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the German language Consolidated Financial Statements are decisive

BioNTech SE Mainz

Consolidated financial statements as of December 31, 2020

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Consolidated Statements of Financial Position

(in thousands)		December 31, 2020	December 31, 2019
Assets	**Note**		
Non-current assets			
Intangible assets	11	€163,490	€89,434
Property, plant and equipment	10	226,968	93,044
Right-of-use assets	19	98,988	55,018
Other assets	14	1,045	-
Deferred tax assets	8	161,233	-
Total non-current assets		**€651,724**	**€237,496**
Current assets			
Inventories	13	64,120	11,722
Trade receivables	12	165,468	11,913
Other financial assets	12	137,234	1,680
Other assets	14	60,966	9,069
Income tax assets		898	756
Deferred expenses	15	28,001	5,862
Cash and cash equivalents	12	1,210,209	519,149
Total current assets		**€1,666,896**	**€560,151**
Total assets		**€2,318,620**	**€797,647**
Equity and liabilities			
Equity			
Share capital	16	246,310	232,304
Capital reserve	16	1,514,451	686,714
Treasury shares	16	(4,789)	(5,525)
Accumulated losses		(409,629)	(424,827)
Other reserves	17	25,503	4,826
Total equity		**€1,371,846**	**€493,492**
Non-current liabilities			
Interest-bearing loans and borrowings	12	231,047	68,904
Other financial liabilities	12	31,476	-
Provisions	20	5,498	-
Contract liabilities	6	71,892	97,109
Other liabilities	18	566	-
Deferred tax liabilities		281	-
Total non-current liabilities		**€340,760**	**€166,013**
Current liabilities			
Interest-bearing loans and borrowings	12	9,142	5,307
Trade payables	12	102,288	20,498
Other financial liabilities	12	74,075	10,352
Government grants	7.5	91,951	-
Tax provisions		11	150
Other provisions		903	762
Contract liabilities	6	299,583	93,583
Other liabilities	18	28,061	7,490
Total current liabilities		**€606,014**	**€138,142**
Total liabilities		**€946,774**	**€304,155**
Total equity and liabilities		**€2,318,620**	**€797,647**

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

Consolidated Statements of Operations

(in thousands, except per share data)	Note	Years ended December 31, 2020	2019	2018
Revenues				
Research & development revenues	6	€178,849	€84,428	€101,837
Commercial revenues	6	303,476	24,161	25,738
Total revenues		**482,325**	**108,589**	**127,575**
Cost of sales	7.1	(59,333)	(17,361)	(13,690)
Research and development expenses	7.2	(645,029)	(226,466)	(143,040)
Sales and marketing expenses	7.3	(14,512)	(2,718)	(3,041)
General and administrative expenses	7.4	(94,049)	(45,547)	(26,334)
Other operating expenses		(2,358)	(739)	(720)
Other operating income	7.5	250,539	2,724	5,396
Operating loss		**€(82,417)**	**€(181,518)**	**€(53,854)**
Finance income*	7.6	1,564	4,122	8,046
Finance expenses*	7.7	(62,946)	(326)	(48)
Interest expenses related to lease liabilities	19	(2,003)	(1,718)	(1,721)
Share of loss of equity method investees		-	-	(84)
Loss before tax		**€(145,802)**	**€(179,440)**	**€(47,662)**
Income taxes	8	161,000	268	(600)
Profit / (Loss) for the period		**€15,198**	**€(179,172)**	**€(48,262)**
Attributable to:				
Equity holders of the parent		15,198	(179,056)	(48,019)
Non-controlling interests		-	(116)	(243)
Profit / (Loss) for the period		**€15,198**	**€(179,172)**	**€(48,262)**
Earnings per share				
Basic and diluted, profit / (loss) for the period attributable to ordinary equity holders of the parent**		€0.06	€(0.85)	€(0.25)

* Foreign exchange differences on a cumulative basis are shown either as finance income or expenses and might switch between those two positions during the year-to-date reporting periods.

** Numbers of shares for calculating the earnings per share for the years ended December 31, 2019 and December 31, 2018 have been adjusted to reflect capital increase due to 1:18 share split, which occurred on September 18, 2019.

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

Consolidated Statements of Comprehensive Income / (Loss)

		Years ended December 31,		
(in thousands)	**Note**	**2020**	**2019**	**2018**
Profit / (Loss) for the period		**€15,198**	**€(179,172)**	**€(48,262)**
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		(11,096)	77	10
Net other comprehensive income / (loss) that may be reclassified to profit or loss in subsequent periods		**(11,096)**	**77**	**10**
Other comprehensive loss that will not be reclassified to profit or loss in subsequent periods, net of tax				
Remeasurement loss on defined benefit plans		(273)	-	-
Net other comprehensive loss that will not be reclassified to profit or loss in subsequent periods		**(273)**	**-**	**-**
Other comprehensive income / (loss) for the period, net of tax		**(11,369)**	**77**	**10**
Comprehensive income / (loss) for the period, net of tax		**€3,829**	**€(179,095)**	**€(48,252)**
Attributable to:				
Equity holders of the parent		3,829	(178,979)	(48,009)
Non-controlling interests		-	(116)	(243)
Comprehensive income / (loss) for the period, net of tax		**€3,829**	**€(179,095)**	**€(48,252)**

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

Consolidated Statements of Changes in Stockholders' Equity

		Equity attributable to equity holders of the parent								
(in thousands)	Note	Share capital	Capital reserve	Treasury shares	Accumulated losses	Other reserves	Foreign currency translation reserve	Total	Non-controlling interest	Total equity
As of January 1, 2018		**€166,764**	**€8,922**	**-**	**€(197,753)**	**€(27,206)**	**€(23)**	**€(49,296)**	**€1,090**	**€(48,206)**
Loss for the period		-	-	-	(48,019)	-	-	**(48,019)**	(243)	**(48,262)**
Other comprehensive income		-	-	-	-	-	10	**10**	-	**10**
Total comprehensive income		**-**	**-**	**-**	**(48,019)**	**-**	**10**	**(48,009)**	**(243)**	**(48,252)**
Issuance of share capital	16	25,949	329,867	-	-	-	-	**355,816**	-	**355,816**
Share based payments	17	-	-	-	-	7,641	-	**7,641**	-	**7,641**
Settlement of share-based payment plan		583	5,326	-	-	(5,909)	-	**-**	-	**-**
As of December 31, 2018		**€193,296**	**€344,115**	**-**	**€(245,771)**	**€(25,474)**	**€(13)**	**€266,153**	**€847**	**€267,000**
Loss for the period		-	-	-	(179,056)	-	-	**(179,056)**	(116)	**(179,172)**
Other comprehensive income		-	-	-	-	-	77	**77**	-	**77**
Total comprehensive income		**-**	**-**	**-**	**(179,056)**	**-**	**77**	**(178,979)**	**(116)**	**(179,095)**
Issuance of share capital	16	8,126	41,748	-	-	-	-	**49,874**	-	**49,874**
Capital increase Series B	16	17,990	186,390	(5,525)	-	-	-	**198,855**	-	**198,855**
Capital increase initial public offering (referred to as IPO)	16	10,517	132,743	-	-	-	-	**143,260**	-	**143,260**
Acquisition of non-controlling interest	16	2,375	(1,644)	-	-	-	-	**731**	(731)	**-**
Transaction costs	16	-	(16,638)	-	-	-	-	**(16,638)**	-	**(16,638)**
Share based payments	17	-	-	-	-	30,236	-	**30,236**	-	**30,236**
As of December 31, 2019		**€232,304**	**€686,714**	**€ (5,525)**	**€(424,827)**	**€4,762**	**€64**	**€493,492**	**-**	**€493,492**
Profit for the period		-	-	-	15,198	-	-	**15,198**	-	**15,198**
Other comprehensive loss		-	-	-	-	(273)	(11,096)	**(11,369)**	-	**(11,369)**
Total comprehensive income		**-**	**-**	**-**	**15,198**	**(273)**	**(11,096)**	**3,829**	**-**	**3,829**
Issuance of share capital	16	14,006	860,960	736	-	-	-	**875,702**	-	**875,702**
Transaction costs	16	-	(33,223)	-	-	-	-	**(33,223)**	-	**(33,223)**
Share-based payments	17	-	-	-	-	32,046	-	**32,046**	-	**32,046**
As of December 31, 2020		**€246,310**	**€1,514,451**	**€(4,789)**	**€(409,629)**	**€36,535**	**€(11,032)**	**€1,371,846**	**-**	**€1,371,846**

* Numbers as of January 1, 2019 have been adjusted to reflect capital increase due to 1:18 share split which occurred on September 18, 2019.

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

Consolidated Statements of Cash Flows

(in thousands)	Years ended December 31, 2020	2019	2018
Operating activities			
Profit / (Loss) for the period	€15,198	€(179,172)	€(48,262)
Income taxes	(161,000)	(268)	600
Loss before tax	**€(145,802)**	**€(179,440)**	**€(47,662)**
Adjustments to reconcile loss before tax to net cash flows:			
Depreciation and amortization of property, plant, equipment and intangible assets	38,744	33,896	21,984
Share-based payment expense	32,142	30,236	7,641
Net foreign exchange differences	41,275	70	459
(Gain) / Loss on disposal of property, plant and equipment	595	542	(14)
Finance income	(1,564)	(1,782)	(1,996)
Interest on lease liability	2,003	1,717	1,721
Finance expense	20,336	326	48
Movements in government grants	91,951	-	-
Share of loss of an associate and a joint venture	-	-	84
Other non-cash income	1,749	-	-
Working capital adjustments:			
Decrease / (Increase) in trade receivable and contract assets	(247,886)	2,939	(18,732)
Decrease / (Increase) in inventories	(49,794)	(5,798)	(1,253)
(Decrease) / Increase in trade payables, other liabilities, contract liabilities and provisions	204,583	(80,577)	(21,080)
Interest received	1,444	1,256	1,996
Interest paid	(3,628)	(2,044)	(1,769)
Income tax received (paid), net	378	122	(304)
Net cash flows used in operating activities	**€(13,474)**	**€(198,537)**	**€(58,877)**
Investing activities			
Purchase of property, plant and equipment	(66,033)	(38,592)	(29,901)
Proceeds from sale of property, plant and equipment	1,241	21	705
Purchase of intangibles assets and right-of-use assets	(19,413)	(32,488)	(37,256)
Acquisition of subsidiaries and businesses, net of cash acquired	(60,643)	(6,056)	-
Net cash flows used in investing activities	**€(144,848)**	**€(77,115)**	**€(66,452)**
Financing activities			
Proceeds from issuance of share capital, net of costs	753,007	375,351	361,725
Proceeds from loans and borrowings	156,027	11,000	5,600
Repayment of loans and borrowings	(1,566)	-	-
Payments related to lease liabilities	(12,743)	(3,061)	(2,148)
Net cash flows from financing activities	**€894,725**	**€383,290**	**€365,177**
Net increase in cash and cash equivalents	736,403	107,638	239,848
Change in cash and cash equivalents resulting from exchange rate differences	(45,343)	16	(459)
Cash and cash equivalents at January 1	519,149	411,495	172,106
Cash and cash equivalents at December 31	**€1,210,209**	**€519,149**	**€411,495**

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

Notes to the 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). The accompanying International Financial Reporting Standards (IFRS) consolidated financial statements present the financial position and the results of operation of BioNTech SE and its subsidiaries, hereinafter also referred to as "BioNTech" or the "Group".

During the year ended December 31, 2020 the following changes to the Group structure occurred:

- On February 16, 2020, BioNTech Protein Therapeutics GmbH was renamed to BioNTech Delivery Technologies GmbH and the company's registered office was changed from Mainz to Halle.
- On May 6, 2020, BioNTech SE acquired Neon Therapeutics, Inc., Cambridge, Massachusetts, United States (formerly Nasdaq: NTGN), or Neon. Under the merger agreement by and among BioNTech, Neon and BioNTech's wholly-owned subsidiary, Endor Lights, Inc., New York, United States, Endor Lights, Inc. merged with and into Neon. The new subsidiary operates under the name BioNTech US Inc., is held indirectly via BioNTech USA Holding, LLC. as a wholly-owned subsidiary and serves as BioNTech's headquarters in the United States.
- On July 17, 2020, BioNTech IVAC GmbH was renamed to BioNTech Manufacturing GmbH and on August 7, 2020, BioNTech Small Molecules GmbH was renamed to BioNTech Europe GmbH.
- On September 17, 2020, the liquidation process for BioNTech Austria Beteiligungen GmbH was initiated by a resolution of the shareholders.
- On October 15, 2020, BioNTech Pharmaceuticals Asia Pacific Pte. Ltd. was founded and is a wholly-owned subsidiary of BioNTech SE.
- Three new real estate entities have been founded in Germany: BioNTech Real Estate An der Goldgrube GmbH & Co. KG, BioNTech Real Estate Adam-Opel-Straße GmbH & Co. KG and BioNTech Real Estate Haus Vier GmbH & Co. KG, all Holzkirchen. All are partnerships wholly-owned by its limited partner BioNTech Real Estate Holding GmbH, a wholly-owned subsidiary of BioNTech SE.
- On October 31, 2020, BioNTech SE acquired Novartis Manufacturing GmbH, Marburg, Germany. The new production site operates under the name BioNTech Manufacturing Marburg GmbH, a wholly-owned subsidiary of BioNTech SE.
- On November 11, 2020, BioNTech UK Limited was founded and is a wholly-owned subsidiary of BioNTech SE.
- On December 15, 2020, reBOOST Management GmbH was renamed to reSano GmbH.

All entities listed above are included in the Group's consolidated financial statements.

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

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 International Financial Reporting Standards (IFRS) as adopted by the European Union and with the additional requirements of the German Commercial Code (HGB) pursuant to Section 315e HGB.

