term of 12 months or less or leases of low-value assets. We recognize the lease payments associated with these leases as an expense in the consolidated statements of profit or loss on a straight-line basis over the lease term.

2.3.10 Intangible Assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses.

The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized generally on a straight-line basis over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are at least reviewed at the end of each reporting period. The amortization expense on intangible assets with finite lives is recognized in the consolidated statements of profit or loss in the expense category that is consistent with the function of the intangible assets.

A summary of the useful lives applied to the Group's intangible assets is as follows:

Intangible assets	Useful life (years)
Intellectual property rights	8-20
Licenses	3-20
Software	3-8

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment at least annually, or when there is an indication for impairment, either individually or at the level of a cash-generating unit (see Note 2.3.13 for further details). The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

We have classified advanced payments on intangible assets as intangible assets, which are not yet ready for use. Advanced payments on intangible assets are tested for impairment on an annual basis.

An intangible asset is derecognized upon disposal (*i.e.*, at the date the recipient obtains control) or when no future economic benefits are expected from its use or disposal. Any gain or loss arising upon derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the consolidated statements of profit or loss.

Research and Development Costs

Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset if, and only if, all of the following six criteria can be demonstrated:

- the technical feasibility of completing the intangible asset so that the asset will be available for use or sale;
- its intention to complete the project;
- the ability and intention to use or sell the asset;
- how the asset will generate future economic benefits;
- the availability of resources to complete the asset; and
- the ability to reliably measure the expenditure during development.

Due to the inherent risk of failure in pharmaceutical development and the uncertainty of approval, management has determined that these criteria are not met in the biotech sector until regulatory approval has been obtained. The related expenditure is reflected in the consolidated statements of profit or loss in the period in which the expenditure is incurred.

Following initial recognition of the development expenditure as an asset, the asset is carried at cost less any accumulated amortization and accumulated impairment losses. Amortization of the asset begins when development is complete and the asset is available for use. It is amortized over the period of expected future benefit. Amortization is recorded in cost of sales. During the period of development, the asset is tested for impairment annually.

2.3.11 Financial Instruments—Initial Recognition and Subsequent Measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

i) Financial Assets

Initial Recognition and Measurement

Financial assets mainly include trade receivables, cash and cash equivalents, cash deposits with an original term of six months recognized as other financial assets as well as equity investments. Financial assets are initially measured at fair value and – depending on their classification – subsequently measured at amortized cost, fair value through other comprehensive income (OCI) or fair value through profit or loss.

Subsequent Measurement

The measurement of financial assets depends on their classification, as described below.

Trade and Other Receivables

With respect to trade receivable, we applied the practical expedient which means that they are measured at the transaction price determined under IFRS 15. Refer to the accounting policies in Note 2.3.4. Other financial assets are measured at amortized costs since they are held to collect contractual cash flows, which are solely payments of principal and interest. Gains and losses are recognized in profit or loss when the financial asset is derecognized, modified or impaired.

Financial Assets designated at Fair Value through OCI (Equity Instruments)

Upon initial recognition, we can irrevocably elect to classify equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under IAS 32 and are not held for trading. The classification is determined on an instrument-by-instrument basis. Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the statement of profit or loss when the right of payment has been established. Equity instruments designated at fair value through OCI are not subject to impairment assessment. We elected to irrevocably classify our non-listed equity investments under this category.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e., removed from the consolidated statements of financial position) when the rights to receive cash flows from the asset have expired or have been transferred in terms of fulfilling the derecognition criteria.

Impairment of Financial Assets

An allowance for expected credit losses (ECLs) is considered for all debt instruments of the Group. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all of the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. We have established a provision matrix that is based on our historical credit loss experience, which implies that expected credit losses are only recorded as far as actual historical credit losses have incurred, adjusted for forward-looking factors specific to the debtors and the economic environment and differentiates between customer groups and geographic regions.

ii) Financial Liabilities

Initial Recognition and Measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings or as payables.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

Financial liabilities include trade payables and other financial liabilities.

Subsequent Measurement

The measurement of financial liabilities depends on their classification, as described below.

Financial Liabilities at Fair Value through Profit or Loss

Financial liabilities at fair value through profit or loss include the embedded derivative, which was bifurcated from the convertible note, as host contract, and is recognized as a separate financial instrument until it is extinguished upon conversion. Furthermore, foreign exchange forward contracts not designated as hedging instruments are recognized as

derivatives at fair value through profit or loss. Financial liabilities at fair value further include contingent considerations resulting from business combinations.

Gains or losses arising from fair value measurement adjustments of the embedded derivative, the derivatives not designated as hedging instruments and the contingent consideration are recognized in profit and loss within the consolidated statements of profit or loss.

Loans, Borrowings, Trade Payables and Other Financial Liabilities

After initial recognition, loans and borrowings, trade payables and other financial liabilities are subsequently measured at amortized cost using the effective interest rate (EIR) method. Gains and losses are recognized in the consolidated statements of profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included as finance costs in the consolidated statements of profit or loss.

This category generally applies to loans and borrowings.

Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the consolidated statements of profit or loss.

2.3.12 Inventories

Inventories are valued at the lower of cost and net realizable value.

Costs incurred in bringing each product to its present location and condition are accounted for as follows:

- raw materials and supplies: purchase cost on a first-in / first-out basis; or
- unfinished goods and finished goods: cost of direct materials and labor, including both internal manufacturing and third-party contract manufacturing organizations, or CMOs, and a proportion of manufacturing overheads based on the normal operating capacity, but excluding borrowing costs.

Net realizable value is the estimated selling price in the ordinary course of business less estimated costs of completion and the estimated costs necessary to make the sale. Write-offs are recorded if inventories do not fulfill the specification defined by our quality standards or if its shelf-life has expired.

2.3.13 Impairment of Non-Financial Assets

At each reporting date, we assess whether there is an indication that a non-financial asset may be impaired. Goodwill is tested for impairment at least annually as of October 1. Impairment is determined for goodwill by assessing the recoverable amount of each cash generating unit (or group of CGUs) to which the goodwill relates. If any indication exists, or when annual impairment testing is performed, we estimate the asset's or CGU's recoverable amount. The recoverable amount is the higher of an asset's or CGU's fair value less costs of disposal and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. In case the asset is not generating independent cash inflows the impairment test is performed for the smallest group of assets that generate largely independent cash inflows from other assets (CGU). When the carrying amount of an asset or cash generating unit exceeds its recoverable amount, the asset or the non-current assets of the CGU are considered impaired and written down to their recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions and our market capitalization are taken into account.

If a value in use is determined it is based on detailed budgets and forecast calculations, which are prepared separately for each of our cash generating units to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of at least five years. A long-term growth rate is calculated and applied to project future cash flows after the last year of the detailed planning period.

Impairment losses are recognized in the consolidated statements of profit or loss in expense categories consistent with the function of the impaired asset.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the asset's or cash generating unit's recoverable amount is estimated. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the consolidated statements of profit or loss unless the asset is carried at a revalued amount, in which case, the reversal is treated as a revaluation increase.

2.3.14 Cash and Cash Equivalents

Cash and cash equivalents comprise cash at banks and on hand and short-term highly liquid deposits with an original maturity of three months or less, that are readily convertible to a known amount of cash and subject to an insignificant risk of changes in value. Deposits with an original maturity of more than three months are recognized as other financial assets.

2.3.15 Provisions

Provisions are recognized when there is a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When we expect some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the consolidated statements of profit or loss net of any reimbursement.

2.3.16 Share-Based Payments

Employees (and others providing similar services) receive remuneration in the form of share-based payments, which are settled in equity instruments (equity-settled transactions) or in cash (cash-settled transactions).

The cost of equity-settled transactions is determined by the fair value at the date when the grant is made using an appropriate valuation model, further details of which are given in Note 17. The cost of cash-settled transactions is determined by the fair value that is remeasured until settlement date.

These costs are recognized in cost of sales, research and development expenses, sales and marketing expenses or general and administrative expenses, together with a corresponding increase in equity (other reserves) or other liabilities, over the period in which the service is provided (the vesting period). The cumulative expense recognized for cash- and equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired. With respect to equity-settled transactions it also reflects the best estimate of the number of equity instruments that will ultimately vest.

2.4 Standards Applied for the First Time

In 2021, the following potentially relevant new and amended standards and interpretations became effective, but did not have an impact on our consolidated financial statements:

Standards / Interpretations	Date of application
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16: Interest Rate Benchmark Reform – Phase 2	January 1, 2021
Amendment to IFRS 16 Leases: Covid 19-Related Rent Concessions beyond 30 June 2021	April 1, 2021

2.5 Standard Issued but Not Yet Effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the financial statements and that might have an impact on our financial statements are disclosed below. We have not early adopted any standards and intend to adopt these new and amended standards and interpretations, if applicable, when they become effective.

Standards / Interpretations		Date of application
Amendments to IFRS 3 Business Combinations: Reference to the Conceptual Framework		January 1, 2022
Amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets: Onerous Contracts – Cost of Fulfilling a Contract Amendments to IAS 37		January 1, 2022
Amendments to IAS 16 Property, Plant and Equipment: Proceeds before Intended Use		January 1, 2022
Annual Improvements to IFRS Standards 2018-2020		January 1, 2022
IFRS 17 Insurance Contracts (issued on May 18, 2017)		January 1, 2023
Amendments to IFRS 17 Insurance Contracts	(1)	January 1, 2023
Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-Current	(1)	January 1, 2023
Amendments to IAS 1 and IFRS Practice Statement 2: Disclosure of Accounting Policies		January 1, 2023
Amendments to IAS 8 Accounting policy changes: Definition of Accounting Estimates		January 1, 2023
Amendments to IAS 12 Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction	(1)	January 1, 2023

(1) Standards had not yet been endorsed in the European Union at the time of publication.

We do not expect a significant impact of the application of any of these amendments.

3 Significant Accounting Judgments, Estimates and Assumptions

The preparation of the consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Significant accounting judgement as well as key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are described below. We based our assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Revenue from Contracts with Customers

We applied the following judgments, estimates and assumptions that significantly affect the determination of the amount and timing of revenue from contracts with customers:

Identification and Determination of Performance Obligations

We generate revenues from collaboration and license agreements, which contain multiple elements, including licenses to use, research, develop, manufacture and commercialize candidates and products, research and development services as well as obligations to develop and manufacture preclinical and clinical material and products. We determined that those collaboration and license agreements qualify as contracts with customers. At inception of each agreement, we apply judgment when determining which promises represent distinct performance obligations. If promises are not distinct, they are combined until the bundle of promised goods and services is distinct. For some agreements, this results in accounting for goods and services promised in a collaboration and license agreement as a single performance obligation with a single measure of progress. For these combined performance obligations, we assess which of these promises is the predominant promise to determine the nature of the performance obligation. When licenses are granted, we determined that the grant of the license is the predominant promise within the combined performance obligations. It is assessed that we grant our customers a right to access or a right to use our intellectual property due to the collaboration and license agreements.

Measurement of the Transaction Price

Our collaboration and license agreements often include variable considerations, which are contingent on the occurrence or non-occurrence of a future event *(i.e.*, reaching a certain milestone). When determining deferred revenues of a collaboration and license agreement, we need to estimate the amount of consideration to which we will be entitled in exchange for transferring the promised goods or services to our customers.

As there are usually only two possible outcomes (*i.e.*, milestone is reached or not), we have assessed that the method of the most likely amount is the best method to predict the amount of consideration to which we will be entitled. At contract inception, the most likely amount for milestone payments is estimated to be zero. We have assessed that the likelihood of achieving the respective milestone decreases depending on how far the expected date of achieving the milestone lies in the future. At each reporting date, we use judgment to determine when to include variable consideration in the transaction price, such that it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with respect to the variable consideration is subsequently resolved. We have concluded that future milestone payments are fully constrained at the end of the current fiscal year.

Future milestone payments would become unconstrained at the satisfaction of the milestone event, specifically a development event, a regulatory approval or achievement of a sales milestone.

Allocation of the Transaction Price to Performance Obligations and Revenue Recognition as Performance Obligations are Satisfied

We allocate the transaction price to performance obligations based on their relative standalone selling prices, which are generally based on our best estimates and interpretations of facts and circumstances of each contractual agreement and may require significant judgment to determine appropriate allocation.

Upfront payments and reimbursement for expenses are initially deferred on our consolidated statements of financial position. We assessed that no significant financing component exists within our collaboration agreements since the overall business purpose of advanced payments is to support the payment structure other than to provide a significant benefit of financing. For performance obligations in which the costs vary based on progress, an input-based measure considering cost incurred depicts most reliably the progress of the related research activities. In other cases, revenue recognition on a straight-line basis may most reliably depict our performance toward complete satisfaction. If the contractual activities progress, the achievement of development milestones will be used to measure the progress toward complete satisfaction. We evaluate the measure of progress each reporting period and, if necessary, adjust the measure of performance and related revenue recognition. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and net loss in the period of adjustment.

Upon successfully commercializing a pharmaceutical product, the collaboration and license agreements also provide for additional profit-sharing or tiered royalties earned when customers recognize net sales of licensed products as well as sales milestone payments. Revenue is recognized based on the sales-based or usage-based royalty exemption; *i.e.* when, or as, the underlying sales occur, which is when the performance obligation has been satisfied.

Principal-Agent Considerations

Collaboration agreements that involve two or more partners who contribute to the provision of a specific good or service to a customer are assessed in terms of principal-agent considerations. Under our current collaboration agreements,

the allocation of marketing and distribution rights defines territories in which the collaboration partner acts as a principal respectively. We recognize revenue net based on the collaboration partners' gross profit in territories where the partner is responsible for supply and on a gross basis when directly supplying our customers in our territories when control has been transferred. Amounts paid to collaboration partners for their share of our profits earned where we are the principal in the transaction are recorded as cost of sales.

Pfizer Agreement Characteristics

With respect to our collaboration with Pfizer, commercial revenue is recognized based on our collaboration partners' gross profit from COVID-19 vaccine sales, which is shared under the respective collaboration agreement. In determining commercial revenue pursuant to this collaboration agreement, we are reliant on our collaboration partner for detail regarding its gross profit for the period at hand. Certain of the information which our collaboration partner provides us with to identify the gross profit are, by necessity, preliminary and subject to change. This is mainly due to the fact that our partner's financial reporting cycle differs from ours. Pfizer's subsidiaries outside the United States have a fiscal year-end of November 30; hence the Pfizer Quarter is equal to the Calendar Quarter with respect to the U.S. territory but is deferred by one month with respect to the territories outside the United States. This implies that the details on sales are required by us in advance of Pfizer closing the respective reporting periods. As a result, our determination of our share of such gross profit especially for this last month of the calendar cycle needs to be estimated for the purposes of recognizing revenues and is subject to the risk that amounts reported might vary from actual amounts reported once our collaboration partner's final financial results are available.

Pfizer's gross profit shares are calculated based on sales and include consideration of transfer prices. The latter includes manufacturing and shipping costs, which represent standard prices and include mark-ups on manufacturing costs as specified by the terms of the agreement. Manufacturing and shipping cost variances were considered as far as those have been identified. Nevertheless, those input parameters may be adjusted once actual costs are determined. The sales as reported by Pfizer for the Pfizer quarter, as well as sales preliminary reported for last month of the calendar quarter and territories outside the United States have been used to estimate license obligations in terms of royalties and sales milestones. Sales milestones and royalties are recognized as they are earned by the partners. Sales milestones are shared equally, while royalty payments are shared on the basis of revenue in the territories for which the partners are responsible. The estimated royalty fees applied to net sales reflect the license obligations to the extent currently identified from third party contractual arrangements. Changes in estimates are accounted for prospectively, when determined.

These estimated figures are likely to change prospectively in future periods as we receive final data from Pfizer. Those changes in our share of the collaboration partner's gross profit will be recognized prospectively as changes to our commercial revenues. To the extent that Pfizer does not provide such preliminary information in the future, our provisional sales figures for territories outside of the United States will be subject to a greater level of estimation and judgment.

Historically, adjustments to these estimates to reflect actual results or updated expectations, have not been material to our overall business. The adjustment to the estimated amounts as of December 31, 2020, which was recorded during the three months ended March 31, 2021 was 5% of revenues and the extent of the adjustments decreased throughout the year ended December 31, 2021 (i.e., adjustments were between 1% and 3% of revenues with respect to the first three quarters during 2021).