BioNTech prepares and publishes its consolidated financial statements in Euros and rounds 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.

Segment Information

Historically BioNTech reported four segments: Clinical, Technology Platform, Manufacturing and Product Sales & External Services. In the course of the year ended December 31, 2020, BioNTech leveraged the breadth of its immunotherapy technologies and used its expertise to mobilize these rapidly to address the COVID-19 pandemic. In December 2020, BioNTech's COVID-19 vaccine was authorized or approved for emergency or temporary use or granted conditional marketing authorization in over 65 countries worldwide. Beginning in the fourth quarter, given the financial and operational significance of the activities to develop and then market, produce and transport the COVID-19 vaccine, BioNTech's Management Board, as the chief operating decision maker (CODM), reviewed financial information presented on a consolidated basis. Decisions with respect to business operations and resource allocations are made by the CODM based on BioNTech as a whole. Accordingly, BioNTech operates and makes decisions as a single operating segment, which is also its 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.

The Group re-assesses whether it controls an investee 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 the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary.

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 the Group loses control over a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interests and other components of equity, while any resultant gain or loss is recognized in the consolidated statements of operations. 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 Group's 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

The Group presents assets and liabilities in the consolidated statements of financial position based on current or non-current classification. An asset is current when it is either: (i) expected to be realized within 12 months after the reporting period or (ii) cash or cash equivalents, unless it is restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period. All other assets are classified as non-current. A liability is current when it is due to be settled within 12 months after the reporting period. 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, the Group determines 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, the Group has determined classes of assets and liabilities 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

BioNTech generates revenues from collaboration and license agreements under which BioNTech grants licenses to use, research, develop, manufacture and commercialize product candidates and products. BioNTech determined that those collaboration and license agreements qualify as contracts with its 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, BioNTech estimates the amount of consideration to which BioNTech 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 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-stand-alone 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 its licensing arrangements, BioNTech provides the licensee with a research and development license, which represents a right to access BioNTech's intellectual property as it exists throughout the license period (as BioNTech's 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 the licensee simultaneously receives and consumes the benefits of BioNTech's 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, BioNTech uses certain information from its 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 BioNTech and the collaborator and the transactions between BioNTech 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 BioNTech is 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 BioNTech is 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 BioNTech transfers control of the product to the customer. Control of the product normally transfers when the customer gains physical possession and BioNTech has 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. Payments from customers are due within 20 days (Europe) or 30 days (non-Europe) after invoice.

Contract Balances

Contract Assets

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

Trade Receivables

A receivable represents BioNTech's 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 BioNTech has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before BioNTech transfers 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 BioNTech performs under the contract.

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, excluding interest expenses and penalties on the underpayment of taxes. 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. 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.

The Group offsets current tax assets and current tax liabilities if, and only if, it has 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 the Group has 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

The Group's consolidated financial statements are presented in Euros, which is also BioNTech SE's functional currency. For each entity, the Group determines the functional currency, and items included in the consolidated financial statements of such entity are measured using that functional currency. The Group uses the direct method of consolidation and on disposal of a foreign operation, the gain or loss that is reclassified to the consolidated statements of operations 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

On consolidation, the assets and liabilities of foreign operations are translated into Euros at the rate of exchange prevailing at the reporting date and their consolidated statements of operations 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, net of accumulated impairment losses, if any. 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	7-33
Equipment, tools and installations	3-15

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 operations 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, the Group assesses 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, the Group assesses 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;
- the Group has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and
- the Group has the right to direct the use of the asset. The Group has this right when it has 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:
  - the Group has the right to operate the asset; or
  - the Group 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 Group allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices. However, for the leases of land and buildings in which it is a lessee, the Group has elected not to separate non-lease components, and instead accounts for the lease and non-lease components as a single lease component.

The Group recognizes 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 Group uses its incremental borrowing rate 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 the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to 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 Group's estimate of the amount expected to be payable under a residual value guarantee, or if the Group changes its assessment of whether it 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 operations if the carrying amount of the right-of-use asset has been reduced to zero.

The Group presents right-of-use assets separately and lease liabilities 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 (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

The Group has 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. The Group recognizes the lease payments associated with these leases as an expense in the consolidated statements of operations 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 operations 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	10-20
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.

The Group has 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 operations.

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 by the Group:

- 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 operations 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 are initially measured at fair value. The Group's financial assets mainly include trade receivables as well as other receivables that reflect BioNTech's entitlement to cash. With respect to trade receivable, the Group has 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 by the Group 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.

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 Group's 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. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment. In this analysis BioNTech also considered that governments and health ministries which are BioNTech's customers established in connection with progressing the commercial activities of the Group with respect to BioNTech's COVID-19 vaccine.

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.

The Group's 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 of the Group 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. Financial liabilities at fair value further include contingent considerations resulting from the Group's business combinations.

Gains or losses arising from fair value measurement adjustments of the embedded derivative and the contingent consideration are recognized in profit and loss within the consolidated statements of operations.

Loans, Borrowings, Trade Payables and Other Financial Liabilities

After initial recognition, interest-bearing loans and borrowings, trade payables and other financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in the consolidated statements of operations 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 operations.

This category generally applies to interest-bearing 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 operations.

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.

2.3.13 Impairment of Non-Financial Assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. Goodwill is tested for impairment 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, the Group estimates 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. When the carrying amount of an asset or cash generating unit exceeds its recoverable amount, the asset is considered impaired and is written down to its 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 are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Group's cash generating units to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. A long-term growth rate is calculated and applied to project future cash flows after the fifth year.

Impairment losses of continuing operations are recognized in the consolidated statements of operations 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 Group estimates the asset's or cash generating unit's recoverable amount. 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 operations 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 in banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

2.3.15 Pension

The liability in respect of defined benefit pension plans is the defined benefit obligation calculated annually by independent actuaries using the projected unit credit method. The current service cost for such post-employment benefit plans is included in the personnel expenses of the various functions of the respective employees, while the net interest on the net defined benefit liability or asset is recognized in finance expenses or finance income.

2.3.16 Provisions

Provisions are recognized when the Group has 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 the Group expects 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 operations net of any reimbursement.

2.3.17 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).

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.

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), over the period in which the service is provided (the vesting period). The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest.

2.4 Standards applied for the First Time

In 2020 several new and amended standards and interpretations became effective but did not have an impact on the consolidated financial statements of the Group.

Standards/Interpretations	Date of application
Amendments to IFRS 3 Business Combinations	January 1, 2020
Amendments to IFRS 9, IAS 39 and IFRS 7 Interest Rate Benchmark Reform	January 1, 2020
Amendments to IAS 1 and IAS 8 Definition of Material	January 1, 2020
Amendments to References to the Conceptual Framework in IFRS Standards	January 1, 2020
Amendment to IFRS 16 Leases COVID-19-Related Rent Concessions	June 1, 2020

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 Group's financial statements and that might have an impact on the Group's financial statements are disclosed below. The Group has not early adopted any standards and intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

Standards/Interpretations	Date of application
Amendments to IFRS 4 Insurance Contracts – deferral of IFRS 9	January 1, 2021
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 Interest Rate Benchmark Reform – Phase 2	January 1, 2021
Amendments to IFRS 3 Business Combinations: Reference to the Conceptual Framework	January 1, 2022
Amendments to IAS 16 Property, Plant and Equipment: Proceeds before Intended Use	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
Annual Improvements to IFRS Standards 2018-2020	January 1, 2022
Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-current - Deferral of Effective Date	January 1, 2023
IFRS 17 Insurance Contracts (issued on 18 May 2017); including Amendments to IFRS 17	January 1, 2023

The Group does not expect a significant impact of the application of any of these amendments.

3 Significant Accounting Judgments, Estimates and Assumptions

The preparation of the Group's 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.

Judgments

In the process of applying the Group's accounting policies, management has made the following judgments, which have the most significant effect on the amounts recognized in the consolidated financial statements:

Revenue from Contracts with Customers

BioNTech applied the following judgments that significantly affect the determination of the amount and timing of revenue from contracts with customers:

Identification and Determination of Performance Obligations

BioNTech generates 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. BioNTech determined that those collaboration and license agreements qualify as contracts with its customers. At inception of each agreement, BioNTech applies 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 BioNTech 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, BioNTech assesses which of these promises is the predominant promise to determine the nature of the performance obligation. When licenses are granted, BioNTech determined that the grant of the license is the predominant promise within the combined performance obligations. It is assessed that BioNTech grants their customers a right to access or a right to use BioNTech's intellectual property due to the collaboration and license agreements.

Measurement of the Transaction Price

BioNTech's 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, BioNTech is required to estimate the amount of consideration to which it will be entitled in exchange for transferring the promised goods or services to the customer.

As there are usually only two possible outcomes (*i.e.,* milestone is reached or not), BioNTech has assessed that the method of the most likely amount is the best method to predict the amount of consideration to which BioNTech will be entitled. At contract inception, the most likely amount for milestone payments is estimated to be zero.

BioNTech has 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, BioNTech uses 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.

BioNTech has 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

BioNTech allocates the transaction price to performance obligations based on their relative standalone selling prices, which are generally based on 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 BioNTech's consolidated statements of financial position. BioNTech assessed that no significant financing component exists within its 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 BioNTech's performance toward complete satisfaction. In case the contractual activities progress, the achievement of development milestones will be used to measure the progress toward complete satisfaction. BioNTech evaluates 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 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 BioNTech's current collaboration agreements, the allocation of marketing and distribution rights defines territories in which the collaboration partner act as a principal respectively. BioNTech recognizes 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 customers in its territories when control has been transferred. Amounts paid to collaboration partners for their share of BioNTech's profits where BioNTech is the principal in the transaction are recorded as cost of sales.

Pfizer Agreement Characteristics

With respect to the collaboration with Pfizer, commercial revenue is recognized based on the 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, BioNTech is reliant on the collaboration partner for detail regarding its gross profit for the period at hand. BioNTech has been informed by its collaboration partner that certain of the information it intends to provide BioNTech with regard to the gross profit will be, by necessity, preliminary and subject to change. This is mainly due to the fact that the partner's financial reporting cycle differs from BioNTech's. Pfizer's subsidiaries outside the United States have a fiscal year-end of November 30; that is, the details on sales in these territories are required in advance of closing the respective reporting periods. As a result, BioNTech's determination of its share of such gross profit for purposes of recognizing revenues will be subject to risks that amounts reported might vary from actual amounts reported once the collaboration partner's final financial results are available.

For the period covered in these consolidated financial statements, Pfizer has calculated gross profit for COVID-19 vaccine sales in the U.S. territory as well as shared preliminary gross profit for COVID-19 vaccine sales in territories outside the United States, both of which will be reconciled and finalized. The respective 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 maybe adjusted once actual costs are determined. The sales for the U.S. territory, as reported by Pfizer, as well as sales preliminary reported for 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 BioNTech receives final data from Pfizer. Those changes in BioNTech's share of the collaboration partner's gross profit will be recognized prospectively as changes to BioNTech's commercial revenues. To the extent that Pfizer does not provide such preliminary information in the future, BioNTech's provisional sales figures for territories outside of the United States will be subject to a greater level of estimation and judgment.

	Year ended December 31, 2020			
(in thousands)	**German territory**	**U.S. territory**	**Territories outside the U.S.**	**Total**
Direct product sales to BioNTech customers	€20,553			**€20,553**
Share of collaboration partner's gross profit		€46,997	€141,480	**€188,477**
Input parameters used within gross profit share calculation				
Sales		*reported*	*preliminary reported*	
Transfer price (manufacturing, shipping costs and respective variances)		*standard prices*	*standard prices*	
License payments		*identified royalty rate*	*identified royalty rate*	

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 BioNTech and may be subject to adjustment whenever manufacturing and shipping cost variances are identified. Likewise, BioNTech's own cost of sales and the respective gross profit share owed to BioNTech's 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

Research and development expenses consist of costs incurred in performing research and development activities, including personnel-related expenses, contract services and costs for purchased materials, laboratory supplies and non-capital equipment used in the research and development process. Research and development expenses include BioNTech's share of expenses under the terms of collaboration agreements and 100% of the expenses for wholly-owned product candidates. Research and development expenses shared under collaboration agreements, which are initially incurred by the collaboration partners and subsequently charged to BioNTech, are recorded as purchased services classified within research and development. Cost reimbursements from partners for research and development expenses initially incurred by BioNTech and due to BioNTech under the agreements, are recorded as a reduction to purchased services classified within research and development expenses.

BioNTech has entered into agreements under which third parties grant licenses to BioNTech. Consideration paid under those agreements include upfront payments, development milestone payments and development expense reimbursements as well as sales-based milestone and royalty payments. Milestone payments are recorded when the specific milestone has been achieved. 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 BioNTech rights to use certain patents and technologies, that meet the definition of an identifiable assets, they are treated as acquired intangible assets. This assessment is made based on the facts and circumstances of each contractual agreement.

The value of goods and services received from contract research organizations, or CROs, and contract manufacturing organizations, or CMOs, in the reporting period are estimated based on the level of services performed and progress made in the respective period. Amounts are recorded as accrued expenses if BioNTech has not received an invoice from the service provider. Advance payments for goods or services that will be used

or rendered for future research and development activities are recognized as other current assets or other current financial assets respectively. The amounts are currently expensed as the related goods are delivered or the services performed. Management's estimates are based on the best information available at the time. However, additional information may become available in the future and management may adjust the estimate in such future periods. In this event, BioNTech may be required to record adjustments to research and development expenses in future periods when the actual level of activity becomes more certain. BioNTech considers resulting increases or decreases in cost as changes in estimates and reflects such changes in research and development expenses in the period identified.

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 six criteria can be demonstrated by the Group as shown under Note 2.3.10 above. 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 operations 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 considered as contingent considerations. These contingent considerations are recognized as expenses as incurred.

Prior to initial regulatory approval, costs relating to production of 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.

Estimates and Assumptions

The 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. The Group based its 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.

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. BioNTech has estimated fair values of assets acquired, liabilities assumed and contingent considerations based on reasonable assumptions. BioNTech continues to collect information and reevaluate these provisional estimates and assumptions in accordance with IFRS 3. Any adjustments to these provisional estimates and assumptions is 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 operations.

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

Impairment of Non-Financial Assets

Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The fair value less costs of disposal calculation is based on DCF model less incremental costs of disposing of the asset. The value in use calculation is based on a DCF model as well. The cash flows are derived from the budget for the next five years and do not include restructuring activities that the Group is not yet committed to or significant future investments that will enhance the performance of the assets of the CGU being tested. The recoverable amount is sensitive to the discount rate used for the DCF model as well as the expected future cash-inflows and the growth rate used for extrapolation purposes. These estimates are most relevant to goodwill and other intangibles with indefinite useful lives recognized by the Group.

The key assumptions used to determine the recoverable amount for the different CGUs, including a sensitivity analysis, are disclosed and further explained in Note 11.

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.

The Group has used valuation models like a binomial or Monte-Carlo simulation model for the measurement of the cash- and equity-settled transactions' fair value at the grant date 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.

The Group has used the Cox-Rubinstein binomial tree model when determining the fair 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 implied volatility for BioNTech, 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.

Leases

Right-of-use assets are measured at the amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments relating to that lease.

Significant accounting judgments are required for the determination of the appropriate incremental borrowing rate, which is to be used in the calculation of the asset and liability that are recognized in the financial statements regarding the lease contracts.

For the carrying amounts of right-of-use assets and the related lease liability, see Note 19.

Taxes

The Group is 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.

The Group does not recognize or impairs 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. Significant management judgment is required 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. 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, 2020, based on BioNTech's product-based business plan, including commercial supply commitments agreed with various governments and health ministries under which BioNTech either directly supplies the COVID-19 vaccine or, if they relate to territories which have been allocated to Pfizer, BioNTech will receive the profit share to which its eligible, it is now considered highly probable that taxable profits for the German tax group will be available against which the tax losses can be utilized. On this basis, BioNTech has determined that a deferred tax asset with respect to the German tax group's tax losses carried forward can be recognized.

On the other hand, management has determined 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 of the Group include the following subsidiaries:

			% equity interest	
Name	**Country of incorporation**	**Registered office**	**December 31, 2020**	**December 31, 2019**
BioNTech RNA Pharmaceuticals GmbH	Germany	Mainz	100%	100%
BioNTech Delivery Technologies GmbH	Germany	Halle	100%	100%
BioNTech Diagnostics GmbH	Germany	Mainz	100%	100%
BioNTech Europe GmbH (previously BioNTech Small Molecules GmbH)	Germany	Mainz	100%	100%
BioNTech Manufacturing GmbH (previously BioNTech IVAC GmbH)	Germany	Mainz	100%	100%
BioNTech Manufacturing Marburg GmbH	Germany	Marburg	100%	n/a
BioNTech Austria Beteiligungen GmbH	Austria	Vienna	100%	100%
BioNTech Innovative Manufacturing Services GmbH	Germany	Idar-Oberstein	100%	100%
reSano GmbH (previously reBOOST Management GmbH)	Germany	Mainz	100%	100%
JPT Peptide Technologies GmbH	Germany	Berlin	100%	100%
JPT Peptide Technologies Inc.	United States	Cambridge (previously Acton)	100%	100%
BioNTech USA Holding, LLC	United States	Cambridge (previously New York)	100%	100%
BioNTech Research and Development, Inc.	United States	Cambridge (previously New York)	100%	100%
BioNTech US Inc.	United States	Cambridge	100%	n/a
BioNTech Pharmaceuticals Asia Pacific Pte. Ltd	Singapore	Singapore	100%	n/a
BioNTech UK Limited	United Kingdom	Reading	100%	n/a
BioNTech Cell & Gene Therapies GmbH	Germany	Mainz	100%	100%
BioNTech Real Estate Holding GmbH	Germany	Holzkirchen	100%	100%
BioNTech Real Estate Verwaltungs GmbH	Germany	Holzkirchen	100%	100%
BioNTech Real Estate GmbH & Co. KG	Germany	Holzkirchen	100%	100%
BioNTech Real Estate An der Goldgrube GmbH & Co. KG	Germany	Holzkirchen	100%	n/a
BioNTech Real Estate Haus Vier GmbH & Co. KG	Germany	Holzkirchen	100%	n/a
BioNTech Real Estate Adam Opel Straße GmbH & Co. KG	Germany	Holzkirchen	100%	n/a

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.

During the year ended December 31, 2019, two entities were founded in the United States: BioNTech USA Holding, LLC, a wholly-owned subsidiary of BioNTech SE, and BioNTech Research and Development, Inc. a wholly-owned subsidiary of BioNTech USA Holding, LLC. Additionally, reSano GmbH (previously reBOOST Management GmbH), was acquired through a share purchase which represents a related party transaction.

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 BioNTech's Annual General Meeting, or AGM.

Name	Country of incorporation	Registered office	Ownership of ordinary shares in BioNTech (in %) December 31, 2020	December 31, 2019
AT Impf GmbH	Germany	Munich	47.37%	50.33%

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, 2020	December 31, 2019
Medine GmbH	Germany	Mainz	17.25%	18.38%

5 Business Combinations

Lipocalyx GmbH

In December 2019, BioNTech Delivery Technologies GmbH (previously BioNTech Protein Therapeutics GmbH), or BioNTech Delivery Technologies, a wholly-owned subsidiary of BioNTech SE, entered into an agreement to acquire all assets, employees and proprietary know-how of Lipocalyx GmbH, or Lipocalyx, and its related parties in exchange for a total cash consideration at an amount of €6.5 million and additional contingent consideration estimated at the closing date of January 6, 2020 in an amount of €0.6 million. The employees of Lipocalyx were transferred automatically to BioNTech Delivery Technologies with effect as of the closing date.

The Group acquired the assets of Lipocalyx and its related parties to combine the acquired technologies and the related know-how with already existing product candidates of the Group to improve their functionality and performance.

The final fair values of the identifiable net assets of Lipocalyx as at the date of acquisition were:

(in thousands)	Fair value recognized on acquisition Lipocalyx GmbH
Assets	
Goodwill	€896
Other intangible assets	5,978
Property, plant and equipment	75
Inventories	139
Total identifiable net assets at fair value	**€7,088**
Consideration	
Cash paid	€6,516
Contingent consideration liability	572
Total consideration	**€7,088**

The consolidated statements of operations include the result of Lipocalyx since the acquisition date. From the date of acquisition through December 31, 2020, Lipocalyx contributed €1.7 million as operating loss to the respective result of the Group. From the date of acquisition through December 31, 2020, Lipocalyx generated €0.2 million of revenues. Given the timing of closing, the contribution to operating loss and revenues, if the transaction had occurred at the beginning of the reporting period, would not differ materially. Goodwill recognized

is primarily attributed to the expected synergies and other benefits from combining the assets and activities of Lipocalyx with those of the Group. The goodwill resulting from the Lipocalyx acquisition during the year ended December 31, 2020 was allocated to the CGU Immunotherapies.

Transaction costs of €17 thousand relating to the acquisition have been expensed and are included in the general and administrative expenses in the consolidated statements of operations and are included in cash flows used in operating activities in the consolidated statements of cash flows.

The purchase agreement with Lipocalyx includes the following contingent cash considerations to the previous owners:

- €1.0 million upon successful completion of a Phase 1 clinical trial designed to show and establish a sufficient safety margin justifying further development of the first pharmaceutical product relating to acquired technologies formulated in a manner covered by a valid granted claim in a major country of a patent within the assigned IP rights; and
- €1.0 million upon successful completion of the first Phase 2 clinical trial of the first pharmaceutical product relating to acquired technologies formulated in a manner covered by a valid granted claim in a major country of a patent within the assigned IP rights.

At the acquisition date, the fair value of the contingent consideration was €0.6 million. The contingent consideration is presented in 'non-current financial liabilities' in the consolidated statements of financial position (see Note 12).

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

On May 6, 2020, BioNTech 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 BioNTech's 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 thousands)	**Fair value recognized on acquisition** BioNTech US Inc.
Assets	
Intangible assets	€29,867
Property, plant and equipment	5,617
Right-of-use assets	6,896
Other assets non-current and current	2,704
Cash and cash equivalents	7,749
Total assets	**€52,833**
Liabilities	
Trade payables	1,723
Other liabilities non-current and current	17,793
Total liabilities	**€19,516**
Total identifiable net assets at fair value	**€33,317**
Goodwill from the acquisition	56,573
Consideration transferred	**€89,890**
Consideration	
Shares issued, at fair value	89,548
Cash paid	342
Total consideration	**€89,890**

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 operations include 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 respective result of the Group. 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 operations 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 have been expensed and are included in the general and administrative expenses in the consolidated statements of operations. In the consolidated statements of cash flows they are 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, BioNTech acquired Novartis Manufacturing GmbH, a manufacturing facility in Marburg. Through the acquisition, BioNTech plans to produce its 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 thousands)	**Fair value recognized on acquisition** BioNTech Manufacturing Marburg GmbH
Assets	
Property, plant and equipment	79,828
Right-of-use assets	28,514
Inventories	2,466
Other assets non-current and current	4,343
Cash and cash equivalents	16,319
Total assets	**€131,470**
Liabilities	
Provisions non-current and current	5,127
Trade payables	8,105
Other liabilities non-current and current	33,383
Total liabilities	**€46,615**
Total identifiable net assets at fair value	**€84,855**
Bargain purchase	(7,002)
Consideration transferred	**€77,853**
Consideration	
Cash paid	77,853
Total consideration	**€77,853**

The consolidated statements of operations include the results of BioNTech Marburg since the acquisition date. From the date of acquisition, the transition into a GMP certified manufacturing facility for BioNTech's COVID-19 vaccine was initiated rapidly. During this time, no revenues have been recognized and set-up, retooling and prepping expenses led to a €6.7 million operating loss, which contributed to the respective result of the Group. Projecting the revenue and result of the joint 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 operations 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 BioNTech's 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 BioNTech to accelerate its efforts to scale-up the commercial manufacturing capacity for its 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 have been expensed and are included in the general and administrative expenses in the consolidated statements of operations and are included in cash flows used in operating activities in the consolidated statements of cash flows.

Reconciliation of Goodwill

The carrying amount of goodwill equals the acquisition costs adjusted by currency translation adjustments. The reconciliation of this carrying amount at the beginning and end of the reporting period is presented below:

(in thousands)	**Goodwill**
As of January 1, 2020	**€2,978**
Acquisition of subsidiaries and businesses	57,469
Currency differences	(6,750)
As of December 31, 2020	**€53,697**

6 Revenue 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 thousands)	**2020**	**2019**	**2018**
Research & development revenues from collaborations	**€178,849**	**€84,428**	**€101,837**
Pfizer Inc.	*121,597*	*14,348*	*7,173*
Genentech Inc.	*49,195*	*64,026*	*49,536*
Shanghai Fosun Pharmaceutical (Group) Co., Ltd	*5,074*	-	-
Other	*2,983*	*6,054*	*45,128*
Commercial revenues	**303,476**	**24,161**	**25,738**
COVID-19 vaccine revenues	270,490	-	-
*Sales to collaboration partner**	*61,460*	-	-
Direct product sales to BioNTech customers	*20,553*	-	-
Share of collaboration partner's gross profit	*188,477*	-	-
Other sales	32,986	24,161	25,738
Total	**€482,325**	**€108,589**	**€127,575**

*Represents sales to collaboration partner of products manufactured by BioNTech.

During the year ended December 31, 2020, revenues from contracts with customers mainly increased since revenues were recognized for the first time under two new collaboration agreements, which BioNTech entered into during the year ended December 31, 2020 in order to develop a COVID-19 vaccine, and ultimately led to the recognition of COVID-19 vaccine commercial revenues.

During the year ended December 31, 2020, revenues recognized from two customers, Pfizer (€371.5 million) and Genentech (€49.2 million), each account for more than 10% of total revenues. During the year ended December 31, 2019 revenues recognized from one customer, Genentech (€64.0 million), accounted for more than 10% of total revenues. During the year ended December 31, 2018 revenues recognized from two customers, Genentech (€49.5 million) and Sanofi (€41.7 million), accounted for more than 10% of total revenue. The geographic region which recognized revenues was mainly Germany (also the Country of BioNTech's domicile) and is based upon the location will bills customers.

Research & Development Revenues from Collaborations

As part of its BNT162 vaccine program against COVID-19, BioNTech collaborates with Pfizer and Fosun Pharma.

Revenue from Pfizer was mainly derived from the collaboration and license agreement to develop a COVID-19 vaccine and, in addition, includes an amount of €3.5 million revenue derived from the existing Influenza collaboration. During the year ended December 31, 2020, a non-refundable upfront cash payment of €66.3 million

was received. A regulatory milestone payment of €51.8 million became due, but has not yet been received. Both were fully recognized as revenue during the year ended December 31, 2020.

Fosun Pharma is the collaboration partner with whom BioNTech works together on the development of a COVID-19 vaccine in China. Through the collaboration agreement BioNTech is conducting clinical trials in China, using BioNTech's proprietary mRNA technology and leveraging Fosun Pharma's extensive clinical development, regulatory, and commercial capabilities in the country. 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 revenue during year ended December 31, 2020.