Pfizer's determination of manufacturing and shipping costs also affects the transfer prices that have been charged to COVID-19 vaccine supplies that it manufactures and supplies to us and may be subject to adjustment whenever manufacturing and shipping cost variances are identified. Likewise, our own cost of sales and the respective gross profit share owed to our partner may be adjusted prospectively, when changes are determined.

For the carrying amounts of the revenue recognition-related contract balances, see Note 6.

Research and Development Expenses

The nature of our business and primary focus of our activities, including development of our platforms and manufacturing technologies, generate a significant amount of research and development expenses. Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset if, and only if, the capitalization criteria are met. We have entered into agreements under which third parties grant licenses to us. If those licenses grant access to technologies, both parties jointly perform research or development activities and both are exposed to

significant risks and rewards of the activities, costs incurred with the agreements are not treated differently from costs related to own product candidates. If the agreements grant us rights to use certain patents and technologies that meet the definition of an identifiable assets, they are treated as acquired intangible assets. Due to the inherent risk of failure in pharmaceutical development and the uncertainty of approval, management has determined that these criteria are not met before regulatory approval is achieved. The related expenditure is reflected in the consolidated statements of profit or loss in the period in which the expenditure is incurred. Sales-based milestone or royalty payments incurred under license agreements relating to self-developed intangibles after the approval date of the respective pharmaceutical product are recognized as expenses as incurred. Prior to initial regulatory approval, costs relating to production of pre-launch products are expensed as research and development expenses in the period incurred. If pre-launch products are sold, the respective product gross margin may be higher compared to the expected recurring margin as the underlying costs will not be included in cost of sales.

Business Combinations

The allocation of the purchase price for business acquisitions to the identifiable assets acquired and liabilities assumed based on their respective fair values, requires use of accounting estimates and judgment. Acquired intangible assets are valued using valuation models such as the Multi Period Excess Earnings Method under which fair values are derived from future net cash flows, which are discounted to the acquisition date using an appropriate discount factor. We have estimated fair values of assets acquired, liabilities assumed and contingent considerations based on reasonable assumptions. We continue to collect information and reevaluate these provisional estimates and assumptions in accordance with IFRS 3. Any adjustments to these provisional estimates and assumptions are recorded against goodwill provided they arise within the measurement period. Upon the conclusion of the measurement period or final determination of the fair value of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of profit or loss.

For further disclosures relating to business combinations, see Note 5.

Share-Based Payments

Determining the fair value of share-based payment transactions requires the most appropriate valuation for the specific program, which depends on the underlying terms and conditions. We used valuation models like a binomial or Monte-Carlo simulation model for the measurement of the cash- and equity-settled transactions' fair value considering certain assumption relating to, *e.g.*, the volatility of stock price, the determination of an appropriate risk-free interest rate, expected dividends and the probability of reaching a minimum hurdle to exercise the relevant options. For awards which were granted prior to the initial public offering, at a time where no quoted market prices existed, the valuation model assumptions included the option's underlying share price. For awards which were granted post the initial public offering, the grant date's share prices on the Nasdaq Global Select Market were included in the valuation.

For further disclosures relating to share-based payments, see Note 17.

Embedded Derivatives

Defining the fair value of the embedded derivative which was bifurcated from the convertible note, as host contract, requires significant judgment. We used the Cox-Rubinstein binomial tree model when determining the fair value of the conversion right, the embedded derivative which was bifurcated from the convertible note, as host contract. The primary inputs used in the model include stock price volatility, credit spreads, risk-free interest rate and foreign exchange forward rates. Stock price volatility is based on our implied volatility, credit risk is model implied and adjusted for movement in credit spreads for B-rated corporates at each valuation date, the risk-free interest rate is based on currency specific time congruent IBOR and swap rates whereas the foreign exchange forward rates are based on observable market data.

For further disclosures relating to financial instruments, see Note 12.

Income Taxes

We are subject to income taxes in more than one tax jurisdictions. Due to the increasing complexity of tax laws and the corresponding uncertainty regarding the legal interpretation by the fiscal authorities, tax calculations are generally subject to an elevated amount of uncertainty. To the extent necessary, possible tax risks are taken into account in form of provisions.

We do not recognize or impair deferred tax assets when it is unlikely that a corresponding amount of future taxable profit will be available against which the deductible temporary differences, tax loss carry forwards and tax credits can be utilized. When determining whether sufficient future taxable profit will be available against which the deductible temporary differences, tax loss carry forwards and tax credits can be utilized, significant management judgment is required. This includes management's assessment on the character and amounts of taxable future profits, the periods in which those profits are expected to occur, and the availability of tax planning opportunities. As a matter of policy, convincing evidence supporting the recognition of deferred tax assets is required if an entity has suffered a loss in either the current or the preceding periods.

As of December 31, 2021, our management continued to determine that deferred tax assets on tax losses carried forward that relate to subsidiaries which have a loss making history cannot be recognized. This includes the assessment that those subsidiaries neither have any taxable temporary difference nor any tax planning opportunities available that could support the recognition of deferred tax assets.

For further disclosures relating to deferred taxes, see Note 8.

4 Group Information

Information about Subsidiaries

The consolidated financial statements include the following subsidiaries:

Name	Country of incorporation	Registered office	% equity interest December 31, 2021	% equity interest December 31, 2020
BioNTech Cell & Gene Therapies GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Delivery Technologies GmbH	Germany	Halle[1]	100 %	100 %
BioNTech Diagnostics GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Europe GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Innovation GmbH (in establishment)	Germany	Mainz[1]	100 %	n/a
BioNTech Innovative Manufacturing Services GmbH	Germany	Idar-Oberstein[1]	100 %	100 %
BioNTech Manufacturing GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Manufacturing Marburg GmbH	Germany	Marburg[1]	100 %	100 %
BioNTech RNA Pharmaceuticals GmbH	Germany	Mainz	n/a[2]	100 %
BioNTech Innovation and Services Marburg GmbH (previously BioNTech Services Marburg GmbH)	Germany	Marburg[1]	100 %	n/a
JPT Peptide Technologies GmbH	Germany	Berlin[1]	100 %	100 %
reSano GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Real Estate Holding GmbH	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate Verwaltungs GmbH	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate An der Goldgrube GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate Haus Vier GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate Adam Opel Straße GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate an der Goldgrube 12 GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	n/a
BioNTech Austria Beteiligungen GmbH	Austria	Vienna	n/a[3]	100 %
BioNTech R&D (Austria) GmbH (previously PhagoMed Biopharma GmbH)	Austria	Vienna	100 %	n/a
BioNTech (Shanghai) Pharmaceuticals Co. Ltd.	China	Shanghai	100 %	n/a
BioNTech Pharmaceuticals Asia Pacific Pte. Ltd.	Singapore	Singapore	100 %	100 %
BioNTech Turkey Tıbbi Ürünler Ve Klinik Araştirma Ticaret Anonim Şirketi	Turkey	Istanbul	100 %	n/a
BioNTech UK Limited	United Kingdom	Reading	100 %	100 %
BioNTech Research and Development, Inc.	United States	Cambridge	100 %	100 %
BioNTech USA Holding, LLC	United States	Cambridge	100 %	100 %
BioNTech US Inc.	United States	Cambridge	100 %	100 %
JPT Peptide Technologies Inc.	United States	Cambridge	100 %	100 %

[1] Subsidiary makes use of the exemption of Sections 264 para. 3 and 264b HGB for the 2021 financial year.

[2] BioNTech RNA Pharmaceuticals GmbH was merged onto BioNTech SE.

[3] BioNTech Austria Beteiligungen GmbH was liquidated in June 2021.

Parent Company

ATHOS KG, Holzkirchen, Germany is the sole shareholder of AT Impf GmbH, Munich, Germany and beneficial owner of the following percentage of ordinary shares in BioNTech at the dates as indicated. ATHOS KG via AT Impf GmbH has de facto control over BioNTech based on its substantial shareholding, which enabled it to exercise the majority of voting rights to pass resolutions at our Annual General Meeting, or AGM.

Name	Country of incorporation	Registered office	Ownership of ordinary shares in BioNTech (in %) December 31, 2021	Ownership of ordinary shares in BioNTech (in %) December 31, 2020
AT Impf GmbH	Germany	Munich	43.75 %	47.37 %

Entity with significant Influence over the Group

Medine GmbH, Mainz owned the following percentage of ordinary shares in BioNTech at the following dates as indicated:

Name	Country of incorporation	Registered office	Ownership of ordinary shares in BioNTech (in %) December 31, 2021	Ownership of ordinary shares in BioNTech (in %) December 31, 2020
Medine GmbH	Germany	Mainz	17.11 %	17.25 %

5 Business Combinations

Business Combinations during the year ended December 31, 2021

BioNTech R&D (Austria) GmbH, or BioNTech Austria (previously PhagoMed Biopharma GmbH)

On October 1, 2021, BioNTech Austria, an Austrian biotechnology company, specialized in the development of a new class of antibacterials, was fully acquired to expanded our infectious disease portfolio capabilities.

The total consideration comprised an upfront consideration of €50.0 million (less acquired debt) of which €23.2 million are considered remuneration and will be recognized as personnel expense over a three-year period in which services are to be provided. An additional consideration of maximum €100.0 million is dependent the achievement of certain clinical development milestones. At the acquisition date, the contingent consideration was recognized with its fair value of €5.5 million and is presented as non-current financial liabilities in the consolidated statements of financial position (see Note 12).

The acquisition of PhagoMed was accounted for as a business combination using the acquisition method of accounting.

The final fair values and values in accordance with IFRS 3 of the identifiable net assets of BioNTech Austria as at the date of acquisition were as follows:

(in millions)	**Fair value recognized on acquisition** BioNTech R&D (Austria) GmbH
Assets	
Intangible assets	€43.3
Other assets non-current and current	1.5
Total assets	**€44.8**
Liabilities	
Other liabilities non-current and current	15.4
Total liabilities	**€15.4**
Total identifiable net assets at fair value	**€29.4**
Bargain purchase	(2.2)
Consideration transferred	**€27.2**
Consideration	
Cash paid	21.7
Contingent consideration liability	5.5
Total consideration	**€27.2**

(in millions)	BioNTech R&D (Austria) GmbH
Transaction costs of the acquisition (included in cash flows from operating activities)	€(0.5)
Net cash acquired (included in cash flows used in investing)	0.9
Cash paid (included in cash flow used in investing activities)	(21.7)
Net cash flow on acquisition	**€(21.3)**

The intangible assets comprise a pre-clinical candidate, PM-477 as well as a platform.

A bargain purchase of €2.2 million was recognized in other operating income.

The consolidated statements of profit or loss include the results of BioNTech Austria since the acquisition date. From the date of acquisition through December 31, 2021, BioNTech Austria did not have any significant impact onto the operating income or the revenues of the Group. The same applies if the transaction had occurred at the beginning of the reporting period.

Business Combinations during the year ended December 31, 2020

During the year ended December 31, 2020, the following material business combinations occurred.

BioNTech US Inc. (previously Neon Therapeutics, Inc., or Neon)

On May 6, 2020, we acquired Neon, a biotechnology company developing novel neoantigen-based T-cell therapies, to leverage Neon's expertise in the development of neoantigen therapies, with both vaccine and T cell capabilities.

Based on the acquisition date share price, the aggregate value of the merger consideration was €89.9 million ($97.1 million) financed by issuing 1,935,488 American Depositary Shares representing our ordinary shares as a stock transaction and including a de minimis cash consideration which was paid to settle Neon's outstanding stock options.

The fair values and values in accordance with IFRS 3 of the identifiable net assets of BioNTech US Inc. as at the date of acquisition were as follows:

(in millions)	**Fair value recognized on acquisition** BioNTech US Inc.
Assets	
Intangible assets	€29.9
Property, plant and equipment	5.6
Right-of-use assets	6.9
Other assets non-current and current	2.7
Cash and cash equivalents	7.7
Total assets	**€52.8**
Liabilities	
Trade payables	1.7
Other liabilities non-current and current	17.8
Total liabilities	**€19.5**
Total identifiable net assets at fair value	**€33.3**
Goodwill from the acquisition	56.6
Consideration transferred	**€89.9**
Consideration	
Shares issued, at fair value	€89.5
Cash paid	€0.4
Total consideration	**€89.9**

The intangible assets comprise two neoantigen targeted therapies, BNT221 (NEO-PTC-01) and BNT222 (NEO-STC-01), which were identified and recorded as in-process R&D.

Deferred tax liabilities relating to temporary differences of the assets acquired in the business combination were recognized at an amount of €8.0 million. To the extent of those deferred tax liabilities assumed, deferred tax assets relating to temporary differences and tax loss carryforwards which existed as of the acquisition date were recognized. Since the conditions to offset were fulfilled, the deferred tax assets and liabilities were offset.

The consolidated statements of profit or loss included the results of BioNTech US since the acquisition date. From the date of acquisition through December 31, 2020, BioNTech US contributed €28.5 million operating loss to our respective result. If the transaction had occurred at the beginning of the reporting period, €59.8 million would have contributed to the operating loss. This amount includes expenses resulting from the merger and should not necessarily be considered representative of the future consolidated results of profit or loss or financial condition on a consolidated basis. From the date of acquisition, BioNTech US did not generate any revenue and no revenue would have been generated if the transaction had occurred at the beginning of the reporting period.

Goodwill recognized is primarily attributable to the expected synergies and other benefits from combining two organizations with a common culture of pioneering translational science and a shared vision for the future of cancer

immunotherapy as described above. The goodwill resulting from the BioNTech US acquisition during the year ended December 31, 2020, was allocated to the CGU immunotherapies.

Transaction costs of €1.1 million relating to the acquisition were expensed and included in the general and administrative expenses in the consolidated statements of profit or loss. In the consolidated statements of cash flows they were included in cash flows used in operating activities. The attributable costs of the issuance of the shares of €1.3 million were recorded in equity as a deduction from the capital reserve and are included in cash flows from financing activities in the consolidated statements of cash flows.

BioNTech Manufacturing Marburg GmbH (previously Novartis Manufacturing GmbH)

On October 31, 2020, Novartis Manufacturing GmbH was acquired, a manufacturing facility in Marburg. Through the acquisition, we planned to produce our COVID-19 vaccine for global supply.

The fair values and values in accordance with IFRS 3 of the identifiable net assets of BioNTech Manufacturing Marburg GmbH, or BioNTech Marburg, as at the date of acquisition were as follows:

(in millions)	**Fair value recognized on acquisition** BioNTech Manufacturing Marburg GmbH
Assets	
Property, plant and equipment	€79.8
Right-of-use assets	28.5
Inventories	2.4
Other assets non-current and current	4.3
Cash and cash equivalents	16.5
Total assets	**€131.5**
Liabilities	
Provisions non-current and current	5.1
Trade payables	8.1
Other liabilities non-current and current	33.4
Total liabilities	**€46.6**
Total identifiable net assets at fair value	**€84.9**
Bargain purchase	(7.0)
Consideration transferred	**€77.9**
Consideration	
Cash paid	€77.9
Total consideration	**€77.9**

The consolidated statements of profit or loss included the results of BioNTech Marburg since the acquisition date. From the date of acquisition, the transition into a GMP certified manufacturing facility for our COVID-19 vaccine was initiated rapidly. During this time, no revenues had been recognized and set-up, retooling and prepping expenses led to a €6.7 million operating loss, which contributed to our respective result. Projecting the revenues and result of the acquired company as if the acquisition had occurred at the beginning of the reporting period is impracticable, since BioNTech intends to use the facility for manufacturing its COVID-19 vaccine. Information about revenues and net income generated by

BioNTech Marburg before the acquisition were considered not to be useful as they are not representative of the future consolidated results of profit or loss or financial condition on a consolidated basis.

The contracting parties shared the understanding that the manufacturing facility is well-equipped to make an important contribution in our effort to develop and manufacture a COVID-19 vaccine. The possibility of acquiring a GMP certified manufacturing facility with well-established biotechnology drug substance and drug product manufacturing equipment as well as an experienced team was a very good opportunity for us to accelerate its efforts to scale-up the commercial manufacturing capacity for our COVID-19 vaccine production. The fact that the offer to sell and the need to acquire the facility overlapped at a convenient time, the underlying opportunities ultimately resulted in a bargain purchase of €7.0 million which was recognized in other operating income.