Other collaboration programs have been progressed during the year ended December 31, 2020 and revenues of €52.1 million have been derived from deferred upfront payments measured based on the costs incurred under the respective research programs. For certain collaboration programs, the commencement of trials has been delayed, partially due to slowed patient enrollment or other delays as a result of the COVID-19 pandemic. Accordingly, during the year ended December 31, 2020, revenues from collaboration programs with Genentech and from the Influenza collaboration with Pfizer have generally decreased compared to the prior year periods.

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 revenue as BioNTech performed under the agreement and measured based on the costs incurred under the respective research programs. Compared to the revenues recognized from collaboration and license agreements during the year ended December 31, 2018, revenues decreased since the revenue recognized in the year ended December 31, 2018 included an amount of €33.2 million collaboration revenue from the Sanofi collaboration for a reimbursement of 50% of CellScript sublicense costs pursuant to a separate sub-sublicense agreement dated December 22, 2018. This transaction only occurred in the year ended December 31, 2018.

Commercial Revenues

BioNTech's COVID-19 vaccine has evolved from the BNT162 program and has been authorized or approved for emergency or temporary use or has been granted conditional marketing authorization in over 65 countries worldwide, which resulted in recognition of revenues from the sale of pharmaceutical products for the first time. BioNTech is the marketing authorization holder in the European Union, and holder of emergency use authorizations or equivalent in the United States, United Kingdom, Canada and other countries in advance of a planned application for full marketing authorizations in these countries. BioNTech has marketing and distribution rights in Germany and Turkey. Pfizer has marketing and distribution rights worldwide with the exception of China, Germany, and Turkey. Fosun Pharma has marketing and distribution rights in China.

The COVID-19 vaccine manufacturing process leverages Pfizer's and BioNTech's manufacturing facilities, consequently responsibilities are shared between BioNTech and Pfizer. Whenever responsibilities in the manufacturing and supply process of the COVID-19 vaccine shift and the COVID-19 vaccine is transferred, it is sold from one partner to the other. During the year ended December 31, 2020, BioNTech has recognized €61.5 million of revenues from selling drug product batches manufactured by BioNTech to Pfizer's manufacturing site for fill and finish.

Upon receiving a conditional marketing authorization, emergency or temporary use authorization, BioNTech and Pfizer started selling the product. The allocation of marketing and distribution rights defines territories in which the collaboration partners act as a principal respectively. For supplying BioNTech's territory, Germany, BioNTech acquired COVID-19 vaccine from Pfizer and recognized €20.6 million of revenues from direct COVID-19 vaccine sales during the year ended December 31, 2020. The share of gross profit that Pfizer as collaboration partner has earned based on these sales is recognized as cost of sales.

Based on Pfizer's COVID-19 vaccine sales in the collaboration partner's territory, BioNTech is eligible to receive a share of the respective gross profit which represents a net figure and is recognized as collaboration revenue during the commercial phase. During the year ended December 31, 2020, a gross profit share of €188.5 million has been recognized. In order to determine our share of collaboration partner's gross profits, BioNTech used certain information from the collaboration partner, including revenue from the sale of products, some of which is based on preliminary data shared between the partners and might vary once final data is available.

During the year ended December 31, 2020, €33.0 million of revenues compared to €24.2 million of revenues during the year ended December 31, 2019, and €25.7 million during the year ended December 31, 2018 were recognized from other sales transactions based on sales of diagnostic products, peptides, retroviral vectors for clinical supply, and development and manufacturing services that were sold to third-party customers.

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

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Timing of revenue recognition			
Goods and services transferred at a point in time	€108,840	€16,955	€22,828
Goods and services transferred over time	373,485	91,634	104,747
Total	**€482,325**	**€108,589**	**€127,575**

During the year ended December 31, 2019, BioNTech recognized revenue of €1.1 million under a bill-and-hold transaction for which the customer already had obtained control. The bill-and-hold arrangement is substantive since the request to retain the product in BioNTech's facilities until January 2020 was initiated by the customer.

6.2 Contract Balances

(in thousands)	**December 31, 2020**	**December 31, 2019**
Trade receivables	€165,468	€11,913
Contract liabilities	371,475	190,692

Trade receivables are non-interest bearing and are generally settled within 20 to 30 days.

Contract assets are recognized for revenue earned from sales and services based on individual customer contracts of BioNTech Innovative Manufacturing Services GmbH. However, the customers' advance payments exceeded BioNTech's transferred goods and services for which a conditional right to consideration exists. Therefore, only contract liabilities net of contract assets are presented as of December 31, 2020 and December 31, 2019, respectively.

Contract liabilities mainly include upfront fees received from BioNTech's 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, 2020 comprise €131.8 million remaining upfront fees from collaboration agreements, €235.8 million of advance payments for future COVID-19 vaccine sales, which had been received during the year ended December 31, 2020 or for which an unconditional right of consideration exists as well as €3.9 million advance payments received on other sales (as of December 31, 2019: €187.6 million of remaining upfront fees from collaborations as well as €3.1 million advance payments received on other sales).

During the year ended December 31, 2020, the increase from payments received exceeded revenues recognized from contract liabilities recorded at the beginning of the year (during the year ended December 31, 2019: decrease in contract liabilities since recognizing revenues from amounts which had been included in contract liabilities at the beginning of the year exceeded advance payments on other sales received).

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

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Amounts included in contract liabilities at the beginning of the year	€58,895	€84,112	€59,583

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 thousands)	December 31, 2020	December 31, 2019
Within one year	€299,583	€93,583
More than one year	71,892	97,109
Total	**€371,475**	**€190,692**

7 Income and Expenses

7.1 Costs of Sales

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Cost of sales related to COVID-19 vaccine revenues	€35,616	-	-
Cost related to other sales	23,717	17,361	13,690
Total	**€59,333**	**€17,361**	**€13,690**

During the year ended December 31, 2020, cost of sales mainly increased compared to the year ended December 31, 2019 since costs were recognized for the first time with respect to BioNTech's COVID-19 vaccine sales and included Pfizer's share of gross profits earned by BioNTech in transactions, where BioNTech is the principal. Costs of sales do not include costs relating to production of pre-launch products since those are expensed as research and development expenses in the period incurred.

7.2 Research and Development Expenses

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Purchased services	€359,880	€65,552	€42,079
Wages, benefits and social security expense	126,298	83,213	45,668
Laboratory supplies	107,792	37,218	22,921
Depreciation and amortization	30,192	27,533	18,312
IT costs	5,118	3,800	1,572
Lease and lease related cost	3,725	2,527	2,404
Transport costs	2,135	1,081	668
Other	9,889	5,542	9,416
Total	**€645,029**	**€226,466**	**€143,040**

During the year ended December 31, 2020, research and development expenses increased compared to the year ended December 31, 2019 due to an increase in research and development expenses from BioNTech's BNT162 program. Research and development expenses include BioNTech's share of expenses under the terms of the Pfizer collaboration agreement. Development costs, which are shared, are divided equally between BioNTech and Pfizer. The amount of shared development expenses, which were initially incurred by Pfizer and subsequently charged to BioNTech, were recorded as purchased services classified within research and development and the reimbursement from Pfizer for research and development expenses initially incurred by BioNTech were recorded as a reduction to research and development expenses. The increase was further driven by an increase in expenses for purchased laboratory supplies as well as an increase in headcount leading to higher wages, benefits and social security expenses. In addition, from May 6, 2020, the date of acquisition, the new U.S.-based subsidiary, BioNTech US Inc., contributed €21.0 million to the research and development expenses of the Group.

During the year ended December 31, 2019, research and development costs increased compared to the year ended December 31, 2018 based on an increase in wages, benefits and social security expenses due to an increase in headcount and the full-year reflection of the Employee Stock Ownership Plan ("ESOP") expenses during the year ended December 31, 2019 as well as higher development expenses spent on purchased services and laboratory supplies.

7.3 Sales and Marketing Expenses

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Purchased services	€10,929	€247	€794
Wages, benefits and social security expense	1,636	1,938	1,728
Other	1,947	533	519
Total	**€14,512**	**€2,718**	**€3,041**

During the year ended December 31, 2020, sales and marketing expenses increased compared to the year ended December 31, 2019 due to an increase in purchased service, which we incurred in connection with progressing the commercial activities of the Group with respect to BioNTech's COVID-19 vaccine.

7.4 General and Administrative Expenses

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Wages, benefits and social security expense	€33,007	€19,122	€8,582
Purchased services	26,022	6,419	5,177
IT and office equipment	7,404	4,573	3,774
Depreciation and amortization	5,104	4,855	2,284
Insurance premiums	4,840	1,061	145
Job advertisement expenses	2,897	548	861
Lease and lease related cost	2,390	1,715	1,012
Research services	2,033	232	26
Laboratory supplies	1,191	785	456
Contract staffing	1,108	686	781
Other	8,053	5,551	3,236
Total	**€94,049**	**€45,547**	**€26,334**

During the year ended December 31, 2020, general and administrative expenses increased compared to the year ended December 31, 2019 due to higher expenses for purchased management consulting and legal services, an increase in headcount leading to higher wages, benefits and social security expenses and higher insurance premiums. In addition, from May 6, 2020, the date of acquisition, the new U.S.-based subsidiary, BioNTech US Inc., contributed €7.4 million to the general and administrative expenses of the Group, respectively.

During the year ended December 31, 2019, general and administrative expenses increased compared to the year ended December 31, 2018 based on an increase in headcount and the full-year reflection of the ESOP program expenses during the year ended December 31, 2019 as well as a charge of €2.6 million in connection with certain withholding tax payments for intellectual property licenses related to prior years that was recorded during the year ended December 31, 2019 but not during the year ended December 31, 2018.

7.5 Other Operating Income

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Government grants	€239,017	€1,547	€4,228
Bargain purchase	7,002	-	50
Other	4,520	1,177	1,118
Total	**€250,539**	**€2,724**	**€5,396**

During the year ended December 31, 2020, the other income increased compared to the year ended December 31, 2019. The increase mainly results from government grants for which BioNTech became eligible as part of an initiative by the German Federal Ministry of Education (*Bundesministerium für Bildung und Forschung*, or the BMBF) to support its COVID-19 vaccine program, BNT162. The BMBF funding was granted to accelerate BioNTech's vaccine development, and to upscale its manufacturing capabilities in Germany. The funding will also

compensate further costs that incur since the COVID-19 vaccine continues to be tested in clinical trials, for example to test it against new variants or to approve it for additional groups (pregnant women, individuals less 16 years), and because study participants will continue to be followed for two years to continue evaluating safety and efficacy. The proportion of the grant that related to expenses incurred by BioNTech is recognized as other operating income with an amount of €238.9 million; the proportion which was received and will compensate BioNTech for future expenses, has been deferred and is presented as government grant in the consolidated statements of financial position with an amount of €88.0 million.

The following table illustrates the changes regarding the government grants:

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
As of January 1	**-**	**-**	-
Received during the year	330,968	1,547	4,228
Released to the consolidated statements of operations	(239,017)	(1,547)	(4,228)
As of December 31	**€91,951**	**-**	**-**
Total current	91,951	-	-
Total non-current	-	-	-

7.6 Finance Income

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Interest income	€1,564	€1,781	€1,996
Foreign exchange gains, net	-	2,341	6,050
Total	**€1,564**	**€4,122**	**€8,046**

During the year ended December 31, 2019, finance income included €2.3 million foreign exchange gains. Foreign exchange differences on a cumulative basis, are either shown as finance income or expenses.

7.7 Finance Expense

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Amortization of financial instruments	€3,048	€326	€48
Fair value adjustments of financial instruments measured at fair value	17,289	-	-
Foreign exchange loss, net	42,609	-	-
Total	**€62,946**	**€326**	**€48**

During the year ended December 31, 2020, finance expenses included €42.6 million foreign exchange losses as well as €17.3 million in expenses arising from fair value measurement adjustments of the derivative embedded within the convertible note. The increase in foreign exchange losses is mainly due to higher balances in U.S. dollar bank accounts and the weakening of the U.S. dollar when compared to the Euro.

7.8 Employee Benefits Expense

	Years ended December 31,		
	2020	**2019**	**2018**
(in thousands)			
Wages and salaries	€160,655	€98,568	€54,149
Social security costs	17,988	12,394	8,231
Pension costs	761	517	324
Total	**€179,404**	**€111,479**	**€62,704**

The item wages and salaries includes, among other things, expenses for share-based payments.

8 Income Tax

Income tax for the years ended December 31, 2020, December 31, 2019 and December 31, 2018 comprised current income taxes, other taxes and deferred taxes. BioNTech SE is subject to corporate taxes, the solidarity surcharge and trade taxes. The Company's corporate tax rate in the reporting year remained unchanged (15.0%) as did the solidarity surcharge (5.5%) whereas the average trade tax rate (15.0%) changed. 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 8.1%).

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

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Current income taxes	€17	€(296)	€600
Deferred taxes	(161,034)	-	-
Other taxes	17	28	-
Income taxes	**€(161,000)**	**€(268)**	**€600**

The following table reconciles the expected income taxes to the actual current income taxes and deferred taxes as presented in the table above. The combined income tax rate of 30.79% in the year ended December 31, 2020 (during the years ended December 31, 2019 and 2018: 30.78% and 30.99%, respectively) was applied to loss before taxes to calculate the expected income taxes. This rate consists of above outlined tax rates of BioNTech SE applicable to the Group. The slight decrease of the tax rate results from the Lipocalyx GmbH business combination.