Transaction costs of €1.4 million relating to the acquisition were expensed and included in the general and administrative expenses in the consolidated statements of profit or loss and were included in cash flows used in operating activities in the consolidated statements of cash flows.

6 Revenues from Contracts with Customers

6.1 Disaggregated Revenue Information

Set out below is the disaggregation of the Group's revenues from contracts with customers:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Research & development revenues from collaborations	**€102.7**	**€178.8**	**€84.4**
Genentech Inc.	*45.9*	*49.2*	*64.0*
Pfizer Inc.	*43.4*	*121.6*	*14.3*
Shanghai Fosun Pharmaceutical (Group) Co., Ltd	*7.4*	*5.1*	—
Other	*6.0*	*2.9*	*6.1*
Commercial revenues	**€18,874.0**	**€303.5**	**€24.2**
COVID-19 vaccine revenues	18,806.8	270.5	—
Sales to collaboration partners[(1)]	*970.9*	*61.4*	—
Direct product sales to customers	*3,007.2*	*20.6*	—
Share of collaboration partners' gross profit and sales milestones	*14,828.7*	*188.5*	—
Other sales	67.2	33.0	24.2
Total	**€18,976.7**	**€482.3**	**€108.6**

1) Represents sales to our collaboration partner of products manufactured by us.

Since December 2020, our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide, which resulted in recognition of revenues from the commercial sale of pharmaceutical products for the first time. Consequently, we have progressed from earning revenues primarily from research and development to earning revenues from commercial sales during the year ended December 31, 2021.

During the year ended December 31, 2021, revenues recognized from Pfizer Inc., or Pfizer (€15,500.0 million) and the German Federal Ministry of Health (€1,945.6 million), each account for more than 10% of total revenues. During the year ended December 31, 2020, revenues recognized from Pfizer (€371.5 million) and Genentech Inc., or Genentech (€49.2 million), each account for more than 10% of total revenues. During the year ended December 31, 2019, revenues recognized from Genentech (€64.0 million) and Pfizer (€14.3 million), accounted for more than 10% of total revenues. During the year ended December 31, 2021, based on the geographic region in which our customers and collaboration partners are located we mainly recognized revenues in the United States (€14,636.5 million) and Germany (€2,241.9 million). During the year ended December 31, 2020, the main geographic regions were United States (€381.9 million), Belgium (€56.2 million) and Germany (€31.7 million). During the year ended December 31, 2019, the main geographic regions were United States (€87.6 million) and Germany (€11.7 million).

Research and Development Revenues from Collaborations

During the year ended December 31, 2021, our collaborations with Genentech, Pfizer, Shanghai Fosun Pharmaceutical (Group) Co., Ltd, or Fosun Pharma, and other collaboration partners were progressed and respective research and development revenues were derived from deferred upfront payments as well as upon achieving development and regulatory milestones.

During the year ended December 31, 2021, our Influenza collaboration with Pfizer was progressed and research and development revenues of €43.4 million were derived from deferred upfront payments based on progress incurred and upon meeting certain development milestones. In comparison, during the year ended December 31, 2020, research and development revenues were mainly related to a non-refundable upfront cash payment of €66.3 million and a regulatory milestone payment of €51.7 million that became due based on our COVID-19 vaccine collaboration with Pfizer which was progressed to the commercial phase as well as €3.6 million incurred with respect to our Influenza collaboration with Pfizer.

As part of our BNT162 vaccine program against COVID-19, we are collaborating with Fosun Pharma to develop a COVID-19 vaccine in China. Upon receiving the authorization for emergency use and launching our COVID-19 vaccine in Hong Kong, development and regulatory milestones of €7.4 million have been achieved and recognized as research and development revenues during the year ended December 31, 2021. In comparison, during the year ended December 31, 2020, Fosun Pharma has paid a non-refundable upfront cash payment of €0.9 million and development milestones of €4.2 million that were recognized as revenues.

Other collaboration programs have been progressed during the year ended December 31, 2021, and revenues of €45.9 million under our collaboration with Genentech and €6.0 million under other collaborations have been derived from deferred upfront payments measured based on the costs incurred under the respective research programs. In comparison, during the year ended December 31, 2020, revenues of €49.2 million under our collaboration with Genentech and €2.9 million under other collaborations had been recognized.

The revenues recorded during the year ended December 31, 2019, mainly included revenues resulting from collaboration and license agreements processed in the research and development phase. The amounts were mainly derived from deferred upfront fees received under the Genentech, Pfizer (Influenza) and Sanofi collaboration. The amounts were recognized as revenues as we performed under the agreement and measured progress based on the costs or time incurred under the respective research programs.

Commercial Revenues

During the year ended December 31, 2021, commercial revenues increased due to the high demand for our COVID-19 vaccine. We are the marketing authorization holder in the United States, the European Union, the United Kingdom, Canada and other countries, and holder of emergency use authorizations or equivalents in the United States (jointly with Pfizer) and other countries, submissions to pursue regulatory approvals on those countries where emergency use authorizations or equivalent were initially granted are ongoing. Pfizer has marketing and distribution rights worldwide with the exception of China, Germany and Turkey. Fosun Pharma has marketing and distribution rights in China, Hong Kong special administrative region, or SAR, Macau SAR and the region of Taiwan. The allocation of marketing and distribution rights defines territories in which the collaboration partners act as a principal.

Whenever responsibilities in the manufacturing and supply process of the COVID-19 vaccine shift and the COVID-19 vaccine is transferred, the vaccine is sold from one partner to the other. During the years ended December 31, 2021 and 2020, we recognized €970.9 million and €61.4 million of revenues, respectively, from selling drug product batches manufactured by us to our partners.

By supplying our territories during the years ended December 31, 2021 and 2020, we recognized €3,007.2 million and €20.6 million of revenues, respectively, from direct COVID-19 vaccine sales in Germany and Turkey. The share of gross profit that we owe our collaboration partner Pfizer based on our sales is recognized as cost of sales.

Based on COVID-19 vaccine sales in the collaboration partners' territories, we are eligible to receive a share of their gross profit which represents a net figure and is recognized as collaboration revenues during the commercial phase together with sales milestones that are recorded once the underlying thresholds are met. During the year ended December 31, 2021, €14,352.1 million gross profit share and €476.6 million of sales milestones have been recognized as revenues. During the year ended December 31, 2020, €188.5 million gross profit share has been recognized as revenues. In order to determine our share of our collaboration partners' gross profits, we used certain information from our collaboration partners, some of which is based on preliminary data shared between the partners and might vary once final data is available. The true-up recognized prospectively during the year ended December 31, 2021, with respect to the prior year was not material.

The revenues from contracts with customers disclosed above were recognized as follows:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Timing of revenue recognition			
Goods and services transferred at a point in time	€4,034.3	€108.8	€17.0
Goods and services transferred over time	14,942.4	373.5	91.6
Total	**€18,976.7**	**€482.3**	**€108.6**

6.2 Contract Balances

(in millions)	**December 31, 2021**	**December 31, 2020**
Trade and other receivables	€12,381.7	€165.5
Contract liabilities	195.1	371.5
Refund liabilities	90.0	—

Trade and other receivables significantly increased mainly due to the trade receivables from our COVID-19 collaboration with Pfizer as well as our own sales. The contractual settlement of the gross profit share has a temporal offset of more than one calendar quarter. As Pfizer's fiscal quarter for subsidiaries outside the United States differs from ours, it creates an additional time lag between the recognition of revenues and the payment receipt. Consequently, as of December 31, 2021, our trade receivables included in addition to the profit share for the fourth quarter of 2021, trade receivables which related to the gross profit share for the third quarter of 2021. The payment settling our gross profit share for the third quarter of 2021 (as defined by the contract) was received from our collaboration partner subsequent to the end of the reporting period in January 2022. From our trade receivables outstanding as of December 31, 2021, we had already collected €4,693.6 million in cash by January 16, 2022.

Contract liabilities mainly include upfront fees received from our major collaboration and license agreements as well as advance payments received for future COVID-19 vaccine sales and other sales. The contract liabilities from collaboration and commercial supply agreements as of December 31, 2021, comprise €61.9 million remaining upfront fees from collaboration agreements, €131.9 million of advance payments for future COVID-19 vaccine sales, which had been received during the year ended December 31, 2021, or for which an unconditional right of consideration exists (as of December 31, 2020: €131.7 million of remaining upfront fees from collaborations as well as €235.9 million of advance payments for future COVID-19 vaccine sales).

During the year ended December 31, 2021, the contract liabilities decreased as revenues were recognized from contract liabilities outstanding at the beginning of the year by fulfilling commercial performance obligations and progressing our research and development collaboration agreements (during the year ended December 31, 2020: increase in contract liabilities since payments received exceeded revenues recognized from contract liabilities recorded at the beginning of the year).

The refund liabilities relate to our collaboration with Fosun and represent consideration which has been received but which will need to be refunded to the collaboration partner.

Set out below is the amount of revenue recognized for the periods indicated:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Amounts included in contract liabilities at the beginning of the year	€73.7	€58.9	€84.1

6.3 Performance Obligations

The contract liabilities allocated to the remaining performance obligations from collaboration or commercial supply agreements (unsatisfied or partially unsatisfied) as at year-end are as follows:

(in millions)	December 31, 2021	December 31, 2020
Within one year	€186.1	€299.6
More than one year	9.0	71.9
Total	**€195.1**	**€371.5**

7 Income and Expenses

7.1 Costs of Sales

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Cost of sales related to COVID-19 vaccine revenues	€2,855.6	€35.6	€—
Cost related to other sales	55.9	23.7	17.4
Total	**€2,911.5**	**€59.3**	**€17.4**

During the year ended December 31, 2021, cost of sales increased compared to the year ended December 31, 2020, mainly due to recognizing cost of sales from our COVID-19 vaccine sales, which included the share of gross profit that we owe our collaboration partner Pfizer based on our sales.

7.2 Research and Development Expenses

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Purchased services	€572.6	€359.9	€65.6
Wages, benefits and social security expense	233.1	126.3	83.2
Laboratory supplies	53.8	107.8	37.2
Depreciation and amortization	32.9	30.2	27.5
Other	56.8	20.8	13.0
Total	**€949.2**	**€645.0**	**€226.5**

During the year ended December 31, 2021, research and development expenses increased compared to the year ended December 31, 2020, mainly due to increased research and development expenses from the BNT162 clinical trials launched and conducted in the year ended December 31, 2021, recorded as purchased services with respect to those expenses, which are initially incurred by Pfizer and subsequently charged to us under the collaboration agreement. The increase was further driven by an increase in wages, benefits and social security expenses resulting from an increase in headcount, recording expenses incurred under our share-based-payment arrangements as well as from recognizing inventor remuneration expenses.

During the year ended December 31, 2020, research and development expenses increased compared to the year ended December 31, 2019, mainly due to an increase in research and development expenses from our BNT162 program.

7.3 Sales and Marketing Expenses

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Purchased services	€26.5	€10.9	€0.2
Wages, benefits and social security expense	4.3	1.6	1.9
Other	19.6	2.0	0.6
Total	**€50.4**	**€14.5**	**€2.7**

During the year ended December 31, 2021, sales and marketing expenses increased compared to the year ended December 31, 2020, mainly due to an increase in purchased service which we incurred in connection with progressing our commercial activities with respect to our COVID-19 vaccine.

7.4 General and Administrative Expenses

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Wages, benefits and social security expense	€90.5	€33.0	€19.1
Purchased services	70.2	26.0	6.4
Insurance premiums	30.4	4.8	1.1
IT and office equipment	25.1	7.4	4.6
Depreciation and amortization	7.3	5.1	4.9
Other	62.3	17.7	9.4
Total	**€285.8**	**€94.0**	**€45.5**

During the year ended December 31, 2021, general and administrative expenses increased compared to the year ended December 31, 2020, mainly due to an increase in wages, benefits and social security expenses resulting from an increase in headcount and expenses incurred under the share-based-payment arrangements, increased expenses for purchased management consulting and legal services as well as higher insurance premiums caused by the increased business volume. Our M&A as well as our business development transactions also contributed to the increase in general and administrative expenses.

During the year ended December 31, 2020, general and administrative expenses increased compared to the year ended December 31, 2019, mainly influenced by higher expenses for purchased management consulting and legal services as well as an increase in headcount leading to higher wages, benefits and social security expenses and higher insurance premiums.

7.5 Other Operating Expenses

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Loss on derivative instruments at fair value through profit or loss	€86.3	€—	€—
Other	8.1	2.4	0.7
Total	**€94.4**	**€2.4**	**€0.7**

During the year ended December 31, 2021, the other expenses increased compared to the year ended December 31, 2020, mainly from recording the change in fair value of foreign exchange forward contracts that were entered into during the year ended December 31, 2021, to manage some of our foreign exchange exposures but were not designated as hedging instruments under IFRS.

7.6 Other Operating Income

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Foreign exchange differences, net	€446.3	€—	€—
Government grants	137.2	239.0	1.5
Income from derivative instruments at fair value through profit and loss	5.7	—	—
Bargain purchase	2.2	7.0	—
Other	7.0	4.5	1.2
Total	**€598.4**	**€250.5**	**€2.7**

During the year ended December 31, 2021, the other income increased compared to the year ended December 31, 2020, which was mainly due from recognizing foreign exchange differences and government grant funding. The foreign exchange differences included in operating income primarily arose from valuing our U.S. dollar denominated trade receivables which were mainly incurred under our COVID-19 collaboration with Pfizer, U.S. dollar denominated trade payables as well as U.S. dollar denominated other financial liabilities which mainly relate to obligations incurred from our license agreements.

The other operating income derived from government grants mainly relates to the government grant for which we became eligible during the year ended December 31, 2020, as part of an initiative by the German Federal Ministry of Education (*Bundesministerium für Bildung und Forschung*, or the *BMBF*) to support our COVID-19 vaccine program, BNT162. The BMBF funding was granted to accelerate our vaccine development, to upscale manufacturing capabilities in Germany and compensate costs that incurred while continuing to test the COVID-19 vaccine in clinical trials. During the year ended December 31, 2021, the final drawdowns were made. Overall, during the years ended December 31, 2021 and 2020, €48.1 million and €326.9 million, respectively, were received in cash. The proportion of the grant that related to expenses incurred during the years ended December 31, 2021 and 2020, was recognized as other operating income with an amount of €136.1 million and €238.9 million, respectively.

The following table illustrates the changes regarding the government grants, including the government grant initiated by the BMBF:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
As of January 1	**€92.0**	**€—**	€—
Received during the year	48.2	331.0	1.5
Released to the consolidated statements of profit or loss	(137.2)	(239.0)	(1.5)
As of December 31	**€3.0**	**€92.0**	**€—**
Total current	3.0	92.0	—
Total non-current	—	—	—

The income from derivative instruments at fair value through profit and loss resulted from foreign exchange forward contracts that were entered into during the year ended December 31, 2021, to manage parts of our transactions' foreign exchange exposures but were not designated as hedging instruments under IFRS.

7.7 Finance Income

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Foreign exchange differences, net	€66.2	€—	€2.3
Interest income	1.5	1.6	1.8
Total	**€67.7**	**€1.6**	**€4.1**

During the year ended December 31, 2021, our finance income included €66.2 million foreign exchange gains. Foreign exchange differences on a cumulative basis, are either shown as finance income or expenses.

7.8 Finance Expenses

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Fair value adjustments of financial instruments measured at fair value	€277.8	€17.3	€—
Amortization of financial instruments	21.9	3.1	0.3
Interest expenses related to lease liabilities	2.9	2.0	1.7
Interest expenses related to financial assets	2.5	—	—
Foreign exchange differences, net	—	42.6	—
Total	**€305.1**	**€65.0**	**€2.0**

During the year ended December 31, 2021, the finance expenses increased compared to the year ended December 31, 2020, mainly due to increased expenses arising from fair value measurement adjustments of the derivative embedded within the convertible note from €17.3 million in 2020 to €277.8 million in 2021. The change in fair value was mainly driven by the increase in our share price and was recognized as finance expenses in our consolidated statements of profit or loss.

During the year ended December 31, 2021, finance expenses included €21.9 million amortization of financial instruments compared to €3.1 million in the prior year mainly due to the effective interest rate effect during the year ended December 31, 2021, derived from adjusting estimated future cash flows of our convertible note which will be redeemed early as of March 1, 2022. For further disclosures, see Note 12.

7.9 Employee Benefits Expense

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Wages and salaries	€345.9	€160.7	€98.7
Social security costs	31.7	17.9	12.3
Pension costs	1.2	0.8	0.5
Total	**€378.8**	**€179.4**	**€111.5**

Wages and salaries include, among other things, expenses for share-based payments.

8 Income Tax

Income tax for the years ended December 31, 2021, December 31, 2020, and December 31, 2019, comprised current income taxes, other taxes and deferred taxes. We are subject to corporate taxes, the solidarity surcharge and trade taxes. Our corporate tax rate in the reporting year remained unchanged (15.0%) as did the solidarity surcharge (5.5%) whereas the average trade tax rate changed resulting in a combined income tax rate of 30.72% in the year ended December 31, 2021 (during the years ended December 31, 2020 and 2019: 30.79% and 30.78%, respectively). Deferred taxes are calculated at a rate of 27.2% taking decreasing average trade tax rates in Mainz, Marburg and Idar-Oberstein from 2022 onwards into

consideration. Deferred taxes for Austria are calculated at a corporate tax rate of 25%. Austria's decrease of its corporate tax rate down to 23% in 2024 will be recognized from 2023 onwards. BioNTech USA Holding, LLC is subject to Federal Corporate Income Tax (21.0%) as well as State Income Tax in various state jurisdictions (average rate of 7.4%).

The following table illustrates the current and deferred taxes for the periods indicated:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Current income taxes	€4,535.0	€—	€(0.2)
Deferred taxes	218.9	(161.0)	—
Income taxes	**€4,753.9**	**€(161.0)**	**€(0.2)**

The following table reconciles the expected income taxes to the actual current income taxes and deferred taxes as presented in the table above. The expected income taxes were calculated using the combined income tax rates of BioNTech SE applicable to the Group and mentioned above which was applied to profit before taxes to calculate the expected income taxes.

	Years ended December 31,		
(in millions)	**2021**	**2020**[1]	**2019**[1]
Profit / (Loss) before tax	**€15,046.4**	**€(145.8)**	**€(179.4)**
Expected tax credit / (benefit)	€4,622.5	€(44.9)	€(55.2)
Effects			
Deviation due to local tax basis	9.1	0.6	0.1
Deviation due to deviating income tax rate (Germany and foreign countries)	9.4	1.3	0.1
Change in valuation allowance	3.0	(26.2)	(0.2)
Effects from tax losses	19.5	(90.4)	51.2
Change in deferred taxes due to tax rate change	(7.5)	—	—
Non-deductible expenses	90.5	0.8	0.1
Tax-free income	(0.3)	—	—
Non tax-effective share-based payment expenses	15.5	9.8	9.3
Tax-effective equity transaction costs	(1.2)	(10.2)	(5.1)
Adjustment prior year taxes	(2.9)	0.3	(0.3)
Non-tax effective bargain purchase	(0.7)	(2.2)	—
Other effects	(3.0)	0.1	(0.2)
Income taxes	**€4,753.9**	**€(161.0)**	**€(0.2)**
Effective tax rate	**31.6%**	**n.m.**[2]	**n.m.**[2]

(1) Certain amounts have been combined in the prior period to conform with the current period presentation.

(2) The information is not meaningful due to the loss before tax in the respective periods.

Deferred Taxes

Deferred taxes for the periods indicated relate to the following:

Year ended December 31, 2021

(in millions)	January 1, 2021	Recognized in P&L	Recognized in OCI	Acquisition of subsidiaries and businesses	December 31, 2021
Fixed assets	€5.6	€(1.3)	€—	€(10.8)	€(6.5)
Right-of-use assets[1]	(30.0)	(17.5)	—	—	(47.5)
Inventories	1.0	0.8	—	—	1.8
Trade and other receivables	(3.0)	(92.6)	—	—	(95.6)
Lease liabilities[1]	25.4	23.3	—	—	48.7
Contract liabilities	23.4	(12.8)	—	—	10.6
Loans and borrowings	0.5	22.6	—	—	23.1
Net employee defined benefit liabilities	0.8	0.1	—	—	0.9
Other provisions	1.5	4.8	—	—	6.3
Other (incl. deferred expenses)	10.6	(9.0)	—	—	1.6
Tax losses / tax credits	175.7	(106.8)	—	2.0	70.9
Deferred tax assets / (liabilities), net (before valuation adjustment)	**€211.5**	**€(188.4)**	**€—**	**€(8.8)**	**€14.3**
Valuation adjustment	(50.5)	(30.5)	—	—	(81.0)
Deferred tax assets / (liabilities), net (after valuation adjustment)	**€161.0**	**€(218.9)**	**€—**	**€(8.8)**	**€(66.7)**

Year ended December 31, 2020

(in millions)	January 1, 2020	Recognized in P&L[2]	Recognized in OCI	Acquisition of subsidiaries and businesses	December 31, 2020
Fixed assets	€(0.7)	€(2.4)	€—	€8.7	€5.6
Right-of-use assets[1]	(16.9)	(3.4)	—	(9.7)	(30.0)
Inventories	0.6	—	—	0.4	1.0
Trade and other receivables	—	(3.0)	—	—	(3.0)
Lease liabilities[1]	17.4	(1.7)	—	9.7	25.4
Loans and borrowings	—	0.3	—	0.2	0.5
Contract liabilities	23.5	(0.1)	—	—	23.4
Net employee defined benefit liabilities	—	0.2	(0.1)	0.7	0.8
Other provisions	0.2	0.9	—	0.4	1.5
Other (incl. deferred expenses)	2.1	8.3	—	0.2	10.6
Tax losses / tax credits	109.8	41.6	—	24.3	175.7
Deferred tax assets net (before valuation adjustment)	**€136.0**	**€40.7**	**€(0.1)**	**€34.9**	**€211.5**
Valuation adjustment	(136.0)	120.3	—	(34.8)	(50.5)
Deferred tax assets net (after valuation adjustment)	**€—**	**€161.0**	**€(0.1)**	**€0.1**	**€161.0**

(1) Presentation has been adjusted to present right-of-use assets and lease liabilities as well as trade and other receivables separately.

(2) Includes all changes in deferred taxes related to U.S. tax group other than those acquired in business combination.

As of December 31, 2021, our accumulated tax losses comprised tax losses of German entities not within the tax group (as of December 31, 2021: BioNTech Innovation and Services Marburg GmbH, BioNTech Innovation GmbH i.G., BioNTech Real Estate Verwaltungs GmbH and the Real Estate partnerships; as of December 31, 2020: reSano GmbH, BioNTech Manufacturing Marburg GmbH, BioNTech Real Estate Verwaltungs GmbH and the Real Estate partnerships) and U.S. tax group. Up until the year ended December 31, 2020, our accumulated tax losses comprised also those of the German tax group. Our accumulated tax losses for the periods indicated amounted to the following:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Corporate tax	€272.0	€596.4	€356.0
Trade tax	170.6	513.6	352.3

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Federal tax credits	€4.0	€0.8	€—
State tax credits	1.6	0.3	—

Up until the year ended December 31, 2020, deferred tax assets on tax losses had not been recognized as there was not sufficient probability in terms of IAS 12 that there would have been future taxable profits available against which the unused tax losses could have been utilized.

Since December 2020, our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide, which resulted in recognition of revenues from the commercial sale of pharmaceutical products for the first time. Therefore as of December 31, 2020, it was considered highly probable that taxable profits for the German tax group would be available against which the tax losses could be utilized. On this basis, we had recognized deferred tax assets and liabilities with a net amount of €161.0 million for the cumulative tax losses and temporary differences determined for the German tax group as of December 31, 2020. During the year ended December 31, 2021, deferred tax assets on tax losses which had been recognized for the losses incurred by the German tax group were fully utilized (as per the end of each quarter during the year ended December 31, 2021, a proportionate amount of the deferred tax assets related to the tax loss carryforward was utilized). The change in deferred taxes was also supplemented by deferred taxes on temporary differences.

As of December 31, 2021, we have not recognized deferred tax asset for unused tax losses and temporary differences at amount of €81.0 million (December 31, 2020: €50.5 million, December 31, 2019: €136.0 million) as there is not sufficient probability in terms of IAS 12 that there will be future taxable income available against which the unused tax losses and temporary differences can be utilized.

These amounts included tax losses at an amount of €238.1 million US federal tax losses and €147.4 million US state tax losses (December 31, 2020: €136.8 million US federal tax losses and €60.9 million US state tax losses, December 31, 2019: nil) related to the US tax group, thereof €20.9 million US federal losses that begin to expire at various dates beginning in 2033. All other unused tax losses and temporary differences can be carried forward indefinitely.

9 Earnings per Share

Basic earnings per share (EPS) is calculated by dividing the profit / (loss) for the year attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year.

Diluted EPS is calculated by dividing the profit / (loss) attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on conversion of all the dilutive potential ordinary shares into ordinary shares.

On September 18, 2019, we effected a 1:18 share split by issuing 206,595,492 shares by way of a capital increase from our own funds; thus, no outside proceeds were received. This capital increase came into effect upon registration with

the commercial register (*Handelsregister*). The accompanying financial statements and notes to the financial statements including the EPS information below which relate to the period before September 18, 2019, give retroactive effect to the share split.

The following table reflects the income and share data used in the basic and diluted EPS calculations:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Profit / (loss) attributable to ordinary equity holders of the parent for basic earnings	**€10,292.5**	**€15.2**	**€(179.1)**
Weighted average number of ordinary shares for basic EPS	**244.0**	**235.4**	**211.5**
Effects of dilution from share options	15.7	13.1	—
Weighted average number of ordinary shares adjusted for the effect of dilution	**259.7**	**248.5**	**211.5**
Earnings per share[1]			
Basic profit / (loss) for the period per share	€42.18	€0.06	€(0.85)
Diluted profit / (loss) for the period per share	€39.63	€0.06	€(0.85)

(1) Capital increase due to 1:18 share split occurred on September 18, 2019. Retroactive effect is reflected in number of shares which relate to the period before the share split.

In January 2022, we announced a new research, development and commercialization collaboration with Pfizer to develop a potential first mRNA-based vaccine for the prevention of shingles (herpes zoster virus, or HZV). Under the terms of the agreement, we issued 497,727 ordinary shares with the nominal amount of €0.5 million to Pfizer which were registered with the commercial register (*Handelsregister*) on March 24, 2022.

Share options were not included in the calculation of diluted EPS for periods in which they were antidilutive; i.e., for the periods in which a loss was incurred.

10 Property, Plant and Equipment

(in millions) **Acquisition and production costs**	**Land and buildings**	**Equipment, tools and installations**	**Construction in progress and advance payments**	**Total**
As of January 1, 2020	**€29.4**	**€83.2**	**€29.7**	**€142.3**
Additions	14.9	10.1	41.0	66.0
Disposals	—	(6.9)	(1.0)	(7.9)
Reclassifications	8.6	1.8	(10.4)	—
Currency differences	—	(0.7)	—	(0.7)
Acquisition of subsidiaries and businesses	8.4	54.9	22.3	85.6
As of December 31, 2020	**€61.3**	**€142.4**	**€81.6**	**€285.3**
As of January 1, 2021	**€61.3**	**€142.4**	**€81.6**	**€285.3**
Additions	20.0	44.3	63.2	127.5
Disposals	(0.8)	(15.1)	(1.7)	(17.6)
Reclassifications	23.1	25.8	(48.9)	—
Currency differences	0.5	0.7	0.1	1.3
Acquisition of subsidiaries and businesses	—	0.2	—	0.2
As of December 31, 2021	**€104.1**	**€198.3**	**€94.3**	**€396.7**

(in millions) **Cumulative depreciation and impairment charges**	**Land and buildings**	**Equipment, tools and installations**	**Construction in progress and advance payments**	**Total**
As of January 1, 2020	**€8.3**	**€41.0**	**€—**	**€49.3**
Depreciation	2.1	13.8	—	15.9
Disposals	—	(6.7)	—	(6.7)
Currency differences	—	(0.2)	—	(0.2)
As of December 31, 2020	**€10.4**	**€47.9**	**€—**	**€58.3**
As of January 1, 2021	10.4	47.9	—	58.3
Depreciation	4.4	25.0	—	29.4
Disposals	(0.6)	(13.1)	—	(13.7)
Currency differences	—	0.2	—	0.2
As of December 31, 2021	**€14.2**	**€60.0**	**€—**	**€74.2**

(in millions) **Carrying amount**	**Land and buildings**	**Equipment, tools and installations**	**Construction in progress and advance payments**	**Total**
As of December 31, 2020	**50.9**	**94.5**	**81.6**	**227.0**
As of December 31, 2021	**€89.9**	**€138.3**	**€94.3**	**€322.5**

11 Intangible Assets

(in millions) **Acquisition costs**	**Goodwill**	**Concessions, licenses, in-process R&D and similar rights**	**Advance payments**	**Total**
As of January 1, 2020	**€3.0**	**€116.3**	**€2.4**	**€121.7**
Additions	—	4.2	4.4	8.6
Disposals	—	(5.4)	(0.6)	(6.0)
Reclassifications	—	0.2	(0.2)	—
Currency differences	(6.8)	(3.9)	—	(10.7)
Acquisition of subsidiaries and businesses	57.5	35.8	—	93.3
As of December 31, 2020	**€53.7**	**€147.2**	**€6.0**	**€206.9**
As of January 1, 2021	53.7	147.2	6.0	206.9
Additions	—	5.9	4.2	10.1
Disposals	—	(8.5)	(1.2)	(9.7)
Reclassifications	—	1.2	(1.2)	—
Currency differences	4.1	2.5	—	6.6
Acquisition of subsidiaries and businesses	—	43.3	—	43.3
As of December 31, 2021	**€57.8**	**€191.6**	**€7.8**	**€257.2**

(in millions) **Cumulative amortization and impairment charges**	**Goodwill**	**Concessions, licenses, in-process R&D and similar rights**	**Advance payments**	**Total**
As of January 1, 2020	**€—**	**€32.3**	**€—**	**€32.3**
Amortization	—	16.6	—	16.6
Disposals	—	(5.4)	—	(5.4)
Currency differences	—	(0.1)	—	(0.1)
As of December 31, 2020	**€—**	**€43.4**	**€—**	**€43.4**
As of January 1, 2021	—	43.4	—	43.4
Amortization	—	16.8	—	16.8
Disposals	—	(5.5)	—	(5.5)
Currency differences	—	0.1	—	0.1
As of December 31, 2021	**€—**	**€54.8**	**€—**	**€54.8**

(in millions) **Carrying amount**	**Goodwill**	**Concessions, licenses, in-process R&D and similar rights**	**Advance payments**	**Total**
As of December 31, 2020	**53.7**	**103.8**	**6.0**	**163.5**
As of December 31, 2021	**€57.8**	**€136.8**	**€7.8**	**€202.4**

Goodwill and Intangible Assets with Indefinite Useful Lives

	CGU Immunotherapies		**External Product Sales of JPT**		**Total**	
(in millions)	As of December 31, 2021	As of December 31, 2020	As of December 31, 2021	As of December 31, 2020	**As of December 31, 2021**	**As of December 31, 2020**
Goodwill	€57.3	€53.2	€0.5	€0.5	**€57.8**	**€53.7**

For the year ended December 31, 2021, we have total Goodwill of €57.3 million, which relates almost completely to the CGU immunotherapies. The CGU immunotherapies focus on the development of therapies to address a range of rare and infectious diseases and include our broad pipeline that includes mRNA-based immune activators, antigen-targeting T cells and antibodies, and defined immunomodulators of various immune cell mechanisms.

The recoverable amount of the CGU immunotherapies has been determined based on a fair value less cost of disposal (FVLCD) derived from our market capitalization as observable input parameter. As a result of the analysis, management did not identify an impairment for this CGU.

We concluded that no reasonable possible change of the recoverable amount would cause the carrying amount of the CGU Immunotherapies to exceed its recoverable amount.

Non-Current Assets by Region

As of December 31, 2021, non-current assets comprised €139.7 million intangible assets, property, plant and equipment, right-of-use assets and other assets of our subsidiaries incorporated in the United States (as of December 31, 2020: €89.2 million). The remaining non-current assets relate to subsidiaries incorporated in Germany.