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Loss before tax	**€(145,802)**	**€(179,440)**	**€(47,662)**
Expected tax benefit (based on BioNTech`s statutory tax rate of 30.79%, 2019: 30.78%, 2018: 30.99%)	44,891	55,240	14,776
Effects			
Government grants exempted from taxes	14	48	28
Non-deductible expenses	(770)	(58)	(18)
Add-back for trade tax purposes	(595)	(110)	(96)
Non-tax effective bargain purchase	2,156	-	-
Non-recognition of tax effect on share-based payment expenses	(9,806)	(9,308)	-
Tax-effective equity transaction costs	10,229	5,121	-
Utilization of tax losses	-	-	1,165
Non-recognition of deferred taxes on tax losses and temporary differences	(12,961)	(51,197)	(13,634)
Recognition of deferred taxes on tax losses not recognized in prior periods	102,231	-	-
Recognition of deferred taxes on temporary differences not recognized in prior periods	26,241	192	-
Effect from lower foreign income tax rate	(1,304)	(102)	-
Adjustment prior year tax	(326)	316	-
Tax credit	1,059	-	-
Other effects	(59)	126	(2,821)
Income taxes	**€161,000**	**€268**	**€(600)**

Deferred Taxes

Deferred taxes for the periods indicated relate to the following:

Year ended December 31, 2020

(in thousands)	**January 1, 2020**	**Recognized in P&L***	**Recognized in OCI**	**Acquisition of subsidiaries and businesses**	**December 31, 2020**
Fixed assets	€(655)	€(2,370)	-	€8,637	€5,612
Inventories	596	46	-	329	971
Leases	512	(5,091)	-	(14)	(4,593)
Contract liabilities	23,543	(174)	-	-	23,369
Interest-bearing loans and borrowings	-	(2,741)	-	195	(2,546)
Net employee defined benefit liabilities	-	169	(63)	698	804
Provisions	187	886	-	419	1,492
Other (incl. deferred expenses)	2,087	8,336	-	202	10,625
Tax loss carryforward / tax credit	109,764	41,660	-	24,280	175,704
Deferred Tax Assets Net (before valuation)	**€136,034**	**€40,721**	**€(63)**	**€34,746**	**€211,438**
Valuation Adjustment	**(136,034)**	**120,313**	**-**	**(34,765)**	**(50,486)**
Deferred Tax Assets Net (after valuation)	**-**	**€161,034**	**€(63)**	**€(19)**	**€160,952**

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

Year ended December 31, 2019

(in thousands)	**January 1, 2019**	**Recognized in P&L**	**Recognized in OCI**	**Acquisition of subsidiaries and businesses**	**December 31, 2019**
Fixed assets	€(90)	€(565)	-	-	€(655)
Inventories	-	596	-	-	€596
Leases	306	206	-	-	€512
Contract liabilities	28,441	(4,898)	-	-	€23,543
Provisions	134	53	-	-	€187
Other (incl. deferred expenses)	161	1,926	-	-	€2,087
Tax loss carryforward / tax credit	55,848	53,916	-	-	€109,764
Deferred Tax Assets Net (before valuation)	**€84,799**	**€51,235**	**-**	**-**	**€136,034**
Valuation Adjustment	**(84,799)**	**(51,235)**	**-**	**-**	**(136,034)**
Deferred Tax Assets Net (after valuation)	**-**	**-**	**-**	**-**	**-**

Accumulated tax losses of the German tax group, German entities not within the tax group and U.S. tax group for the periods indicated amount to the following:

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Corporate Tax	€596,359	€356,044	€179,264
Trade Tax	513,561	352,341	176,425

(in thousands)	Years ended December 31, 2020	2019	2018
Federal Tax Credits	€756	-	-
State Tax Credits	250	-	-

The accumulated tax losses related to the German tax group include €457.9 million of corporate income tax losses and €450.9 million of trade tax losses. Under German law, tax losses do not expire. Deferred tax assets on tax losses had not been capitalized in previous years, 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. Following the authorization and approval of the COVID-19 vaccine for emergency or temporary use or having been granted conditional marketing authorization in over 65 countries worldwide, BioNTech re-evaluated previously unrecognized tax losses. Based on BioNTech's product-based business plan, including commercial supply commitments agreed with various governments and health ministries under which BioNTech either directly supplies the COVID-19 vaccine or, if they relate to territories which have been allocated to Pfizer, BioNTech will receive the profit share to which it is eligible, it is now considered highly probable that taxable profits for the German tax group will be available against which the tax losses can be utilized. On this basis, BioNTech recognized deferred tax assets and liabilities with a net amount of €161.0 million for the losses and temporary differences determined for the German tax group as of December 31, 2020.

The accumulated tax losses related to German entities not within the tax group include €1.7 million of corporate income tax losses and €1.8 million of trade tax losses. With respect to those tax losses, no deferred tax assets have been capitalized, as there is not sufficient probability in terms of IAS 12 that there will be future taxable profits available against which the unused tax losses can be utilized.

The accumulated tax losses related to U.S. tax group include €136.8 million of corporate income tax losses and €60.9 million of trade tax losses. The tax losses related to the U.S. tax group include €20.9 million of federal losses that are expected to expire in 2033 and €115.9 million of federal losses which have no expiration date and can be carried forward indefinitely. In addition, the U.S. tax group has state tax losses of €60.9 million, which may be available to offset future taxable profit and that expire at various dates beginning in 2033. BioNTech's forecast for the U.S. tax group does not provide sufficient probability for the use of existing tax loss carryforwards in the near future. Therefore, the requirements set out by IAS 12 are not fulfilled for the U.S. tax group. As of December 31, 2020, deferred tax assets are only recognized up to the amount of deferred tax liabilities.

In addition to accumulated tax losses, BioNTech had accumulated federal tax credits of €0.8 million and state tax credits of €0.3 million in the United States as of December 31, 2020. The tax credits in the United States will expire at various dates beginning in 2035 if they are not used.

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, BioNTech effected a 1:18 share split by issuing 206,595,492 shares by way of a capital increase from its 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 give retroactive effect to the share split for all periods presented.

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

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Gain (loss) attributable to ordinary equity holders of the parent for basic earnings	**€15,198**	**€(179,056)**	**€(48,019)**
Weighted average number of ordinary shares for basic EPS	**235,442**	**211,499**	**190,710**
Effects of dilution from share options	13,085	-	-
Weighted average number of ordinary shares adjusted for the effect of dilution	**248,527**	**211,499**	**190,710**
Earnings per share			
in EUR			
Basic and diluted, profit / (loss) for the period attributable to ordinary equity holders of the parent*	€0.06	€(0.85)	€(0.25)

* Numbers of shares for calculating the earnings per share for the years ended December 31, 2019 and December 31, 2018 have been adjusted to reflect capital increase due to 1:18 share split, which occurred on September 18, 2019.

There have been no other transactions involving ordinary shares or potential ordinary shares between the reporting date and the date of authorization of these financial statements. 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 thousands) **Acquisition and production costs**	**Land and buildings**	**Equipment, tools and installations**	**Construction in progress and advance payments**	**Total**
As of January 1, 2019	**€22,147**	**€73,613**	**€7,091**	**€102,853**
Additions	7,269	8,700	22,623	38,592
Disposals	-	(105)	(10)	(115)
Reclassifications	53	-	(53)	-
Currency differences	-	(1)	1	-
Acquisition of subsidiaries and businesses	-	999	-	999
As of December 31, 2019	**€29,469**	**€83,206**	**€29,652**	**€142,329**
As of January 1, 2020	**€29,469**	**€83,206**	**€29,652**	**€142,329**
Additions	14,927	10,093	41,013	66,033
Disposals	(41)	(6,892)	(958)	(7,891)
Reclassifications	8,561	1,832	(10,391)	-
Currency differences	(52)	(638)	-	(690)
Acquisition of subsidiaries and businesses	8,400	54,817	22,302	85,519
As of December 31, 2020	**€61,264**	**€142,418**	**€81,618**	**€285,300**

(in thousands) **Cumulative depreciation and impairment charges**	**Land and buildings**	**Equipment, tools and installations**	**Construction in progress and advance payments**	**Total**
As of January 1, 2019	**€6,472**	**€30,180**	**-**	**€36,652**
Depreciation	1,854	10,861	-	12,715
Disposals	-	(79)	-	(79)
Reclassifications	-	-	-	-
Currency differences	-	(3)	-	(3)
As of December 31, 2019	**€8,326**	**€40,959**	**-**	**€49,285**
As of January 1, 2020	**€8,326**	**€40,959**	**-**	**€49,285**
Depreciation	2,074	13,753	-	15,827
Disposals	(41)	(6,683)	-	(6,724)
Reclassifications	-	-	-	-
Currency differences	(3)	(53)	-	(56)
As of December 31, 2020	**€10,356**	**€47,976**	**-**	**€58,332**

(in thousands) **Carrying amount**	**Land and buildings**	**Equipment, tools and installations**	**Construction in progress and advance payments**	**Total**
As of January 1, 2019	**€15,675**	**€43,433**	**€7,091**	**€66,200**
As of December 31, 2019	**€21,143**	**€42,247**	**€29,652**	**€93,044**
As of December 31, 2020	**€50,908**	**€94,442**	**€81,618**	**€226,968**

11 Intangible Assets

(in thousands) **Acquisition costs**	**Goodwill**	**Concessions, licenses, in-process R&D and similar rights**	**Advance payments**	**Total**
As of January 1, 2019	**€534**	**€101,853**	**€1,497**	**€103,883**
Additions	-	11,744	1,529	13,273
Disposals	-	(133)	(477)	(610)
Reclassifications	-	146	(146)	-
Currency differences	-	(23)	-	(23)
Acquisition of subsidiaries and businesses	2,444	2,726	-	5,170
As of December 31, 2019	**€2,978**	**€116,313**	**€2,403**	**€121,693**
As of January 1, 2020	**€2,978**	**€116,313**	**€2,403**	**€121,693**
Additions	-	4,187	4,426	8,613
Disposals	-	(5,435)	(643)	(6,078)
Reclassifications	-	233	(233)	-
Currency differences	(6,750)	(3,897)	-	(10,647)
Acquisition of subsidiaries and businesses	57,469	35,845	-	93,314
As of December 31, 2020	**€53,697**	**€147,246**	**€5,953**	**€206,895**

(in thousands) **Cumulative depreciation and impairment charges**	**Goodwill**	**Concessions, licenses, in-process R&D and similar rights**	**Advance payments**	**Total**
As of January 1, 2019	**-**	**€15,842**	**-**	**€15,842**
Depreciation	-	16,502	-	16,502
Disposals	-	(81)	-	(81)
Reclassifications	-	-	-	-
Currency differences	-	(3)	-	(3)
As of December 31, 2019	**-**	**€32,260**	**-**	**€32,260**
As of January 1, 2020	**-**	**€32,260**	**-**	**€32,260**
Depreciation	-	16,627	-	16,627
Disposals	-	(5,410)	-	(5,410)
Reclassifications	-	-	-	-
Currency differences	-	(72)	-	(72)
As of December 31, 2020	**-**	**€43,405**	**-**	**€43,405**

(in thousands) **Carrying amount**	**Goodwill**	**Concessions, licenses, in-process R&D and similar rights**	**Advance payments**	**Total**
As of January 1, 2019	**€534**	**€86,011**	**€1,497**	**€88,042**
As of December 31, 2019	**€2,978**	**€84,053**	**€2,403**	**€89,434**
As of December 31, 2020	**€53,697**	**€103,841**	**€5,953**	**€163,490**

Goodwill and intangible assets with indefinite useful lives

For impairment testing, goodwill acquired through business combinations has been allocated to the cash-generating units (CGU) as shown in the following table:

	CGU Immunotherapies		**External Product Sales of JPT**		**Total**	
(in thousands)	As of December 31, 2020	As of December 31, 2019	As of December 31, 2020	As of December 31, 2019	**As of December 31, 2020**	**As of December 31, 2019**
Goodwill	€53,163	€2,444	€534	€534	**€53,697**	**€2,978**

The Group performs its annual goodwill impairment test for the respective year as of October 1. As a result of the change to one reportable segment (Note 2.1), BioNTech evaluated the implications on its determination of CGUs for allocation of goodwill. As a result, two CGUs were identified:

- The Immunotheraopies CGU focuses on the development of therapies to address a range of rare and infectious diseases and includes BioNTech's broad pipeline includes mRNA-based immune activators, antigen-targeting T-cells and antibodies, and defined immunomodulators of various immune cell mechanisms.
- The External Products Sales of JPT Peptide Technologies GmbH CGU includes the distribution of innovative peptide-based products to external customers.

CGU Immunotherapies

The recoverable amount of the CGU Immunotherapies has been determined based on a value in use calculation using cash flow projections from financial budgets approved by the Management Board covering a fifteen-year period. The projected cash flows have been updated to reflect the near-term effect from BioNTech's COVID-19 vaccine. The discount rate applied to cash flow projections is 8.9% and cash flows beyond the forecast period are extrapolated using a 1.0% growth rate that is the same as the long-term average growth rate for the biotech industry. It was concluded that the fair value less costs of disposal did not exceed the value in use. As a result of the analysis, management did not identify an impairment for this CGU.

CGU External Product Sales of JPT Peptide Technologies GmbH

The recoverable amount of the CGU External Product Sales of JPT Peptide Technologies GmbH has been determined based on a value in use calculation using cash flow projections from financial budgets approved by senior management covering a ten-year period. The discount rate applied to cash flow projections is 7.9% and cash flows beyond the forecast period are extrapolated using a 1.0% growth rate which is in line with industry standard. It was concluded that the fair value less costs of disposal did not exceed the value in use. As a result of the analysis, management did not identify an impairment for this CGU.