12 Financial Assets and Financial Liabilities

12.1 Capital Risk Management

Our capital management objectives are designed primarily to finance our growth strategy.

Our controlling committee reviews the total amount of cash on a regular basis. As part of this review, the committee considers the total cash and cash equivalents, the cash outflow, currency translation differences and refinancing activities. We monitor cash using a burn rate. The cash burn rate is defined as the average monthly net cash flow from operating and investing activities during a financial year.

(in millions)	**December 31, 2021**	**December 31, 2020**
Cash and cash equivalents at banks and on hand	€1,692.7	€1,210.2
Total	**€1,692.7**	**€1,210.2**

When analyzing our liquidity, we anticipate certain significant balance sheet items that are expected to improve our cash and cash equivalents balance subsequent to the end of the reporting period. Please refer to Note 12.2 for details on cash deposits which were returned to cash and cash equivalents and Note 6.2 explains the settlement payments received under our COVID-19 collaboration with Pfizer.

In general, the aim is to maximize the financial resources available for further research and development projects.

As of December 1, 2021, an investment and asset management policy became effective which confirmed our previous objectives, policies and processes for managing cash which requires that our investment portfolio shall be maintained in a manner that minimizes risk of the invested capital. These risks include mainly credit risk and concentration risk. The portfolio must provide liquidity in a timely manner to accommodate operational and capital needs. The portfolio is managed efficiently by the Treasury department.

We are not subject to externally imposed capital requirements. Our capital management objectives were achieved in the reporting year.

12.2 Categories of Financial Instruments

Financial Assets: Financial Assets at Amortized Cost and at Fair Value through Profit or Loss

Set out below, is an overview of financial assets at amortized cost and at fair value through profit or loss, other than cash and cash equivalents, held by the Group as of the dates indicated:

Financial assets

(in millions)	**December 31, 2021**	**December 31, 2020**
Derivatives not designated as hedging instrument		
Foreign exchange forward contracts	€5.7	€—
Equity instruments designated at fair value through OCI		
InstaDeep Ltd.	19.5	—
Financial assets at amortized cost		
Trade and other receivables	12,381.7	165.5
Cash deposit with an original term of six months	375.2	—
Other financial assets	2.5	137.2
Total	**€12,784.6**	**€302.7**
Total current	12,763.3	302.7
Total non-current	21.3	—

Equity Instruments Designated at Fair Value through OCI

In December 2021, we acquired 5.3% of the shares (fully diluted as of closing) of InstaDeep Ltd., a provider of artificial intelligence-powered decision-making systems headquartered in London, United Kingdom. The equity investment complements the already established commercial cooperation based on the field of artificial intelligence and machine learning in the context of computational design of new precision immunotherapies. In accordance with IFRS 9 we elected to present gains and losses on this equity investment in OCI to avoid fluctuation to be disclosed in our consolidated financial statements of profit or loss. Since the acquisition date, no material gains and losses on this equity investment have occurred.

Financial Assets at Amortized Cost

Trade and other receivables significantly increased and remained outstanding as of December 31, 2021, mainly due to the contractual settlement of the gross profit share under our COVID-19 collaboration with Pfizer as described in Note 6.2. as well as from our direct product sales to customers in our territory.

Cash deposits with an original term of six months are presented as other financial assets. Within our interim condensed consolidated financial statements as of, and for the three and nine months ended, September 30, 2021, cash deposits in an amount of €367.0 million with a term of six months at inception had been classified as cash and cash equivalents. The presentation as other financial assets in our consolidated statements of financial position and cash flow used in investing activities in our consolidated statements of cash flows was corrected as of and for the year ended December 31, 2021. As of December 31, 2021, the remaining term until maturity for the investments made was on average less than one month and the cash deposits in the amount of €375.2 million, were returned to cash and cash equivalents during January and February 2022.

Financial Liabilities: Financial Liabilities at Amortized /Cost (including Loans and Borrowings and Other Financial Liabilities)

Set out below, is an overview of financial liabilities, other financial liabilities and trade payables held by the Group as of the dates indicated:

Loans and borrowings

(in millions)	**Maturity**	**December 31, 2021**	**December 31, 2020**
Lease liabilities		€181.6	€84.2
Convertible note – host contract	8/28/2024	99.7	87.5
3.5% €50,000,000 bank loan	[1]	—	47.2
2.2% €10,000,000 secured bank loan	12/30/2027[2]	7.7	9.0
2.1% €9,450,000 secured bank loan	9/30/2028[2]	7.8	8.7
1.9% €3,528,892 secured bank loan	6/30/2027	3.4	3.5
0.8% €1,305,167 loan	5/30/2039	1.3	—
Total		**€301.5**	**€240.1**
Total current		129.9	9.1
Total non-current		171.6	231.0

[1] The loan was fully repaid during December 2021.

[2] The loans were fully repaid in February 2022.

Other financial liabilities

(in millions)	December 31, 2021	December 31, 2020
Derivatives not designated as hedging instrument		
Convertible note – embedded derivative	€308.7	€30.9
Foreign exchange forward contracts	63.0	—
Financial liabilities at fair value through profit or loss		
Contingent consideration	6.1	0.6
Total financial liabilities at fair value	**€377.8**	**€31.5**
Trade payables and other financial liabilities at amortized cost, other than loans and borrowings		
Trade payables	160.0	102.3
Other financial liabilities	818.7	74.1
Total trade payables and other financial liabilities at amortized cost, other than loans and borrowings	**€978.7**	**€176.4**
Total other financial liabilities	**€1,356.5**	**€207.9**
Total current	1,350.4	176.4
Total non-current	6.1	31.5

Total financial liabilities

(in millions)	December 31, 2021	December 31, 2020
Loans and borrowings	€301.5	€240.1
Other financial liabilities	1,356.5	207.9
Total	**€1,658.0**	**€448.0**
Total current	1,480.3	185.5
Total non-current	177.7	262.5

Loans and Borrowings

2.2% and 2.1% Secured Bank Loan

We maintain two secured loans with Deutsche Bank AG, or Deutsche Bank, a €9.5 million secured credit facility at a rate of 2.1% and maturing on September 30, 2028 to finance the buildouts of our JPT Peptide Technologies GmbH facility and a €10.0 million secured credit facility at a rate of 2.2% and maturing on December 30, 2027, of Innovative Manufacturing Services GmbH facility, respectively. As of December 31, 2021, the full amounts under these facilities were drawn down and were started to be repaid. Each of these facilities is secured by liens over our property. Subsequent to the end of the reporting period, we agreed to repay both Deutsche Bank loans as of February 25, 2022.

EIB Manufacturing Financing – 3.5% Secured Bank Loan

A financing arrangement which was entered with the European Investment Bank, or the EIB, in June 2020 to partially support the development of BNT162 and fund expansion of our manufacturing capacity to provide worldwide supply of BNT162 in response to the COVID-19 pandemic comprised a €100.0 million credit facility. Under this arrangement, €50.0 million (Credit A) at a cash interest fixed rate of 1.0% per annum payable quarterly in arrears, plus deferred interest at fixed rate of 2.5% per annum had been drawn down but was effectively repaid during the year ended December 31, 2021. The additional €50.0 million (Credit B) was cancelled effectively during the year ended December 31, 2021. The guarantee agreements securing the financing arrangement were effectively released by fulfilling all payment obligations derived from and fully repaying the amounts drawn under the arrangements.

June 2020 Private Placement – Convertible Note

A fund associated with Temasek Capital Management Pte. Ltd., or Temasek, and another accredited investor participated in a private investment which we refer to as the June 2020 Private Placement. The private placement includes an investment in a four years mandatory convertible note and an investment in ordinary shares and closed as of August 28, 2020, following the satisfaction of customary closing conditions. The private placement includes an investment in ordinary shares (see Note 16) and a €100.0 million investment in a four years mandatory convertible note with a coupon of 4.5% per annum and a conversion premium of 20% above its reference price. As of closing, the convertible note has been classified as a financial liability according to IAS 32 because the conversion features of the note lead to a conversion into a variable number of shares and is measured at amortized costs since the fair value option was not applied. On initial recognition, the financial liability was measured at the present value of the contractually determined future cash flows discounted at the effective interest rate of 9.0%. The financial liability is subsequently measured at amortized cost by using the effective interest rate method, reflecting actual and revised estimated contractual cash flows until extinguished upon conversion. In February 2022, we gave notice to Temasek that we will exercise our early redemption option and fully redeem the convertible note on March 1, 2022, the redemption date. The early redemption will be fulfilled by issuing the number of our ordinary shares calculated pursuant to the early redemption provisions of the convertible note, plus paying any fractional share and accrued but unpaid interest up to (but excluding) the redemption date. The early redemption was already expected and reflected in the presentation of the financial liability and our estimates for future cash flows and conversion effects under the convertible note as of December 31, 2021. The conversion features provided for in the contract were identified as a combined embedded derivative since they share the same risk exposure and are interdependent. The embedded derivative was bifurcated from the convertible note, as host contract, and is recognized as a separate financial instrument. Based on the classification as derivative, the instrument is measured at fair value through profit and loss until it is extinguished upon conversion. The fair value of the embedded derivative is determined by modeling the stock price movement using the Cox-Rubinstein binomial tree model to derive the value of the conversion right. The primary inputs used in the model include stock price volatility, credit spreads, risk-free interest rate and foreign exchange forward rates. Stock price volatility is based on our implied volatility, credit risk is model implied and adjusted for movement in credit spreads for B-rated corporates at each valuation date, the risk-free interest rate is based on currency specific time congruent IBOR and swap rates whereas the foreign exchange forward rates are based on observable market data.

Derivatives Not Designated as Hedging Instrument

Derivatives not designated as hedging instruments relate to foreign exchange forward contracts that were entered into during the year ended December 31, 2021, to manage some of our foreign currency exposures. The foreign exchange forward contracts are intended to reduce the exposure to foreign currency risk resulting from trade receivables denominated in U.S. dollar.

Other Financial Liabilities at Amortized Cost

Other financial liabilities at amortized cost mainly include obligations derived from license agreements which are being incurred with respect to our COVID-19 vaccine sales in our and the collaboration partners' territories where we and our partners are using third party intellectual property. In addition, other financial liabilities at amortized cost comprise obligations from services received but not yet invoiced.

12.3 Fair Values

Fair values of cash and cash equivalents, trade receivables, trade payables and other current financial assets and liabilities approximate their carrying amounts as of December 31, 2021, largely due to the short-term maturities of these instruments.

After repaying the EIB loan, the financial liabilities measured at amortized cost include four fixed-interest rate loans as well as the convertible note. As of December 31, 2021, the carrying value approximates their fair values as there have been no significant changes in relevant interest rates since the inception of the respective loans and note.

The fair values of financial instruments measured at fair value are reassessed on a quarterly basis. The valuation technique used for measuring the fair value of the embedded derivative is based on significant observable inputs (Level 2). During the year ended December 31, 2021, the fair value adjustment derived from remeasuring the embedded derivative was recognized as finance expenses in our consolidated statements of profit or loss and amounted to €277.8 million. The foreign exchange forward contracts are valued using valuation techniques, which employ the use of foreign exchange spot

and forward rates (Level 2). The fair value adjustment derived from remeasuring the foreign exchange forward contracts amounted to other operating expenses of €86.3 million and other operating income of €5.7 million in our consolidated statements of profit or loss. The initial fair value of the contingent consideration determined at acquisition was based on cash flow projections (unobservable Level 3 input factors) and remains valid since no changes of the underlying available information has occurred.

12.4 Financial Instruments Risk Management Objectives and Policies

Our financial liabilities comprise bank loans, lease liabilities, trade and other payables as well as the convertible note and hedging liabilities. The main purpose of these financial liabilities is to enable our operations. Our principal financial assets include mainly cash and trade receivables that derive directly from our operations.

We are exposed to market risk, credit risk and liquidity risk. Our Management Board oversees the management of these risks.

The controlling committee provides assurance to our Management Board that our financial risk activities are governed by appropriate policies and procedures and that financial risks are identified, measured and managed in accordance with our policies and risk objectives. The Management Board reviews and agrees policies for managing each of these risks, which are summarized below.

12.5 Market Risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in market prices. Market risk comprises of three types of risk: interest risk, foreign currency risk and other price risk. Financial instruments affected by market risk include financial assets like trade and other receivables, cash and cash equivalents as well as financial liabilities like trade payables and other financial liabilities. Interest risk as well as other price risk are not considered as risks.

The sensitivity analysis in the following sections relate to the position as of December 31, 2021 and December 31, 2020.

There were no material changes in the our market risk exposures or changes in the way risk was managed and valued during the periods.

Foreign Currency Risk

Foreign currency risk is the risk that the fair value or future cash flows of an exposure will fluctuate because of changes in foreign exchange rates. We are subject to currency risk, as our income and expenditures are denominated in Euro and the U.S. dollar. As such, we are exposed to exchange rate fluctuations between these currencies. Cash inflows denominated in U.S. dollar mainly result from generating proceeds under our collaboration agreements which significantly increased in the past year. Our commercial revenues are primarily collaboration revenues from earnings based on our partners' gross profit, which is shared under the respective collaboration agreements and represents payments we receive in U.S. dollar. Cash outflows dominated in U.S. dollar mainly result from amounts spent on research and development activities as well as expanding our global footprint further. Especially when funds are required in Euros, we are exposed to foreign currency exchange risks. With the aim of preserving capital, surplus liquidity is invested carefully for example into foreign currency investments. Exchange rate fluctuations can reduce the value of our financial positions. We limit the effects of the identified risks by means of a coordinated and consistently implemented risk strategy. Besides applying natural hedging relationships where possible, a matter of principle, foreign exchange forward contracts are concluded as instruments to mitigate foreign currency exchange risk associated with foreign currency-denominated payments. However, the foreign exchange forward contracts which we entered were not designated as hedging instrument under IFRS.

The carrying amount of the monetary assets and liabilities denominated in U.S. dollar at the dates indicated are as follows:

(in millions)	December 31, 2021	December 31, 2020
U.S. dollar Bank accounts	€436.2	€673.5
Other financial assets in U.S. dollar	11,895.5	85.6
Financial liabilities in U.S. dollar	656.7	72.8
Total	**€11,675.0**	**€686.3**

The following tables demonstrate the sensitivity to a reasonably possible change in U.S. dollar exchange rates or U.S. dollar forward rates, with all other variables held constant. The impact on our profit / (loss) before tax is due to changes in the fair value of monetary assets and liabilities. The exposure to foreign currency changes for all other currencies is not material.

		1 € =	Closing rate		Average rate	
Currency	**Country**		**2021**	**2020**	**2021**	**2020**
U.S. dollar	United States		1.1326	1.2271	1.1827	1.1422

(in millions)	Change in U.S. dollar rate	Effect on profit / (loss) before tax	Effect on pre-tax equity
2021	+5 %	€(329.5)	€(328.5)
	-5 %	364.3	363.0
2020	+5 %	(32.5)	(32.7)
	-5 %	35.9	36.1

12.6 Credit Risk Management

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities, including deposits with banks and financial institutions, foreign exchange transactions and trade and other receivables.

Trade and Other Receivables

Our exposure to credit risk of trade receivables and contract assets is primarily on transactions with corporate customers in the biopharma / biotech industry that operate in the United States or Germany as well as governments which are customers established in connection with fulfilling our commercial obligations in our territories as defined under our current COVID-19 collaboration agreements. An analysis of the aging of receivables and the creditworthiness of customers is used to evaluate this risk at each reporting date. The Group follows risk control procedures to assess the credit quality of the customers taking into account their financial position, past experience and other factors. The compliance with credit limits by corporate customers is regularly monitored by us.

As of December 31, 2021, the outstanding trade receivables were mainly due from our collaboration partner Pfizer as well as the Turkish government. Please see Note 12.1 for information on trade receivables received or expected to be received subsequent to the end of the reporting period. Besides well-established pharmaceutical companies and governmental institutions, to a smaller extent, our other customers are medical universities, other public institutions and peers in the biopharma industry, which all have a very high credit rating. Due to this customer portfolio, the credit risk on trade receivables and contract assets is generally very low. We have not incurred bad debt expense and do not expect that this will change with respect to the trade receivables recognized as of December 31, 2021.