Key assumptions used in value in use calculations and sensitivity to changes in assumptions

The calculation of value in use for both CGUs, Immunotherapies and External Product Sales of JPT Peptide Technologies GmbH, is most sensitive to the following assumptions:

- Discount rates
- Growth rates used to extrapolate cash flows beyond the forecast period

Discount rates − Discount rates represent the current market assessment of the risks specific to the CGU, taking into consideration the time value of money and individual risks of the underlying assets that have not been incorporated in the cash flow estimates. The discount rate calculation is based on the specific circumstances of the Group and the respective CGU. It is derived from its weighted average cost of capital (WACC). The WACC takes into account both debt and equity. The cost of equity is derived from the expected return on investment by the Group's investors. The cost of debt is based on the interest-bearing borrowings the Group is obliged to service. CGU-specific risk is incorporated by applying individual beta factors. The beta factors are evaluated annually based on publicly available market data. Adjustments to the discount rate are made to factor in the specific amount and timing of the future tax flows in order to reflect a pre-tax discount rate.

An increase in the discount rate to 9.4% (i.e., +1.5%point) in the CGU External Product Sales of JPT Peptide Technologies GmbH would result in a goodwill impairment as of October 1, 2020. With respect to the CGU Immunotherapies, no reasonable rise in the discount rate would result in an impairment.

Growth rate estimates − Rates are based on published industry research. Management recognizes that the speed of technological change and the possibility of new entrants (further market approvals) can have a significant impact on growth rate assumptions. The effect of new entrants is not expected to have an adverse impact on the forecasts, but could yield a reasonably possible alternative to the estimated long-term growth rate of 1.0%.

With respect to both CGUs, no reasonable reduction in the growth rate estimate would result in an impairment.

In general, BioNTech concluded that no reasonable possible change of key assumptions on which the calculation of the recoverable amount is based would cause the carrying amount of the CGU to exceed its recoverable amount.

Intangible Assets not yet Available for Use

Intangible assets not yet available for use did not exist in the years ended December 31, 2020 and December 31, 2019.

Non-Current assets by Region

As of December 31, 2020 and December 31, 2019, non-current assets comprised €89.2 million respectively €3.8 million intangible assets, property, plant and equipment, right-of-use assets and other assets of our subsidiaries incorporated in the United States respectively. The remaining non-current assets relate to subsidiaries incorporated in Germany.

12 Financial Assets and Financial Liabilities

12.1 Capital Risk Management

BioNTech's capital management objectives are designed primarily to finance the Group's growth strategy.

The Group's controlling committee reviews the total amount of cash of the Group on a weekly basis. As part of this review, the committee considers the total cash and cash equivalents, the cash outflow, currency translation

differences and refinancing activities. The Group monitors 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 thousands)	**December 31, 2020**	**December 31, 2019**
Cash and cash equivalents at banks and on hand	€1,210,209	€519,149
Total	**€1,210,209**	**€519,149**

In meeting its financing objectives, the Group negotiates and enters into research cooperation agreements. In general, the aim is to maximize the financial resources available for further research and development projects.

BioNTech is not subject to externally imposed capital requirements. BioNTech's capital management objectives were achieved in the reporting year.

No changes were made in the objectives, policies or processes for managing cash during the years ended December 31, 2020 and December 31, 2019.

12.2 Categories of Financial Instruments

Financial assets at amortized cost

Set out below, is an overview of financial assets, other than cash and cash equivalents, held by the Group as of the dates indicated:

Financial assets at amortized cost

(in thousands)	**December 31, 2020**	**December 31, 2019**
Trade receivables	€165,468	€11,913
Other financial assets	137,234	1,680
Total	**€302,702**	**€13,593**
Total current	302,702	13,593
Total non-current	-	-

As of December 31, 2020, other financial assets mainly include advance-payments received by BioNTech's collaboration partner on future deliveries and payable to BioNTech.

Financial liabilities: Financial liabilities at amortized cost (including Interest-bearing 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:

Interest-bearing loans and borrowings

(in thousands)	**Maturity**	**December 31, 2020**	**December 31, 2019**
Lease liabilities		€84,158	€57,611
Convertible note - host contract	08/28/2024	87,457	-
3.50% € 50,000,000 secured bank loan	12/21/2026	47,176	-
2.15% € 10,000,000 secured bank loan	12/30/2027	9,032	9,000
2.08% € 9,450,000 secured bank loan	09/30/2028	8,877	7,600
1.90% € 3,528,892.48 secured bank loan	05/30/2039	3,489	-
Total		**€240,189**	**€74,211**
Total current		9,142	5,307
Total non-current		231,047	68,904

Other financial liabilities

(in thousands)	December 31, 2020	December 31, 2019
Derivatives not designated as hedging instrument		
Convertible note - embedded derivative	€30,903	-
Financial liabilities at fair value through profit or loss		
Contingent consideration	572	-
Total financial liabilities at fair value	**€31,475**	**-**
Other financial liabilities at amortized cost, other than interest-bearing loans and borrowings		
Trade payables	102,288	20,498
Other financial liabilities	74,076	10,352
Total other financial liabilities at amortized cost, other than interest-bearing loans and borrowings	**€176,364**	**€30,850**
Total other financial liabilities	**€207,839**	**€30,850**
Total current	176,363	30,850
Total non-current	31,476	-

Total financial liabilities

(in thousands)	December 31, 2020	December 31, 2019
Interest-bearing loans and borrowings	€240,189	€74,211
Other financial liabilities	€207,839	€30,850
Total	**€448,028**	**€105,061**
Total current	185,505	36,157
Total non-current	262,523	68,904

Interest-Bearing Loans and Borrowings

2.15% and 2.08% Secured Bank Loan

BioNTech maintains two secured loans with Deutsche Bank AG, or Deutsche Bank, to finance the buildouts of the JPT Peptide Technologies GmbH facility and BioNTech Innovative Manufacturing Services GmbH facility. The €10.0 million secured credit facility, entered into with Deutsche Bank by the subsidiary BioNTech Innovative Manufacturing Services GmbH, bears interest at a rate of 2.15% and matures on December 30, 2027. The loan is repayable in equal quarterly installments of €0.3 million commencing on June 30, 2020. As of December 31, 2020, the full amount under this facility is drawn down and the first three scheduled repayments have occurred. The €9.45 million secured credit facility, entered into with Deutsche Bank by the subsidiary JPT Peptide Technologies GmbH, bears interest at a rate of 2.08% and matures on September 30, 2028. The loan is repayable by quarterly installments of €0.3 million commencing on September 30, 2020. As of December 31, 2020, the full amount under this facility is drawn down and the first two scheduled repayments have occurred. Each of these facilities is secured by liens over property.

EIB Manufacturing Financing – 3.50% Secured Bank Loan

In June 2020, BioNTech entered into an agreement with the EIB for a €100.0 million credit facility to partially support the development of BNT162 and fund expansion of the manufacturing capacity to provide worldwide supply of BNT162 in response to the COVID-19 pandemic. The credit consists of (i) a term loan in the amount of €50 million that may be drawn in a single tranche upon the achievement of certain milestone events (Credit A), and (ii) a term loan in the amount of €50.0 million that may be drawn in a single tranche (Credit B). Credit B may only be drawn down after Credit A has been drawn down and upon the achievement of certain milestone events. The financing arrangement is to be secured by way of liens over certain of our property. On December 21, 2020, €50.0 million from Credit A was drawn down. Interest is payable on the outstanding balance of Credit A at the cash interest fixed rate of 1% per annum quarterly in arrears, plus deferred interest at fixed rate of 2.5% per annum. The nominal amount must be repaid on December 21, 2026.

June 2020 Private Placement – Convertible Note

A fund associated with Temasek Capital Management Pte. Ltd., or Temasek, and another accredited investor, contributed a private investment which 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 4-year 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 until extinguished upon conversion. 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 implied volatility for BioNTech, 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.

Other Financial Liabilities at Amortized Cost

Other financial liabilities at amortized cost mainly include provision for outstanding services and obligations derived from license agreements as well as CRO and CMO contracts.

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, 2020, largely due to the short-term maturities of these instruments.

The liabilities measured at amortized cost include four fixed-interest rate loans as well as a recently issued convertible note. As of December 31, 2020, 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, 2020, the fair value adjustment derived from remeasuring the embedded derivative was recognized as finance expenses in profit or loss and amounted to €17.3 million. The initial fair value of the contingent consideration determined at acquisition remains valid since no changes of the underlying performance criteria have occurred.

12.4 Financial Instruments Risk Management Objectives and Policies

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

The Group is exposed to market risk, credit risk and liquidity risk. The Group's Management Board oversees the management of these risks.

The controlling committee provides assurance to the Group's Management Board that the Group's financial risk activities are governed by appropriate policies and procedures and that financial risks are identified, measured and managed in accordance with the Group's 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 cash and cash equivalents. Interest risk as well as other price risk are not considered as risks for the Group.

The sensitivity analysis in the following sections relate to the position as of December 31, 2020 and December 31, 2019.

There were no material changes in the Group's 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. The Group's exposure to the risk of changes in foreign currency rates relates primarily to the Group's operating activities (when revenue or expense is denominated in a foreign currency).

In order to reduce exchange rate risk, BioNTech makes every effort to generate expenses and income in the same functional currency. The Group does not hedge exchange rate risks.

The carrying amount of the monetary assets (the Group's cash and cash equivalents) of BioNTech denominated in foreign currencies at the dates indicated are as follows:

(in thousands)	**December 31, 2020**	**December 31, 2019**
U.S. dollar Bank accounts	€673,545	€213,913
Other financial assets in U.S. dollar	85,573	-
Financial liabilities in U.S. dollar	72,821	-
Total	**€686,297**	**€213,913**

The following tables demonstrate the sensitivity to a reasonably possible change in U.S. dollar exchange rates, with all other variables held constant. The impact on the Group's profit before tax is due to changes in the fair value of monetary assets. The Group's exposure to foreign currency changes for all other currencies is not material.

		1 € =	**Closing rate**		**Average rate**	
Currency	**Country**		**2020**	**2019**	**2020**	**2019**
U.S. dollar	United States		1.2271	1.1234	1.1422	1.1195

(in thousands)	**Change in U.S. dollar rate**	**Effect on loss before tax**	**Effect on pre-tax equity**
2020	+5 %	€(32,491)	€(32,681)
2020	-5%	€35,911	€36,121
2019	+5 %	€(10,186)	€(10,186)
2019	-5%	€11,259	€11,259

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 accounts receivable.

Trade Receivables and Contract Assets

The Group's 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 Germany or in the United States as well as governments which are BioNTech's customers established in connection with progressing the commercial activities of the Group with respect to BioNTech's COVID-19 vaccine. 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 BioNTech.

As of December 31, 2020, the outstanding trade receivables were mainly due from BioNTech's collaboration partner Pfizer as well as the German government. To a smaller extent, BioNTech's 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 very low. BioNTech has not incurred bad debt expense and does not expect that this will change with respect to the trade receivables recognized as of December 31, 2020.

Generally, trade receivables are written off if past due for more than one year and are not subject to enforcement activity. 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 accounts receivables and other financial assets was estimated to be not material as of December 31, 2020 as well as December 31, 2019. The Group does not hold collateral as security.

Cash and Cash Equivalents

Credit risk from balances with banks and financial institutions is managed by the Group's controlling department in accordance with the Group's policy.

Credit risk stemming from cash and cash equivalents is very low due to its demand feature and the high credit rating of the respective banks.

The Group's maximum exposure to credit risk for the components of the consolidated statements of financial position as of December 31, 2020 and December 31, 2019 are the carrying amounts as illustrated in Note 12.1.

12.7 Liquidity Risk

Generally, BioNTech has relied on the financing from shareholders and collaborators in order to ensure sufficient liquidity. Lack of external financial support could pose a risk of going concern. The liquidity management of BioNTech ensures the availability of cash and cash equivalents 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.

The Group monitors liquidity risks using a liquidity planning tool.

Ultimately, the responsibility for liquidity risk management lies with the Management Board, which has established an appropriate approach to managing short-, medium- and long-term financing and liquidity requirements. BioNTech manages 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 a 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 the Group's performance to developments affecting a particular industry.

In order to avoid concentrations of risk, the Group's policies and procedures include specific guidelines to focus on the maintenance of an effective diversification in the sources of funding and distribution of cash deposits. Identified concentrations of credit risks are controlled and managed accordingly.

The maturity profile of the Group's financial liabilities based on contractual undiscounted payments is summarized as follows:

December 31, 2020

(in thousands)	Less than 1 year	1 to 5 years	More than 5 years	Total
Interest bearing loans and borrowings	€3,173	€12,643	€66,730	**€82,546**
Trade and other payables	102,288	-	-	**€102,288**
Lease liabilities	8,525	27,283	71,780	**€107,588**
Contingent consideration	-	-	572	**€572**
Other financial liabilities	74,076	-	-	**€74,076**
Total	**€188,062**	**€39,926**	**€139,082**	**€367,070**

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

December 31, 2020

(in thousands)	January 1, 2020	Cash flows	Acquisition of subsidiaries and businesses	New leases and disposals	Reclassification	Other	December 31, 2020
Current obligations under lease contracts	€3,485	€(12,743)	€2,719	€8,684	€3,982	-	**€6,127**
Non-current obligations under lease contracts	54,126	-	32,331	(4,444)	(3,982)	-	**78,031**
Interest-bearing loans and borrowings	16,600	140,847	-	-	-	(1,416)	**156,031**
Convertible note - embedded derivative	-	13,614	-	-	-	17,289	**30,903**
Total	**€74,211**	**€141,718**	**€35,050**	**€4,240**	**-**	**€15,873**	**€271,092**

December 31, 2019

(in thousands)	January 1, 2019	Cash flows	Acquisition of subsidiaries and businesses	New leases and disposals	Reclassification	Other	December 31, 2019
Current obligations under lease contracts	€2,134	€(3,061)	-	€1,484	€2,928	-	**€3,485**
Non-current obligations under lease contracts	48,618	-	-	8,436	(2,928)	-	**54,126**
Interest-bearing loans and borrowings	5,600	11,000	-	-	-	-	**16,600**
Total	**€56,352**	**€7,939**	**-**	**€9,920**	**-**	**-**	**€74,211**

13 Inventories

(in thousands)	December 31, 2020	December 31, 2019
Raw materials and supplies	€44,283	€8,201
Unfinished goods	19,380	2,888
Finished goods	457	633
Total	**€64,120**	**€11,722**

BioNTech has not pledged any inventories as securities for liabilities.

14 Other Assets

(in thousands)	December 31, 2020	December 31, 2019
Prepayments on inventories	29,845	351
Prepayments related to CRO and CMO contracts	14,140	-
Sales tax receivable	4,155	7,536
Prepayments related to service contracts	3,825	-
Other	10,046	1,182
Total	**€62,011**	**€9,069**
Total current	60,966	9,069
Total non-current	1,045	-

15 Deferred Expenses

(in thousands)	December 31, 2020	December 31, 2019
Deferred expenses from insurance contracts	€13,845	€1,758
Deferred expenses from CRO and CMO contracts	5,725	-
Other	8,431	4,104
Total	**€28,001**	**€5,862**
Total current	28,001	5,862
Total non-current	-	-

16 Issued Capital and Reserves

On September 18, 2019, BioNTech effected a 1:18 share split by issuing 206,595,492 shares by way of a capital increase from its own funds; thus, no outside proceeds were received. This 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.

Capital transactions during the year ended December 31, 2020

During the year ended December 31, 2020, the issued share capital of BioNTech 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 year ended December 31, 2020 were as follows:

Shanghai Fosun Pharmaceuticals (Group) Co., Ltd

As part of the BNT162 program, BioNTech entered 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 in BioNTech 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 BioNTech 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

BioNTech acquired Neon by issuing 1,935,488 ADS representing BioNTech's 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 BioNTech increased its share capital by €5.5 million ($6.4 million) in conjunction with the underwritten offering of 5,500,000 ADS each representing one of BioNTech's ordinary shares at a public offering price of $93.00 per ADS ("Underwritten Offering"). On August 27, 2020, following the Underwritten Offering, BioNTech increased its share capital by additional €16 thousand ($19 thousand) in conjunction with the rights offering of 16,124 ADS each representing one of BioNTech's 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 BioNTech refers 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

In November 2020, BioNTech entered into a sales agreement ("Sales Agreement") with Jefferies LLC and SVB Leerink LLC, as sales agents, to establish an at-the-market offering program, pursuant to which BioNTech may sell, from time to time, ADS representing ordinary shares for aggregate gross proceeds of up to $500.0 million. During the year ended December 31, 2020, BioNTech sold 735,490 ADSs, each representing one of its ordinary shares that had previously been held in treasury, under the Sales Agreement for aggregate gross proceeds of €76.5 million ($92.9 million). Re-issuing 735,490 ordinary shares was registered as decrease of €0.7 million in treasury shares. As a result of the transaction the capital reserve increased by €75.8 million.

Capital transactions during the year ended December 31, 2019

During the year ended December 31, 2019, the issued share capital of BioNTech increased by €39.0 million. Each share has a nominal value of €1.00. As a result of the financing transactions the capital reserve increased by €359.2 million. Costs of €16.6 million related to these equity transactions were recorded in equity as deduction from the capital reserve.

In January 2019, BioNTech issued 5,088,204 shares and increased its share capital by €5.1 million. The cash investment of €80.0 million was received in 2018.

As of March 14, 2019, BioNTech acquired the remaining 5.5% of non-controlling interests in BioNTech Cell & Gene Therapies GmbH previously held by Eli Lilly Nederland B.V. in exchange for issuing 2,374,794 new ordinary shares with an imputed nominal value of €1.00 each. This acquisition was recognized within equity and resulted in the derecognition of the non-controlling interest of €0.7 million as well as an increase in share capital of €2.4 million. The net effect of the transaction of €1.6 million was recognized as a decrease in capital reserve.

Of the share capital issued in 2019, €12.5 million related to a new financing round (referred to as the Series B round). As part of the Series B round, 12,465,288 ordinary shares (excluding 5,524,506 ordinary shares which were issued to a Hong Kong-based investor and subsequently transferred to BioNTech for no consideration; these shares are held as treasury shares) were issued to certain new and existing shareholders. As a result of the Series B round, the capital reserve increased by €186.1 million.

On August 30, 2019, BioNTech entered into agreements with the Bill & Melinda Gates Foundation under which BioNTech is required to perform certain research and development activities. The issuance of 3,038,674 ordinary shares with the nominal amount of €3.0 million was registered with the commercial register (*Handelsregister*) on September 26, 2019. As result of the transaction the capital reserve increased by €46.8 million.

On October 10, 2019, BioNTech increased its share capital by €10.0 million in conjunction with the Initial Public Offering. American Depositary Shares which represent ordinary shares were offered on the Nasdaq Global Select Market at a price of $15.00. On November 6, 2019, BioNTech increased its share capital by €0.5 million upon the execution of the underwriter´s option. American Depositary Shares which represent ordinary shares were issued at a price of $15.00 (under both issuances). The gross proceeds were €143.3 million ($157.8 million) including €10.5 million increase in share capital and €132.7 million increase in capital reserve.

17 Share-Based Payments

During the years ended December 31, 2020, December 31, 2019 and December 31, 2018, the Group had the following share-based arrangements.

17.1 BioNTech Employee Equity Plan (LTI and LTI-plus Program) (Equity-Settled)

In December 2020, BioNTech adopted the BioNTech Employee 2020 Equity Plan and the BioNTech 2020 Restricted Stock Unit Plan for North America Employees. Under the plans Restricted Cash Units, or RSUs, will be offered to employees based in Europe and the United States respectively. The plan to which employees based in Europe will be eligible, was communicated in December 2020. Since those employees obtained a valid expectation of the award as of the announcement date and started rendering services as of such date, BioNTech concluded that the service commencement date for the BioNTech Employee 2020 Equity Plan was December 17, 2020. This is the date as of which BioNTech started to recognize the expenses related to the services received. Since the BioNTech 2020 Restricted Stock Unit Plan for North America Employees had not been communicated in detail to employees based in the United States during the year ended December 31, 2020, no expenses have been recognized in the Consolidated Statements of Operations for the year ended December 31, 2020.

BioNTech Employee 2020 Equity Plan for employees based in Europe

Description of Share-Based Payments

The BioNTech Employee 2020 Equity Plan share-based payment transaction for employees based in Europe includes two programs, LTI and LTI-plus. The LTI program will be offered to all employees. The LTI-plus program intends to compensate employees who did not participate in the ESOP. Under both programs, RSUs will be offered to employees based in Europe. Both programs are classified as equity-settled because BioNTech has the ability to determine the method of settlement. The LTI will vest annually in equal installments after four years commencing on December 15, 2020. The LTI-plus will vest annually in equal installments after two years commencing on December 15, 2020. Moreover, the LTI-plus contains a non-vesting condition concerning 50% of the granted RSUs. These units will be awarded to the participant after the FDA fully approves BNT162b2.

Measurement of Fair Values

BioNTech estimates the grant date fair value of the awards for services received in advance of grant date based upon the share-price at the reporting date. The estimate is revised at subsequent reporting periods until the date of grant has been established (refer to Note 25). An estimate for the number of equity instruments for which service conditions are expected to be satisfied is calculated considering a retention assumption 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 (expected to be allocated)	Share price (in €)
As of January 1, 2020	-	-
Expected to be allocated under LTI Program	252,766	66.43
Expected to be allocated under LTI-plus Program	396,938	66.43
As of December 31, 2020	**649,704**	**66.43**

Expense recognized in the Consolidated Statements of Operations

(in thousands)	Year ended December 31, **2020**
Cost of sales	€179
Research and development expenses	681
Sales and marketing expenses	8
General and administrative expenses	147
Total	**€1,015**

17.2 Management Board Grant (Cash-Settled)

Since the beginning of 2020, the first year following the completion of BioNTech's initial public offering ("IPO"), the current service agreements with BioNTech's Management Board have provided for a short-term incentive compensation of up to a maximum of fifty percent of the annual base salary for the years 2020, 2021 and 2022. The amount of such short-term incentive compensation will depend on the achievement of certain company goals in the particular fiscal year, which goals will be set uniformly for all members of the Management Board. Fifty percent of the incentive compensation will be paid promptly upon achievement of the applicable company goals (first installment), with the remaining amount payable one year later, subject to adjustment relative to the performance of the price of the American Depositary Shares representing BioNTech's ordinary shares during that year (second installment).

For each of the three yearly awards, the second installment of the short-term incentive compensation that is dependent on the price of the American Depositary Shares representing BioNTech's 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 the service commencement date (January 1, 2020) until each separate determination date and are remeasured until settlement date.

During the year ended December 31, 2020, the Group recognized share-based payment expenses of €0.3 million as research and development expenses and of €0.4 million as general and administrative expenses in the consolidated statements of operations and €0.7 million of other financial liabilities in the statements of financial position as of December 31, 2020.

17.3 Management Board Grant (Equity-Settled)

Description of Share-Based Payments

From the beginning of 2020, the first year following the completion of BioNTech's IPO, until the end of the term of the Management Board member's employment agreement, the service agreements with BioNTech's Management Board provide for a long-term incentive compensation in terms of a yearly grant of options to purchase BioNTech shares. The right to receive options in 2020, 2021 and 2022 represents an equity-settled share-based payment arrangement.

The options allocated each year will be subject to the terms, conditions, definitions and provisions of the ESOP and the applicable option agreement thereunder. The number of options to be allocated each year to Prof. Ugur Sahin, Sean Marett, Dr. Sierk Poetting, Dr. Özlem Türeci and Ryan Richardson is to be calculated based on a value of €750,000, €300,000, €300,000, €300,000 and €260,000, respectively, in each case divided by the amount by which a certain target share price exceeds the exercise price. The value used to calculate the number of options for Ryan Richardson increases to €280,000 for the year 2022.

The allocation of the number of issued options in 2020 occurred as of February 13, 2020 (allocation date). As of December 31, 2020, the assessment about options expected to be granted in 2021 and 2022 was based on estimated allocation dates in the middle of the years 2021 and 2022, respectively.

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

	Share options (expected to be allocated)	Weighted-average exercise price (€)
As of January 1, 2020	-	-
Granted as of allocation date February 13, 2020	248,096	28.32
Expected to be allocated as of estimated allocation date 2021	101,422	67.26*
Expected to be allocated as of estimated allocation date 2022	102,463	67.27*
As of December 31, 2020	**451,981**	**45.89**

*Valuation parameter derived from the Monte-Carlo simulation model

For the awards with estimated allocation dates the numbers 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 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 13, 2020	Estimated allocation date 2021	Estimated allocation date 2022
Weighted average fair value*	€10.83	€26.85	€26.61
Weighted average share price	€28.20	€ 66.43*	€ 66.43*
Exercise price	€28.32	€ 67.26*	€ 67.27*
Expected volatility (%)	36.6%	41.0%	40.7%
Expected life (years)*	4.75	5.01	6.05
Risk-free interest rate (%)	1.61 %	0.88%	0.88%

*Valuation parameter 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 award allocated as of February 13, 2020, the exercise price has been determined to be $30.78 (€28.32). 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. 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 optionholder 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**	**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
Dr. Özlem Türeci, M.D.	38,968	28.32
Ryan Richardson	33,772	28.32

Estimated allocation date 2021	**Share options outstanding (expected to be allocated)**	**Weighted-average exercise price (€)**
Prof. Ugur Sahin, M.D.	39,826	67.26*
Sean Marett	15,930	67.26*
Dr. Sierk Poetting	15,930	67.26*
Dr. Özlem Türeci, M.D.	15,930	67.26*
Ryan Richardson	13,806	67.26*

*Valuation parameter derived from the Monte-Carlo simulation model

Estimated allocation date 2022	**Share options outstanding (expected to be allocated)**	**Weighted-average exercise price (€)**
Prof. Ugur Sahin, M.D.	39,817	67.27*
Sean Marett	15,927	67.27*
Dr. Sierk Poetting	15,927	67.27*
Dr. Özlem Türeci, M.D.	15,927	67.27*
Ryan Richardson	14,865	67.27*

*Valuation parameter derived from the Monte-Carlo simulation model

As of December 31, 2020, the share options allocated and expected to be allocated had a remaining weighted-average expected life of 4.63 years.

Expense recognized in the Consolidated Statements of Operations

The expenses recognized for employee services received during the periods indicated are shown in the following table:

	Year ended December 31,
(in thousands)	**2020**
Research and development expenses	€1,514
General and administrative expenses	1,246
Total	**€2,760**

17.4 Chief Executive Officer Grant (Equity-Settled)

Description of Share-Based Payments

In September 2019, BioNTech granted Prof. Ugur Sahin, M.D. an option to purchase 4,374,963 ordinary shares, subject to Prof. Sahin's continuous employment with BioNTech. The options' exercise price per share is the Euro translation of the public offering price from BioNTech's initial public offering, €13.60 ($15.00). 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 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 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)	5.37
Risk-free interest rate (%)	1.52 %

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 optionholder behavior for employee options.

Reconciliation of Outstanding Share-Options

During the year ended December 31, 2020, no further options were granted or forfeited.

As of December 31, 2020, the share options outstanding had a remaining weighted-average expected life of 4.12 years.

Expense recognized in the Statement of Operations

During the year ended December 31, 2020, the Group has recognized €11.3 million of share-based payment expenses as research and development expenses in the consolidated statements of operations (during the year ended December 31, 2019: €3.2 million).

17.5 Employee Stock Ownership Plan (Equity-Settled)

Description of Share-Based Payments

On November 15, 2018, the Group established a share option program that grants selected employees options to receive shares in the Company. The program is designed as an ESOP. The Group has offered the participants a certain number of rights (Option Rights) by explicit acceptance of the participants. 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 the company has 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.