Generally, if overdue by more than 90 days and not subject to enforcement activity trade receivables are considered for write-offs. The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial

assets disclosed in Note 12.2. The expected credit risk on trade receivables and other financial assets derived from applying the simplified approach in calculating expected credit losses was estimated to be not material as of December 31, 2021, as well as December 31, 2020. The Group does not hold collateral as security.

Cash and Cash Equivalents as well as Cash Deposits with an Original Term of Six Months

Credit risk from balances with banks and financial institutions is managed by our Treasury department in accordance with our policy.

Credit risk stemming from cash and cash equivalents as well as cash deposits with an original term of six months is very low due to its demand feature and the high credit rating of the respective banks.

The maximum exposure to credit risk for the components of the consolidated statements of financial position as of December 31, 2021, and December 31, 2020, are the carrying amounts as illustrated in Note 12.1 and Note 12.2.

12.7 Liquidity Risk

Since December 2020, our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide, resulting in commercial revenues respectively. We plan to invest heavily in R&D as we make a strong drive to build out our global development organization and diversify our therapeutic area footprint. Additionally, we plan to enhance capabilities through complementary acquisitions, technologies, infrastructure and manufacturing. Lack of external financial support could pose a risk of going concern. Our liquidity management ensures the availability of cash and cash equivalents, short term financial instruments for operational activities and further investments through appropriate budget planning. In addition, a sufficient level of cash and cash equivalents, which is managed centrally, is always maintained to finance the operational activities.

We monitor liquidity risks using a liquidity planning tool.

Ultimately, the responsibility for liquidity risk management lies with our Management Board, which has established an appropriate approach to managing short-, medium- and long-term financing and liquidity requirements. We manage liquidity risks by holding appropriate reserves, as well as by monitoring forecasted and actual cash flows and reconciling the maturity profiles of financial assets and liabilities.

Risk Concentration

Concentrations arise when the number of counterparties is small or larger number of counterparties are engaged in similar business activities, or activities in the same geographical region, or have economic features that would cause their ability to meet contractual obligations to be affected similarly by changes in economic, political or other conditions. Concentrations indicate the relative sensitivity of our performance to developments affecting a particular industry.

In order to reduce the concentrations of risk derived from having only few customers, including the significant relationship maintained with our collaboration partner Pfizer, our policies and procedures include specific guidelines to constantly monitor the customers' credit risks.

The maturity profile of our financial liabilities based on contractual undiscounted payments is summarized as follows:

Year ended December 31, 2021

(in millions)	**Less than 1 year**	**1 to 5 years**	**More than 5 years**	**Total**
Loans and borrowings	€2.6	€11.5	€6.1	**€20.2**
Trade and other payables	160.0	—	—	**160.0**
Lease liabilities	31.3	89.1	88.9	**209.3**
Contingent consideration	—	—	6.1	**6.1**
Foreign exchange forward contracts	63.0	—	—	**63.0**
Other financial liabilities	818.7	—	—	**818.7**
Total	**€1,075.6**	**€100.6**	**€101.1**	**€1,277.3**

Year ended December 31, 2020

(in millions)	Less than 1 year	1 to 5 years	More than 5 years	Total
Loans and borrowings	€3.2	€12.6	€66.7	**€82.5**
Trade and other payables	102.3	—	—	**102.3**
Lease liabilities	8.5	27.3	71.8	**107.6**
Contingent consideration	—	—	0.6	**0.6**
Other financial liabilities	74.1	—	—	**74.1**
Total	**€188.1**	**€39.9**	**€139.1**	**€367.1**

The mandatory convertible note, which was issued during the year ended December 31, 2020, and which is expected to be settled in equity is excluded from the table above.

12.8 Changes in Liabilities Arising from Financing Activities

Year ended December 31, 2021

(in millions)	January 1, 2021	Cash flows	Acquisition of subsidiaries and businesses	Changes in fair value	New leases and disposals	Reclassification	Other	December 31, 2021
Current obligations under lease contracts	€6.1	€(14.1)	€—	€—	€22.1	€13.4	€0.4	**€27.9**
Non-current obligations under lease contracts	78.1	—	—	—	87.7	(13.4)	1.3	**153.7**
Loans and borrowings	155.9	(52.6)	1.3	—	—	—	15.3	**119.9**
Convertible note – embedded derivative	30.9	—	—	277.8	—	—	—	**308.7**
Total	**€271.0**	**€(66.7)**	**€1.3**	**€277.8**	**€109.8**	**€—**	**€17.0**	**€610.2**

Year ended December 31, 2020

(in millions)	January 1, 2020	Cash flows	Acquisition of subsidiaries and businesses	Changes in fair value	New leases and disposals	Reclassification	Other	December 31, 2020
Current obligations under lease contracts	€3.5	€(12.7)	€2.7	€—	€8.6	€4.0	€—	**€6.1**
Non-current obligations under lease contracts	54.1	—	32.3	—	(4.3)	(4.0)	—	**78.1**
Loans and borrowings	16.6	140.8	—	—	—	—	(1.5)	**155.9**
Convertible note – embedded derivative	—	13.6	—	17.3	—	—	—	**30.9**
Total	**€74.2**	**€141.7**	**€35.0**	**€17.3**	**€4.3**	**€—**	**€(1.5)**	**€271.0**

13 Inventories

(in millions)	December 31, 2021	December 31, 2020
Raw materials and supplies	€248.3	€44.3
Unfinished goods	84.5	19.4
Finished goods	169.7	0.4
Total	**€502.5**	**€64.1**

During the year ended December 31, 2021, inventory write-offs and reserves related to our COVID-19 vaccine amounting to €194.6 million were recognized in cost of sales as a result of the respective inventories not fulfilling the predefined quality-specifications (GMP) and / or regulatory requirements (approval of the respective authorities, i.e. FDA) and / or shelf-life expiration, compared to nil in the previous period. We have not pledged any inventories as securities for liabilities. During the years ended December 31, 2021 and 2020, €1,255.1 million and €32.1 million, respectively costs of inventories were recognized as cost of sales.

14 Other Assets

(in millions)	December 31, 2021	December 31, 2020
Sales tax receivable	€26.7	€4.2
Prepayments related to CRO and CMO contracts	22.8	14.2
Prepayments on inventories	6.1	29.8
Prepayments related to service contracts	6.5	3.8
Other	3.6	10.0
Total	**€65.7**	**€62.0**
Total current	64.9	61.0
Total non-current	0.8	1.0

15 Deferred Expenses

(in millions)	December 31, 2021	December 31, 2020
Deferred remuneration	€21.2	€—
Deferred transportation cost	12.7	—
Deferred expenses from CRO and CMO contracts	7.1	5.7
Deferred expenses from insurance contracts	5.0	13.8
Other	16.1	8.5
Total	**€62.1**	**€28.0**
Total current	48.5	28.0
Total non-current	13.6	—

16 Issued Capital and Reserves

On September 18, 2019, we effected a 1:18 share split by issuing 206,595,492 shares by way of a capital increase from our own funds; thus, no outside proceeds were received. The capital increase came into effect upon registration with

the commercial register (*Handelsregister*). The accompanying consolidated financial statements and notes to the consolidated financial statements give retroactive effect to the share split for all periods presented.

Proposed Cash Dividend Distributions

(in millions)	**December 31, 2021**
Proposed cash dividends on ordinary shares	
Cash dividend for 2021: €2.00 per share	**€486.0**

We will propose a special cash dividend of €2.00 per ordinary share (including those held in the form of ADSs), which corresponds to an aggregate of approximately €486.0 million, based on the shares outstanding as of March 30, 2022. Since the cash dividend is subject to approval at our Annual General Meeting to be held in June 2022, no liability is recognized as of December 31, 2021. The Annual General Meeting expects to serve as the record date for the dividend.

Capital Transactions During the Year Ended December 31, 2021

In November 2020, we entered into a sales agreement, or the Sales Agreement, with Jefferies LLC and SVB Leerink LLC, as sales agents, to establish an at-the-market offering program, pursuant to which we may sell, from time to time, ADSs representing ordinary shares for aggregate gross proceeds of up to $500.0 million. During the year ended December 31, 2021, we sold 995,890 ADSs, each representing one of our ordinary shares that had previously been held in treasury, under the Sales Agreement for aggregate gross proceeds of $200.0 million (€163.6 million). As of December 31, 2021, the remaining capacity under the Sales Agreement is $207.1 million. Under the at-the-market offering program ADSs are sold via the stock exchange and therefore no shareholders' subscription rights are affected. As a result of the transaction, treasury shares in the amount of €1.0 million were issued and the capital reserve increased by €162.6 million. Costs of €2.7 million related to the equity transaction were recorded in equity as deduction from the capital reserve.

Capital Transactions During the Year Ended December 31, 2020

During the year ended December 31, 2020, our issued share capital increased by €14.0 million. Each share has a nominal value of €1.00. As a result of the financing transactions, treasury shares decreased by €0.7 million and capital reserve increased by €861.0 million. Costs of €33.2 million related to these equity transactions were recorded in equity as deduction from the capital reserve. The financing transactions that occurred during the year ended December 31, 2020, were as follows:

Shanghai Fosun Pharmaceuticals (Group) Co., Ltd

As part of the BNT162 program, we entered into a strategic alliance with Fosun Pharma to develop COVID-19 vaccine candidates in China. Fosun Pharma agreed to make an equity investment of €45.6 million ($50.0 million) for 1,580,777 ordinary shares via Fosun Industrial Co., Limited, Hong Kong. The increase in share capital with a nominal amount of €1.6 million was subject to execution of share subscription documentation and approval from regulatory authorities in China and became effective with the registration with the commercial register (*Handelsregister*) on April 23, 2020. As a result of the transaction, the capital reserve increased by €44.0 million.

Pfizer Inc., New York, New York, United States

As part of the collaboration between us and Pfizer for the co-development of BNT162, Pfizer agreed to make an equity investment of €103.9 million ($113.0 million). The issuance of 2,377,446 ordinary shares with the nominal amount of €2.4 million was registered with the commercial register (*Handelsregister*) on May 5, 2020. As a result of the transaction the capital reserve increased by €101.5 million.

Neon Therapeutics, Inc., Cambridge, Massachusetts, United States

We acquired Neon by issuing 1,935,488 ADSs representing our ordinary shares with the nominal amount of €1.9 million to former stockholders of Neon in the Merger. The capital increase was registered with the commercial register (*Handelsregister*) on May 8, 2020. As a result of the transaction the capital reserve increased by €87.6 million.

Global Offering

On July 27, 2020, our share capital increased by €5.5 million ($6.4 million) in conjunction with the underwritten offering of 5,500,000 ADSs each representing one ordinary shares at a public offering price of $93.00 per ADS ("Underwritten Offering"). On August 27, 2020, following the Underwritten Offering, our share capital was increased by additional €16 thousand ($19 thousand) in conjunction with the rights offering of 16,124 ADSs each representing one of our ordinary shares at a public offering price of $93.00 per ADS ("Rights Offering"). The Underwritten Offering and the Rights Offering are part of a single, global offering which we refer to as the Global Offering. The gross proceeds of the Global Offering were €436.3 million ($513.0 million) including €5.5 million increase in share capital and €430.8 million increase in capital reserve.

June 2020 Private Placement – Equity Investment

A fund associated with Temasek Capital Management Pte. Ltd., or Temasek, and another accredited investor, contributed a private investment. The private placement includes an investment in a 4-year mandatory convertible note (see Note 12) and an investment of €123.9 million in ordinary shares. The issuance of 2,595,996 ordinary shares with the nominal amount of €2.6 million was registered with the commercial register (*Handelsregister*) on September 8, 2020. As result of the transaction the capital reserve increased by €121.3 million.

At-The-Market Offering Program

During the year ended December 31, 2020, we sold 735,490 ADSs, each representing one of our ordinary shares and previously held in treasury, under the Sales Agreement with Jefferies LLC and SVB Leerink LLC in November 2020 for aggregate gross proceeds of $92.9 million (€76.5 million). As a result of the transaction the capital reserve increased by €75.8 million.

17 Share-Based Payments

During the years ended December 31, 2021 and 2020, our share-based payment arrangements led to the following expenses:

		Years ended December 31,		
(in millions)	**Note**	**2021**	**2020**	**2019**
Expense arising from equity-settled share-based payment arrangements		€61.0	€32.1	€30.2
Employee Stock Ownership Plan	17.5	*20.2*	*17.1*	*27.0*
Chief Executive Officer Grant	17.4	*5.9*	*11.3*	*3.2*
Management Board Grant[(1)]	17.3	*2.4*	*2.7*	—
BioNTech 2020 Employee Equity Plan for employees based outside North America	17.1	*32.5*	*1.0*	—
Expense arising from cash-settled share-based payment arrangements		32.7	0.7	—
Employee Stock Ownership Plan	17.5	*6.3*	—	—
Management Board Grant[(1)]	17.2, 17.3	*3.6*	*0.7*	—
BioNTech Restricted Stock Unit Plan for North America Employees	17.1	*22.8*	—	—
Total		**€93.7**	**€32.8**	**€30.2**
Cost of sales		7.0	1.1	0.9
Research and development expenses		60.5	24.9	23.2
Sales and marketing expenses		0.5	0.1	0.1
General and administrative expenses		25.7	6.7	6.0
Total		**€93.7**	**€32.8**	**€30.2**

(1) In May 2021, phantom options were granted under the Management Board Grant for the 2021 year which led to a modification from equity-settled to cash-settled share-based payment arrangement and a reclassification of €1.1 million between equity and non-current other liabilities, respectively. Expenses incurred before and after the modification date have been disclosed as equity-settled or cash-settled share-based payment arrangement, respectively. The amount includes expenses incurred with respect to a one-time signing bonus granted to Jens Holstein as of his appointment to the Management Board (see Note 21.2).

17.1 BioNTech Employee Equity Plan

BioNTech 2020 Employee Equity Plan for Employees Based Outside North America (Equity-Settled)

Description of Share-Based Payments

In December 2020, we approved the BioNTech 2020 Employee Equity Plan for employees based outside North America, the European Plan. Under the European Plan, Restricted Cash Units, or RSUs, are offered to our employees. As of the grant date in February 2021, the European Plan was implemented for the calendar year 2020 by entering into award agreements with our employees under the LTI 2020 program. In addition, further award agreements were entered into under the LTI-plus program with employees who did not participate in the Employee Stock Ownership Plan, or ESOP. In December 2021 and January 2022, award agreements were announced to and respectively entered into with our employees and the European Plan was granted for the calendar year 2021, the LTI 2021 program. Since employees obtained a valid expectation of the award already as of the announcement date and started rendering services as of such date, we concluded that the service commencement date for the LTI 2021 program was in December 2021 and started recognizing expenses related to the services received, respectively. RSUs issued under the LTI 2020 and LTI 2021 program vest annually in equal installments after four years and RSUs issued under the LTI-plus program vests annually in equal installments after two years, with the LTI 2020 and the LTI-plus programs commencing in December 2020 and the LTI 2021 program commencing in December 2021, respectively. Under the LTI-plus program, 50% of the RSUs awarded to the participant were awarded on commencement of the program in December 2020 and the remaining 50% were awarded to the participant

shortly after the U.S. Food and Drug Administration, or the FDA, fully approved BNT162b2, our COVID-19 vaccine in August 2021 (non-vesting condition). As we have the ability to determine the method of settlement, all programs were classified as equity-settled. The cost of the awards will be recognized over the relevant service period, applying the graded vesting method.

Measurement of Fair Values

For the LTI 2020 and the LTI-plus program, the fair value of the awards was based upon the price of our ADSs representing ordinary shares at grant date. For the LTI 2021 program, the fair value of the awards for services received in advance of grant date was based upon the share price as of December 31, 2021, the reporting date. The estimate is revised at subsequent reporting periods until the date of grant has been established. A retention assumption is applied when estimating the number of equity instruments for which service conditions are expected to be satisfied and will be revised in case material differences arise. Ultimately, a true-up to the number satisfied until settlement date will be recorded.