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 was as follows:

	Grant date 15 November 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)	5.84	6.00	6.00	5.50
Risk-free interest rate (%)	0.05%	0.05%	0.05%	0.05%

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, 2019	658,109	11,845,962	10.14
Granted	14,511	261,198	15.17
Forfeited	(17,237)	(310,266)	10.85
As of December 31, 2019	**655,383**	**11,796,894**	**10.23**
As of January 1, 2020	655,383	11,796,894	10.23
Forfeited	(9,491)	(170,838)	10.81
As of December 31, 2020	**645,892**	**11,626,056**	**10.23**

As of December 31, 2020, the share options outstanding had a remaining weighted-average expected life of 3.73 years.

The share options outstanding as of December 31, 2020 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
Dr. Özlem Türeci, M.D.	108,463*	1,952,334	10.14
Ryan Richardson**	8,306***	149,508	10.14

* Options fully vested on March 16, 2019, however these options will not become exercisable until September 16, 2022.

** 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.

The expenses recognized for employee services received during the periods indicated are shown in the following table:

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Cost of sales	€869	€896	€114
Research and development expenses	11,120	20,016	6,786
Sales and marketing expenses	111	108	13
General and administrative expenses	4,975	6,008	728
Total	**€17,075**	**€27,028**	**€7,641**

18 Other Liabilities

(in thousands)	December 31, 2020	December 31, 2019
Liabilities to employees	€24,248	€6,710
Other	4,379	780
Total	**€28,627**	**€7,490**
Total current	28,061	7,490
Total non-current	566	-

19 Leases

19.1 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 thousands)	December 31, 2020	December 31, 2019
Buildings	€80,875	€54,956
Equipment, tools and installations	3	7
Automobiles	108	55
Production facilities	7,202	-
Advance payments	10,800	-
Total	**€98,988**	**€55,018**

Additions to the right-of-use assets during the year ended December 31, 2020 were €22.1 million (during the year ended December 31, 2019: €10.0 million) including advanced payments of €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 interest-bearing loans and borrowings as of the dates indicated:

(in thousands)	**December 31, 2020**	**December 31, 2019**
Current	€6,127	€3,485
Non-current	78,031	54,126
Total	**€84,158**	**€57,611**

The Group has various lease contracts that have not yet commenced as of December 31, 2020. The future lease payments for these non-cancellable lease contracts are €2.8 million for the year 2021 and €10.2 million for the years 2022 and beyond.

Several lease contracts include extension and termination options. These options are negoiated by management to provide flexibility in managing the leased-asset portfolio and align with the Group's business needs. Management exercises significant judgement in determining whether these extension and termination options are reasonably certain to be exercised.

19.2 Amounts Recognized in the Consolidated Statements of Operations

Depreciation Charge of Right-of-Use Assets

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Buildings	€4,628	€4,614	€2,751
Equipment, tools and installations	4	25	60
Automobiles	45	40	35
Production facilities	1,613	-	-
Total depreciation charge	**€6,290**	**€4,679**	**€2,846**
Interest on lease liabilities	€2,003	€1,718	€1,721
Expense related to short-term leases (included in other expenses)	875	442	431
Expense relating to leases of low-value assets that are not short-term leases (included in other expenses)	300	90	90
Total amounts recognized in profit or loss	**€9,468**	**€6,929**	**€5,088**

19.3 Amounts recognized in the Consolidated Statements of Cash Flows

During the year ended December 31, 2020, the total cash outflow for leases amounted to €14.7 million (during the year ended December 31, 2019: €4.8 million; during the year ended December 31, 2018: €2.3 million).

19.4 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 €38.3 million until 2049.

20 Pensions

In 2020, BioNTech adopted a defined benefit pension plan through the acquisition of BioNTech Manufacturing Marburg GmbH in Germany. The defined benefit pension plan is a final salary plan for German employees, which requires contributions to be made to a separately administered fund.

The pension plan is governed by the employment laws of Germany and consists of a funded base plan and a non-funded supplement plan. The base plan through *Pensionskasse Hoechst* is a multi-employer plan. *Pensionskasse Hoechst* is a legally independent insurance company that is subject to the Insurance Supervision Act (*BaFin*). Plan participants may elect to contribute a percentage of their income (between 1.5% and 2.5% of salary components up to the social security contribution ceiling). A €1.00 employee contribution results in an annual pension entitlement of €0.42. The aforementioned contributions include contributions to the *Pensionskasse Höchst* in the amount of €34 thousand. Contributions in the amount of €0.2 million are expected for the following financial year. Since the obligation of the sponsoring company is not limited to the payment of the contributions for the financial year, this is a multi-employer defined benefit plan, which is generally to be accounted for proportionally as such. However, pension fund benefits are financed in accordance with the financing methodology of the pension fund (*Bedarfdeckungsverfahren*). Consequently, the actuarial valuation is performed to determine the present valuate of future contributions based upon the present value of future benefit obligation less plan assets for all employers and the level of the pension fund portfolio, not at the level of an individual insurer's risk. The calculation of the contribution rates is based on the future coverage of the total obligation, so that all sponsoring companies pay the same contribution rates. Accordingly, the portion of the base plan financed through *Pensionskasse Hoechst* is not accounted for as a defined benefit plan, but as a defined contribution plan. There are no minimum funding requirements. It is not possible to withdraw the funds from the multi-employer plan or to transfer them to another pension fund. It is not possible to withdraw from the pension fund. Upon expiry of the plan, any underfunding is to be made up by the employer and therefore recognized as liability in the consolidated statement of financial positions; any remaining surplus would be used for charitable purposes. Both plans have been closed so that no further employees can obtain entitlements.

Since the German Company Pension Act (*Betriebsrentengesetz*) applies to the pension obligation, the pensions are subject to adjustments at least every three years by the increase in the consumer price index or by the net wage development of comparable groups of employees. Therefore, the pension obligation is subject to inflation risk. In addition, there is longevity risk as the pensions are paid for life. Part of the obligations is also based on the level of salaries, so that the obligations will also increase if salaries develop more strongly than expected. Plan assets benefits from pension funds are offset. In this case, there is a risk that the external pension provider will not be able to provide the benefits to the extent expected and that the payments to be made directly by the employer will therefore increase.

The following table summarizes the defined benefit obligation recognized in non-current provisions:

(in thousands)	**December 31, 2020**
Base plan	€2,140
Supplement plan	2,125
Total	**€4,265**

The following table summarizes the components of net benefit expense recognized in the statement of profit or loss for both plans:

	Years ended December 31,
(in thousands)	**2020**
Service cost	€24
Net interest expense	6
Total	**€30**

The current service cost is included in the personnel expenses of the various functions of the respective employees, while the net interest is recognized in finance expenses or finance income.

The following table summarizes the components of remeasurements recognized in other comprehensive income for both plans:

(in thousands)	Years ended December 31, 2020
Actuarial changes arising from changes in financial assumptions	€227
Experience adjustments	(17)
Total	**€210**

Set out below is an overview of changes to the defined benefit obligation during the period indicated for both plans:

(in thousands)	Defined benefit obligations
As of January 1, 2020	-
Acquisition of subsidiaries and businesses	(4,029)
Service cost	(24)
Net interest expense	(6)
Benefits paid	4
Actuarial changes arising from changes in financial assumptions	(227)
Experience adjustments	17
As of December 31, 2020	**€(4,265)**

The principal assumptions used in determining the defined benefit obligation for the Group's plans are shown below:

	December 31, 2020
Discount rate	0.80%
Price inflation	2.00%
Rate of salary increase	2.50%
Pension increases for in-payment benefits	1.75%

Sensitivity analysis

The main actuarial assumptions that are used to calculate the provisions for post-employment benefits are the discount rate and the trend for future increases in post-employment benefit payments. A reasonably possible increase, or respective decrease, in the significant actuarial assumptions would have impacted the present value of the post-employment benefit obligations as of December 31, 2020 as shown below:

Quantitative sensitivity analysis

	December 31, 2020
Discount rate increase 0.25%	€(282)
Discount rate decrease 0.25%	309
Pension increases for in payment benefits 0.25%	475
Pension decreases for in payment benefits 0.25%	(447)

Duration

The average duration of the German obligations are 35.92 years for the base plan and 19.77 years for the supplement plan.

Expected benefit payments

The following are the expected payments or contributions to the plans in future years:

Expected payments or contributions in future years

(in thousands)	December 31, 2020
Less than 1 year	€29
1 to 5 years	317
More than 5 years	340
Total	**€686**

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 ordinary shares in BioNTech. 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

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

Compensation of key management personnel of the Group

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Short-term employee benefits incurred	€2,627	€1,847	€1,161
Short-term employee benefits accrued*	740	-	-
Share-based payments	20,700**	18,151	6,163
Total compensation paid to key management personnel	**€24,067**	**€19,998**	**€7,324**

* Includes 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 (January 1, 2020) until each separate determination date and are remeasured until settlement date.

** Includes 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 have not yet been issued.

In September 2019, BioNTech agreed to grant Prof. Ugur Sahin, M.D., BioNTech's co-founder and Chief Executive Officer, an option to purchase 4,374,963 ordinary shares (see Note 17).

Management Board members participate in the Group's ESOP program (see Note 17).

Key Management Personnel Transactions

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 the Group during the year.

The Group purchases various goods and services from Translationale Onkologie an der Universitätsmedizin der Johannes Gutenberg-Universität Mainz gemeinnützige GmbH, or TRON, an institute which was co-founded by Prof. Ugur Sahin, M.D., the co-founder and Chief Executive Officer of BioNTech. Prof. Ugur Sahin, M.D.

served as Managing Director at TRON until September 10, 2019 and currently serves as scientific advisor at TRON and as a Professor of Medicine at the University of Mainz. Additionally, Prof. Christoph Huber, M.D., a member of our Supervisory Board, served on TRON's supervisory board until his resignation in April 2019. Prof. Ugur Sahin, M.D., our co-founder and Chief Executive Officer, owns a significant amount of shares in TRON.

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

	Years ended December 31,		
(in thousands)	**2020**	**2019**	**2018**
Consulting services / patent assignment	€25	€56	€25
Purchases of various goods and services from TRON	10,105	9,968	11,160
Total	**€10,130**	**€10,024**	**€11,185**

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

(in thousands)	**December 31, 2020**	**December 31, 2019**
Consulting service provider	€7	-
TRON	1,229	1,843
Total	**€1,236**	**€1,843**

21.3 Other 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 thousands)	**2020**	**2019**	**2018**
Purchases of various goods and services from entities controlled by ATHOS KG	€2,296	€2,071	€2,431
Purchases of property and other assets from entities controlled by ATHOS KG	2,349	-	4,748
Total	**€4,645**	**€2,071**	**€7,179**

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

(in thousands)	**December 31, 2020**	**December 31, 2019**
ATHOS KG	€500	€51
Total	**€500**	**€51**

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 was as follows for the periods indicated:

	Years ended December 31		
Quarterly average number of employees by function	**2020**	**2019**	**2018**
Clinical Research & Development	113	81	46
Scientific Research & Development	586	414	300
Operations	490	376	268
Quality	184	129	105
Support functions	218	126	97
Commercial & Business Development	33	69	28
Total	**1,624**	**1,195**	**844**

The number of employees were as follows as of the periods indicated:

	Years ended December 31		
Number of employees by function as of the reporting date	**2020**	**2019**	**2018**
Clinical Research & Development	128	90	52
Scientific Research & Development	661	459	338
Operations	699	416	305
Quality	234	142	118
Support functions	276	139	109
Commercial & Business Development	49	77	31
Total	**2,047**	**1,323**	**953**

23 Audit Fees

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

	Years ended December 31	
(in thousands)	**2020**	**2019**
Audit services	€1,354	€578
Other confirmation services	444	721
Tax consulting services	255	132
Other services	419	49
Total	**€2,472**	**€1,480**

24 Corporate Governance

The Annual Declaration of Conformity (*Entsprechenserklärung*) pursuant to Section 161 (1) German Stock Corporation Act (AktG) is, in accordance with the Corporate Governance Code, issued in connection with the corporate governance declaration (E*rklärung zur Unternehmensführung*) pursuant to Section 315d in conjunction with Section 289f HGB and is included in the combined management report of BioNTech SE.

25 Events After the Reporting Period

On February 12, 2021, BioNTech and Pfizer announced that the U.S. government has exercised its option to purchase an additional 100 million doses of the Pfizer-BioNTech COVID-19 vaccine. This brings the total number of doses to be supplied by the companies to the U.S. government to 300 million.

On February 17, 2021, BioNTech and Pfizer announced an agreement with the European Commission (EC) to supply an additional 200 million doses of COVID-19 vaccine to the 27 European Union member states. The EC has the option to request supply of an additional 100 million doses.

In February 2021, RSUs under the BioNTech Employee 2020 Equity Plan were offered to employees based in Europe which determined the grant date fair value. Given that the share price had increased since the plan was established, a significant true-up in fair value occurred.

In February 2021, RSUs under the BioNTech 2020 Restricted Stock Unit Plan for North America Employees were offered to employees based in the United States. As from this date, BioNTech started recognizing expenses for this plan in the Consolidated Statements of Operations.

On March 12, 2021, BioNTech Turkey Tıbbi Ürünler Ve Klinik Araştirma Ticaret Anonim Şirketi, translates as BioNTech Turkey Pharmaceutical Products and Clinical Trials Trading JSC, Istanbul, Turkey, was founded and is a wholly-owned subsidiary of BioNTech SE.

Mainz, April 9, 2021

BioNTech SE

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

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

Dr. Sierk Poetting
Chief Financial Officer (CFO) and Chief Operating Officer (COO)

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

Ryan Richardson
Chief Strategy Officer (CSO)