Reconciliation of Outstanding Share-Options

	Restricted stock units	Weighted average fair value (€)
Granted under LTI 2020 and LTI-plus program	627,486	€89.41
Forfeited	(13,059)	88.84
Allocated under LTI 2021 program	110,036	227.62
As of December 31, 2021	**724,463**	**€110.4**

BioNTech 2020 Restricted Stock Unit Plan for North America Employees (Cash-Settled)

Description of Share-Based Payments

In December 2020, we approved the BioNTech 2020 Restricted Stock Unit Plan for North America Employees, or the North American Plan. Under the North American Plan, RSUs are offered to our employees. These RSUs generally vest over four years, with 25% vesting one year after the service commencement date and the remainder vesting in equal quarterly installments thereafter. The first awards under the North American Plan were granted in February 2021. The service date for these awards is the date as of which the employee became employed by BioNTech US. During the year ended December 31, 2021, further awards were granted under the North American Plan, which included awards granted to new hire employees and ongoing recurring awards to existing employees on the approximate anniversary of each employee's start date of employment with BioNTech US. As these RSUs are intended to be cash-settled upon vesting, the awards were defined as a cash-settled share-based payment arrangement. The liability related to these awards is measured, initially and at the end of each reporting period until settled, at the fair value of the award considering the price of the ADSs representing our ordinary shares. The cost of the awards will be recognized over the relevant service period, applying the graded vesting method.

17.2 Management Board Grant – Short-Term Incentive (Cash-Settled)

The following sets forth the effective and termination dates of the current service agreements of our Management Board:

- Prof. Ugur Sahin, M.D.: September 1, 2019 – December 31, 2022
- Sean Marett: September 1, 2019 – September 30, 2022
- Dr. Sierk Poetting: September 1, 2019 – November 30, 2026 (renewed as of December 1, 2021)
- Prof. Özlem Türeci, M.D.: September 1, 2019 – May 31, 2022 (renewed as of March 1, 2022 until May 31, 2025)
- Ryan Richardson: January 1, 2020 – December 31, 2022
- Jens Holstein: July 1, 2021 – June 30, 2025

The service agreements with our Management Board provide for a short-term incentive compensation which is an annual performance-related bonus for the years of their respective service periods. Effective January 1, 2020, the maximum

short-term incentive compensation for our Management Board members, Prof. Ugur Sahin, Sean Marett, Dr. Sierk Poetting and Prof. Özlem Türeci was 50% of their annual fixed compensation. The same applied to Ryan Richardson's maximum short-term incentive compensation effective since January 1, 2020. Effective July 1, 2021, the maximum short-term incentive compensation for Jens Holstein was defined as €300,000. Effective January 1, 2022, the maximum short-term incentive compensation for Dr. Sierk Poetting has been increased to €300,000.The payout amount of the short-term incentive compensation depends on the achievement of certain financial performance criteria and non-financial performance criteria (performance targets) of the Group in a particular financial year, which goals are set uniformly for all members of the Management Board. 50% percent of the compensation are paid following the determination on the actual achievement of the performance targets (first installment), with the remaining amount payable one year after such determination, subject to adjustment relative to the performance of the price of the American Depositary Shares representing our ordinary shares during that year (second installment).

For each of the yearly awards, the second installment of the short-term incentive compensation that is dependent on the price of the American Depositary Shares representing our ordinary shares, represents a cash-settled share-based payment arrangement. The fair values of the liabilities are recognized over the award's vesting period beginning as of service agreements' effective dates, being the service commencement date until each separate determination date and are remeasured until settlement date.

17.3 Management Board Grant Long-Term Incentive (partly Equity-Settled, partly Cash-Settled)

Description of Share-Based Payments

The service agreements with our Management Board provide for a long-term incentive compensation in terms of an annual grant of options to purchase BioNTech shares for the years of their respective service periods. The options granted each year will be subject to the terms, conditions, definitions and provisions of our Employee Stock Ownership Plan (ESOP) and the applicable option agreement thereunder. Effective January 1, 2020, the number of options to be granted each year to Prof. Ugur Sahin, Sean Marett, Prof. Özlem Türeci and Ryan Richardson are to be calculated based on a value of €750,000, €300,000, €300,000 and €260,000, respectively. The value used to calculate the number of options for Ryan Richardson increases to €280,000 for the year 2022. Effective December 1, 2021, with entering into a new service contract, the value on which the number of options to be granted each year to Dr. Sierk Poetting is based was increased from €300,000 to €550,000 for new awards. Effective as of his appointment to the Management Board on July 1, 2021, the number of options to be granted each year to Jens Holstein was to be calculated based on a value of €550,000. In each case the values must be divided by the amount by which a certain target share price exceeds the exercise price.

The right to receive options generally represents an equity-settled share-based payment arrangement. The allocation of the number of issued options in 2020 occurred in February 2020 (2020 allocation date). In May 2021 (2021 allocation date), phantom options equivalent to the number of options the Management Board members would have been entitled to receive for the year 2021 were granted under the Management Board Grant which led to a modification from equity-settled to cash-settled share-based payment arrangement and a reclassification of €1.1 million between equity and non-current other liabilities. As of December 31, 2021, the assessment about options expected to be allocated in future years was based on estimated allocation dates in the middle of the respective years.

The share options allocated and expected to be allocated to our Management Board as of the dates indicated are presented in the tables below.

	Share options (expected to be allocated)	Weighted-average exercise price (€)
Granted share options as of allocation date February 2020	248,096	€28.32
Granted phantom options as of allocation dates May 2021[(2)]	51,742	163.72
Estimated allocation date 2022[(1)]	38,674	229.00
Estimated allocation date 2023[(1)]	16,848	233.16
Estimated allocation date 2024[(1)]	16,680	235.52
Estimated allocation date 2025[(1)]	12,265	240.21
Estimated allocation date 2026[(1)]	7,314	246.18
As of December 31, 2021	**391,619**	**€83.81**

(1) Valuation parameter derived from the Monte-Carlo simulation model.

(2) Classified as cash-settled share-based payment arrangement; all other share-based payment arrangements are classified as equity-settled.

For the awards with estimated allocation dates the numbers of options expected to be allocated have been derived from a Monte-Carlo simulation model. Those will be adjusted until the actual allocation has occurred and the number of options granted has ultimately been determined. The options will vest annually in equal installments over four years commencing on the first anniversary of the allocation date and will be exercisable four years after the allocation date.

The options will be subject to the terms, conditions, definitions and provisions of the ESOP and the applicable option agreement thereunder. The vested options can only be exercised if and to the extent that each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the target price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the ordinary shares outstanding immediately following the initial public offering (other than ordinary shares owned by BioNTech), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. The options expire ten years after the allocation date. If they have not been exercised by that date, they will lapse without compensation.

Measurement of Fair Values

A Monte-Carlo simulation model has been used to measure the fair values at the (estimated) allocation dates of the Management Board Grant. This model incorporates the impact of the performance criteria regarding share price and index development described above. The parameters used for measuring the fair values as of the respective (estimated) allocation dates were as follows:

	Allocation date February 2020	Allocation date May 12, 2021[2]	Allocation date May 17, 2021[2]	Estimated allocation date 2022
Weighted average fair value[1]	€10.83	€115.64	€91.66	€111.80
Weighted average share price[1]	€28.20	€164.34	€175.08	€227.62
Exercise price[1]	€28.32	€163.54	€164.96	€229.00
Expected volatility (%)	36.6%	47.2%	47.2%	43.7%
Expected life (years)[1]	4.8	4.6	4.6	5.8
Risk-free interest rate (%)	1.6%	1.5%	1.5%	1.5%

(1) Valuation parameter for estimated allocation dates derived from the Monte-Carlo simulation model.

(2) Classified as cash-settled share-based payment arrangement; all other share-based payment arrangements are classified as equity-settled.

	Estimated allocation date 2023	Estimated allocation date 2024	Estimated allocation date 2025	Estimated allocation date 2026
Weighted average fair value[1]	€98.77	€90.31	€90.20	€82.31
Weighted average share price[1]	€227.62	€227.62	€227.62	€227.62
Exercise price[1]	€233.16	€235.52	€240.21	€246.18
Expected volatility (%)	45.3%	41.0%	42.9%	43.6%
Expected life (years)[1]	5.8	5.8	5.8	5.8
Risk-free interest rate (%)	1.5%	1.6%	1.6%	1.6%

(1) Valuation parameter for estimated allocation dates derived from the Monte-Carlo simulation model

The exercise of the option rights in accordance with the terms of the ESOP gives the Management Board members the right to obtain shares against payment of the exercise price. The per share exercise price of the options is the Euro equivalent of the arithmetic mean of the closing prices of the ten last trading days prior to the allocation date. For the awards allocated as of February 2020, the exercise price has been determined to be $30.78 (€28.32), calculated as of grant date using the foreign exchange rate as published by the German Central Bank (*Deutsche Bundesbank*). As of December 31, 2021, the awards allocated as of February 2020 are subject to the effective exercise price cap. This means that the exercise price shall effectively be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price. For the awards allocated as of May 12, 2021, and May 17, 2021, the exercise price has been determined to be$185.23 (€163.54) and $186.83 (€164.96), respectively (both amounts calculated as of December 31, 2021, using the foreign exchange rate as published by the German Central Bank (*Deutsche Bundesbank*)). For the awards with estimated allocation dates the exercise prices of options expected to be allocated have been derived from the Monte-Carlo simulation model. Those will be adjusted until the actual allocation has occurred and the exercise price has ultimately been determined. With respect to the phantom share options issued in May 2021, as of December 31, 2021, all agreements include the effective exercise price cap and an additional maximum compensation clause limiting the total cash payment that the Management Board members are entitled to receive to €20.0 million for Ugur Sahin as Chief Executive Officer (CEO) or €10.0 million for all other Management Board members, less other compensation components received by each such board member in the respective grant year. Expected volatility was based on an evaluation of the historical volatilities of comparable companies over the historical period commensurate with the expected option term. The expected term was based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options

The share options allocated and expected to be allocated under the Management Board Grant were as follows:

Allocation date February 13, 2020	**Share options outstanding (expected to be allocated)**	**Weighted-average exercise price (€)**
Prof. Ugur Sahin, M.D.	97,420	€28.32
Sean Marett	38,968	28.32
Dr. Sierk Poetting	38,968	28.32
Prof. Özlem Türeci, M.D.	38,968	28.32
Ryan Richardson	33,772	28.32

Allocation dates May 12 and May 17, 2021[(1)]	**Share options outstanding (expected to be allocated)**	**Weighted-average exercise price (€)**
Prof. Ugur Sahin, M.D.	17,780	€163.54
Sean Marett	7,112	163.54
Dr. Sierk Poetting	7,112	163.54
Prof. Özlem Türeci, M.D.	7,112	163.54
Ryan Richardson	6,163	163.54
Jens Holstein	6,463	164.96

(1) Classified as cash-settled share-based payment arrangement; all other share-based payment arrangements are classified as equity-settled. Allocation date May 17, 2021 concerns Jens Holstein.

Estimated allocation date 2022[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Prof. Ugur Sahin, M.D.	11,696	€229.00
Sean Marett	3,509	229.00
Dr. Sierk Poetting	8,577	229.00
Prof. Özlem Türeci, M.D.	1,949	229.00
Ryan Richardson	4,366	229.00
Jens Holstein	8,577	229.00

[1] Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

Estimated allocation date 2023[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Dr. Sierk Poetting	8,424	€233.16
Jens Holstein	8,424	233.16

[1] Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

Estimated allocation date 2024[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Dr. Sierk Poetting	8,340	€235.52
Jens Holstein	8,340	235.52

[1] Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

Estimated allocation date 2025[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Dr. Sierk Poetting	8,177	€240.21
Jens Holstein	4,088	240.21

[1] Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

Estimated allocation date 2026[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Dr. Sierk Poetting	7,314	€246.18

[1] Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

As of December 31, 2021, the share options allocated and expected to be allocated had a remaining weighted-average expected life of 3.7 years (as of December 31, 2020: 4.6 years).

17.4 Chief Executive Officer Grant (Equity-Settled)

Description of Share-Based Payments

In September 2019, we granted Prof. Ugur Sahin, M.D. an option to purchase 4,374,963 ordinary shares, subject to Prof. Sahin's continuous employment with us. The options' exercise price per share is the Euro translation of the public offering price from our initial public offering, €13.60 ($15.00) which, as of December 31, 2021, is subject to the effective

exercise price cap. The option vests annually in equal installments after four years commencing on the first anniversary of the initial public offering and will be exercisable four years after the initial public offering. The option is subject to the terms, conditions, definitions and provisions of the ESOP and the applicable option agreement thereunder. The vested option rights can only be exercised if and to the extent that each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the Target Price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the shares outstanding immediately following the initial public offering (other than shares owned by us), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. The option rights can be exercised up to ten years after the allocation date. If they have not been exercised by that date, they will lapse without compensation.

Measurement of Fair Values

A Monte-Carlo simulation model has been used to measure the fair value at grant date of the Chief Executive Officer Grant. This model incorporates the impact of the performance criteria regarding share price and index development described above in the calculation of the award's fair value at grant date. The inputs used in the measurement of the fair value at grant date of the Chief Executive Officer Grant were as follows:

	Grant date October 10, 2019
Weighted average fair value	€5.63
Weighted average share price	€13.60
Exercise price	€13.60
Expected volatility (%)	41.4 %
Expected life (years)	5.4
Risk-free interest rate (%)	1.5%

Expected volatility was based on an evaluation of the historical volatilities of comparable companies over the historical period commensurate with the expected term. The expected term was based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options

During the years ended December 31, 2021 and 2020, no further options were granted or forfeited.

As of December 31, 2021, the share options outstanding had a remaining weighted-average expected life of 3.1 years (as of December 31, 2020: 4.1 years).

17.5 Employee Stock Ownership Plan (Equity-Settled)

Description of Share-Based Payments

On November 15, 2018, we established a share option program that grants selected employees options to receive shares in the Company. The program is designed as an ESOP. We had offered the participants a certain number of rights (Option Rights) by explicit acceptance of the participants. Grants under the ESOP took place from November 2018 until December 2019. The exercise of the Option Rights in accordance with the terms of the ESOP, gives the participants the right to obtain shares against payment of the exercise price. The Option Rights vest over four years and can only be exercised if we have executed a public offering in the United States (IPO) and when the Threshold Amount is met. Threshold Amount means the exercise price provided that such price increases by eight percentage points on the first and then each subsequent anniversary of the Allocation Date (September 26, 2018). The Option Rights can be exercised at the latest eight years after the Allocation Date. If they have not been exercised by that date, they will be forfeited without compensation.

As of December 31, 2021, with respect to the Management Board members, other than Ryan Richardson who was not a Management Board member at the time the options were granted, the options are subject to the effective exercise price cap.

Measurement of Fair Values

The fair value of the ESOP has been measured using a binomial model. Service conditions attached to the arrangement were not taken into account in measuring the fair value.

The share options can only be exercised by the grantee if the price of the share is equal or greater to the Threshold Amount as defined in the arrangement. Moreover, the option rights can only be exercised if the IPO has occurred. Both conditions have been incorporated into the fair value at grant date.

The inputs used in the measurement of the fair values at grant date of the ESOP were as follows:

	Grant date November 15, 2018	Grant dates between February 21 - April 3, 2019	Grant dates between April 29 - May 31, 2019	Grant date December 1, 2019
Weighted average fair value	€7.41	€6.93	€7.04	€9.49
Weighted average share price	€14.40	€15.72	€16.03	€19.84
Exercise price	€10.14	€15.03	€15.39	€15.82
Expected volatility (%)	46.0%	46.0%	46.0%	46.0%
Expected life (years)	5.8	6.0	6.0	5.5
Risk-free interest rate (%)	0.1 %	0.1 %	0.1 %	0.1 %

Expected volatility has been based on an evaluation of the historical and the implied volatilities of comparable companies over the historical period commensurate with the expected term. The expected term has been based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options

Set out below is an overview of changes to share options outstanding and number of ordinary shares underlying these options that occurred during the periods indicated:

	Share options outstanding	Number of ordinary shares underlying options	Weighted-average exercise price (€)
As of January 1, 2020	655,383	11,796,894	€10.38
Forfeited	(9,491)	(170,838)	10.78
As of December 31, 2020	**645,892**	**11,626,056**	**10.23**
As of January 1, 2021	645,892	11,626,056	10.23
Forfeited	(3,885)	(69,932)	10.14
As of December 31, 2021	**642,007**	**11,556,124**	**€10.23**

As of December 31, 2021, the share options outstanding had a remaining weighted-average expected life of 2.7 years (as of December 31, 2020: 3.7 years).

The share options outstanding as of December 31, 2021, issued to the Management Board Grant were as follows:

	Share options outstanding	Number of ordinary shares underlying options	Weighted-average exercise price (€)
Prof. Ugur Sahin, M.D.	101,686	1,830,348	€10.14
Sean Marett	33,895	610,110	10.14
Dr. Sierk Poetting	33,895	610,110	10.14
Prof. Özlem Türeci, M.D.[(1)]	108,463	1,952,334	10.14
Ryan Richardson[(2)]	8,306	149,508	10.14

(1) Options fully vested on March 16, 2019; however these options will not become exercisable until September 16, 2022.

(2) Ryan Richardson was appointed to the Management Board as Chief Strategy Officer (CSO) and Managing Director on January 12, 2020. The share options granted on November 15, 2018, under the Employee Stock Ownership Plan were granted before his appointment to the Management Board. Options fully vested on October 10, 2019; however these options will not become exercisable until September 16, 2022.

18 Provisions and Contingencies

Provisions

As of December 31, 2021, certain claims were pending or threatened against us or our subsidiaries, mainly related to purported obligations arising out of use or alleged use of third party intellectual property. Our best estimate of potential outflow of economic resources from such proceedings amounts to €177.9 million, which is expected not to be settled within the next twelve months and is therefore included in non-current provisions in our consolidated statements of financial position as of December 31, 2021,and was recognized in cost of sales in our consolidated statements of profit or loss (nil as of December 31, 2020). This assessment is based on assumptions deemed reasonable by management including those about future events and uncertainties. The outcome of these matters is ultimately uncertain, such that unanticipated events and circumstances might occur that might cause us to change those assumptions and give rise to a material adverse effect on our financial position in the future.

As of December 31, 2021, our current provisions include €35.4 million (nil as of December 31, 2020) estimated deferred expenses in the form of inventor remuneration, which represents compensation used to honor service inventions made by employees related to our COVID-19 vaccine development and was recognized as research and development expenses in our consolidated statements of profit or loss. The inventor's compensation is determined on the basis of the so-called license analogy and is therefore related to our revenues.

As of December 31, 2021, our current provisions include €58.5 million (nil as of December 31, 2020) international trade obligations including customs value calculation, customs tariff number classification and other related securities requirements whereof €42.1 million related to our commercial sales were recognized as cost of sales and €16.4 million related to clinical trials were recognized as research and development expenses in our consolidated statements of profit or loss. The expenses are partially subject to reimbursement under our collaboration agreement with Pfizer.

Contingencies

In addition to the above, from time to time, in the normal course and conduct of our business, we may be involved in discussions with third parties about considering, for example, the use and/or remuneration for use of such third party's IP. As of December 31, 2021, none of such IP-related considerations that we have been notified of and for which potential claims could be brought against us or our subsidiaries in the future, fulfill the criteria for recording a provision. We will continue to evaluate whether, if circumstances were to change in the future, the recording of a provision may be needed and whether potential indemnification entitlements exist against any such claim. It is currently not practical to estimate the potential liability, if any.

19 Other Liabilities

(in millions)	December 31, 2021	December 31, 2020
Liabilities to employees	€54.6	€24.3
Other	1.3	4.4
Total	**€55.9**	**€28.7**
Total current	43.1	28.0
Total non-current	12.8	0.7

20 Leases

20.1 Amounts Recognized in the Consolidated Statements of Financial Position

Right-of-Use Assets

The following amounts are presented as right-of-use assets within the consolidated statements of financial position as of the dates indicated:

(in millions)	December 31, 2021	December 31, 2020
Buildings	€175.0	€80.9
Equipment, tools and installations	0.8	—
Automobiles	0.1	0.1
Production facilities	19.4	7.2
Advance payments	2.6	10.8
Total	**€197.9**	**€99.0**

Additions to the right-of-use assets during the year ended December 31, 2021, were €126.5 million (during the year ended December 31, 2020: €22.1 million) including advanced payments of €2.6 million (during the year ended December 31, 2020: €10.8 million) related to embedded leases under contract manufacturing agreements that not yet commenced. Since the advanced lease payments have already been settled, the amounts are not included in the lease liability presented below.

Lease Liability

The following amounts are included in loans and borrowings as of the dates indicated:

(in millions)	December 31, 2021	December 31, 2020
Current	€27.9	€6.1
Non-current	153.7	78.1
Total	**€181.6**	**€84.2**

20.2 Amounts Recognized in the Consolidated Statements of Profit or Loss

Depreciation Charge of Right-of-Use Assets

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Buildings	€14.7	€4.7	€4.7
Equipment, tools and installations	0.2	—	—
Automobiles	0.1	—	—
Production facilities	14.0	1.6	—
Total depreciation charge	**€29.0**	**€6.3**	**€4.7**
Interest on lease liabilities	2.9	2.0	1.7
Expense related to short-term leases (included in other expenses)	9.1	0.9	0.4
Expense relating to leases of low-value assets that are not short-term leases (included in other expenses)	0.4	0.3	0.1
Total amounts recognized in profit or loss	**€41.4**	**€9.5**	**€6.9**

20.3 Amounts Recognized in the Consolidated Statements of Cash Flows

During the year ended December 31, 2021, the total cash outflow for leases amounted to €17.0 million (during the year ended December 31, 2020: €14.7 million; during the year ended December 31, 2019: €4.8 million).

20.4 Extension Options

The Group has several lease contracts that include extension options. These options are negotiated by management to provide flexibility in managing the leased-asset portfolio and align with the Group's business needs. Management exercises judgement in determining whether these extension options are reasonably certain to be exercised. The undiscounted potential future lease payments, which relate to periods after the exercise date of renewal options and are not included in lease liabilities, amount to up to €82.8 million until 2049 (during the year ended December 31, 2020: €38.3 million until 2049).

21 Related Party Disclosures

21.1 Parent and Ultimate Controlling Party

ATHOS KG, Holzkirchen, Germany is the sole shareholder of AT Impf GmbH, Munich, Germany and beneficial owner of our ordinary shares. Entities controlled by ATHOS KG mainly provide rental and property management activities and sell property, plant and equipment to us. ATHOS KG via AT Impf GmbH has de facto control over BioNTech based on its substantial shareholding, which enabled it to exercise the majority of voting rights to pass resolutions at BioNTech's Annual General Meeting, or AGM.

21.2 Transactions with Key Management Personnel

Key Management Personnel Compensation

Our key management personnel has been defined as the members of the Management Board and the Supervisory Board. Key management personnel compensation is comprised of the following:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Management Board	**€20.4**	**€23.7**	**€19.8**
Fixed compensation	2.2	1.9	1.3
Short-term incentive – first installment	0.6	0.5	—
Short-term incentive – second installment[(1)]	1.2	0.6	—
Other performance-related variable compensation[(2)]	—	—	0.4
Share-based payments (incl. long-term incentive)[(3)]	16.4	20.7	18.1
Supervisory Board	**€0.4**	**€0.4**	**€0.5**
Total compensation paid to key management personnel	**€20.8**	**€24.1**	**€20.3**

(1) The fair value of the second installment of the short-term incentive compensation which has been classified as cash-settled share-based payment arrangement was determined pursuant to the regulations of IFRS 2 "Share-based Payments." This table shows the pro-rata share of personnel expenses for the respective financial year that are recognized over the award's vesting period beginning as of the service commencement date (date when the respective service agreement becomes effective) until each separate determination date and are remeasured until settlement date.

(2) Includes a one time bonus payment for the year ended December 31, 2019.

(3) The fair value of the share-based payments was determined pursuant to the regulations of IFRS 2 "Share-based Payments." This table shows the pro-rata share of personnel expenses resulting from stock-based compensation for the respective financial year. During the year ended December 31, 2021, the amount included a one-time signing bonus of €800,000 granted to Jens Holstein as of his appointment to the Management Board by awarding 4,246 phantom shares. The phantom shares vest in four equal installments on July 1 of 2022, 2023, 2024 and 2025 but will only be settled in cash on July 1, 2025. As of December 31, 2021, the cash payment is subject to an effective settlement closing price cap. This means that the settlement closing price shall effectively be adjusted to ensure that the current price of an ADS as of the settlement date does not exceed 800% of the closing price applied when the award was initially granted. In addition, the total cash payment under the award shall not exceed €6.4 million. During the year ended December 31, 2020, the amount included expenses from a bonus arrangement agreed with Ryan Richardson in advance of his appointment to the Management Board. During the year ended December 31, 2020, the arrangement was modified from an all-equity share-based payment arrangement into a partly cash and partly equity settled share-based payment arrangement including 4,534 ordinary shares which were issued during the year ended December 31, 2021. In September 2019, we agreed to grant Prof. Ugur Sahin, M.D., our co-founder and Chief Executive Officer, an option to purchase 4,374,963 ordinary shares (see Note 17). Management Board members participate in our ESOP program (see Note 17).

Key Management Personnel Transaction

A number of key management personnel, or their related parties, hold positions in other companies that result in them having control or significant influence over these companies. A number of these companies have entered into transactions with us during the year.

We purchased various goods and services from Translationale Onkologie an der Universitätsmedizin der Johannes Gutenberg-Universität Mainz gemeinnützige GmbH, or TRON.

The aggregate value of transactions related to key management personnel were as follows for the periods indicated:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Consulting services / patent assignment	€—	€—	€0.1
Purchases of various goods and services from TRON[(1)]	—	10.1	9.9
Total	**€—**	**€10.1**	**€10.0**

(1) We purchase various goods and services from TRON, an institute where Prof. Ugur Sahin, M.D served as Managing Director. TRON is no longer considered to be a related party for the year ended December 31, 2021, as the criteria for such classification are no longer fulfilled.

The outstanding balances of transactions related to key management personnel were as follows as at the periods indicated:

(in millions)	**December 31, 2021**	**December 31, 2020**
TRON[(1)]	€—	€1.2
Total	**€—**	**€1.2**

(1) We purchase various goods and services from TRON, an institute where Prof. Ugur Sahin, M.D served as Managing Director. TRON is no longer considered to be a related party for the year ended December 31, 2021, as the criteria for such classification are no longer fulfilled.

21.3 Related Party Transactions

The total amount of transactions with ATHOS KG or entities controlled by it was as follows for the periods indicated:

	Years ended December 31,		
(in millions)	**2021**	**2020**	**2019**
Purchases of various goods and services from entities controlled by ATHOS KG	€0.9	€2.3	€2.1
Purchases of property and other assets from entities controlled by ATHOS KG	—	2.3	—
Total	**€0.9**	**€4.6**	**€2.1**

The outstanding balances of transactions with ATHOS KG or entities controlled by them were as follows as at the periods indicated:

(in millions)	**December 31, 2021**	**December 31, 2020**
ATHOS KG	€0.3	€0.5
Total	**€0.3**	**€0.5**

In addition to the transactions above, we have lease arrangements with ATHOS KG or entities controlled by them in place. None of the balances are secured and no bad debt expense has been recognized in respect of amounts owed by related parties.

22 Number of employees

The average number of employees is:

	Years ended December 31,		
Quarterly average number of employees by function	**2021**	**2020**	**2019**
Clinical Research & Development	137	113	81
Scientific Research & Development	875	586	414
Operations	863	490	376
Quality	322	184	129
Support Functions	431	218	126
Commercial & Business Development	66	33	69
Total	**2,694**	**1,624**	**1,195**

The number of employees as of the balance sheet date is:

	Years ended December 31,		
Number of employees by function as of the reporting date	**2021**	**2020**	**2019**
Clinical Research & Development	153	128	90
Scientific Research & Development	1,026	661	459
Operations	1,036	699	416
Quality	301	234	142
Support Functions	539	276	139
Commercial & Business Development	83	49	77
Total	**3,138**	**2,047**	**1,323**

23 Fees for Auditors

The following fees were recognized for the services provided by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft for the fiscal years ended December 31, 2020 and December 31, 2019:

	Years ended December 31,	
(in millions)	**2021**	**2020**
Audit fees	€ 1.9	€1.4
Audit-related fees	0.7	0.4
Tax fees	0.5	0.3
All other fees	0.1	0.4
Total fees for professional audit services and other services	**€3.20**	**€2.50**

24 Corporate Governance

The declaration of conformity pursuant to Section 161 para. 1 of the German Stock Corporation Act (*Aktiengesetz*) is issued in accordance with the Corporate Governance Code in connection with the corporate governance declaration pursuant to Section 315d in conjunction with Section 289f HGB and can be found in the combined management report of BioNTech SE.

25 Events After the Reporting Period

In January 2022, we announced a new research, development and commercialization collaboration with Pfizer to develop a potential first mRNA-based vaccine for the prevention of shingles (herpes zoster virus, or HZV). The collaboration builds on the companies' success in developing the first approved and most widely used mRNA vaccine to

help prevent COVID-19. Under the terms of the agreement, we will leverage a proprietary antigen technology identified by Pfizer's scientists and our proprietary mRNA platform technology used in the our COVID-19 vaccine. The parties will share development costs. Clinical trials are planned to start in the second half of 2022. Pfizer will have rights to commercialize the potential vaccine on a global basis, with the exception of Germany, Turkey and certain developing countries where we will have commercialization rights. Under the terms of the agreement, Pfizer will pay $225.0 million in upfront payments, including a cash payment and an equity investment as we will pay Pfizer $25.0 million for the company's proprietary antigen technology. In addition, we are eligible to receive future regulatory and sales milestone payments of up to $200.0 million as well as a share of gross profits arising from future product sales. The issuance of 497,727 ordinary shares with the nominal amount of €0.5 million was registered with the commercial register (*Handelsregister*) on March 24, 2022.

In February 2022, we gave notice to Temasek that we will exercise our early redemption option and fully redeem the convertible note on March 1, 2022, the redemption date. The early redemption will be fulfilled by issuing the number of our ordinary shares calculated pursuant to the early redemption provisions of the convertible note, plus paying any fractional share and accrued but unpaid interest up to (but excluding) the redemption date. The early redemption was already expected and reflected in the presentation of the financial liability and our estimates for future cash flows and conversion effects under the convertible note as of December 31, 2021.

In February 2022, we announced that we have entered into a multi-target research collaboration with Medigene AG, or Medigene, to develop T-cell receptor (TCR) based immunotherapies against cancer. The initial term of the collaboration is three years. Under the terms of the agreement, we will acquire Medigene's next generation preclinical TCR program, will obtain the exclusive option to acquire additional existing TCRs in Medigene's discovery pipeline and will receive licenses to Medigene's PD1-41BB switch receptor and precision pairing library. We are responsible for global development and hold exclusive worldwide commercialization rights on all TCR therapies resulting from this research collaboration. Medigene will receive a €26.0 million upfront, as well as research funding for the period of the collaboration and will be eligible to receive development, regulatory and commercial milestone payments up to a triple digit million EUR amount per program in addition to tiered deferred option payments on global net sales for products based on TCRs arising from the collaboration and royalties on products utilizing at least one of the licensed technologies.

The escalation of the conflict between Russia and Ukraine which has led to armed conflicts in Ukraine has created uncertainties regarding the development of the world economy. As of the date of this filing, we do not anticipate any material impact of the conflict on our business. Russia and Ukraine are part of our collaboration partner Pfizer's distribution territory and are currently not expected to have a material effect on our revenues. We also do not expect an impact on our clinical trial execution as we do not have active clinical sites in Russia or Ukraine. We do not have any local subsidiaries in the affected countries, do not have direct relationships with Russian banks and do not purchase raw materials or services from Russian suppliers. Together with our third party vendors, we are monitoring the situation closely to ensure that risk mitigations are implemented. We will continue to assess any impact, including the medium- to long-term implications on our business and on the world economy, as well as to continue to evaluate any risks as they arise.

Mainz, March 29, 2022

BioNTech SE

Prof. Ugur Sahin, M.D.
(Chief Executive Officer, CEO)

Jens Holstein
(Chief Financial Officer, CFO)

Sean Marett
Chief Business Officer (CBO) and Chief Commercial Officer (CCO)

Sierk Poetting, M.D.
(Chief Operating Officer, COO)

Prof. Özlem Türeci, M.D.
(Chief Medical Officer, CMO)

Ryan Richardson
(Chief Strategy Officer, CSO)