Consolidated Financial Statements

The Group's net assets, financial position and results of operations remain very positive. Total assets rose by € 43.9 billion to € 106.3 billion, mainly due to acquisitions. Earnings per share declined to € 4.22; the earnings contribution made by the Deutsche Wohnen Group in the fourth quarter of 2021 is included in this figure. Real estate assets increased by 58.9% in the 2021 fiscal year to € 97.8 billion. Cash and cash equivalents amounted to around € 1.4 billion at the end of the year.

Consolidated Income Statement

for the period from January 1 until December 31

in € million	Notes	2020	2021
Income from property letting		3,069.4	3,465.0
Other income from property management		77.7	158.9
Income from property management	B10	**3,147.1**	**3,623.9**
Income from the disposal of properties		586.3	1,122.2
Carrying amount of properties sold		-482.4	-1,044.6
Revaluation of assets held for sale		78.2	87.4
Profit from disposal of properties	B11	**182.1**	**165.0**
Income from the disposal of properties		297.7	519.6
Cost of sold properties		-235.9	-381.7
Profit from the disposal of properties	B12	**61.8**	**137.9**
Net income from fair value adjustments of investment properties	B13	3,719.8	7,393.8
Capitalized internal expenses	B14	659.4	662.6
Cost of materials	B15	-1,493.4	-1,671.1
Personnel expenses	B16	-594.9	-682.3
Depreciation and amortization	D26	-92.3	-3,482.2
Other operating income	B17	163.0	276.9
Impairment losses on financial assets		-40.0	-39.2
Net income from the derecognition of financial assets measured at amortized cost		0.0	-2.5
Other operating expenses	B18	-278.8	-388.9
Net income from investments accounted for using the equity method		2.7	15.7
Interest income	B19	21.9	21.5
Interest expenses	B20	-411.4	-411.6
Other financial result	B21	-32.6	-137.1
Earnings before tax		**5,014.4**	**5,482.4**
Income taxes	B22	-1,674.4	-2,651.5
Profit for the period		**3,340.0**	**2,830.9**
Attributable to:			
Vonovia's shareholders		3,228.5	2,641.9
Vonovia's hybrid capital investors		40.0	38.4
Non-controlling interests		71.5	150.6
Earnings per share (basic and diluted) in €	C24	**5.50**	**4.22**

Consolidated Statement of Comprehensive Income

for the period from January 1 until December 31

in € million	2020	2021
Profit for the period	3,340.0	2,830.9
Change in unrealized gains/losses	-10.1	26.5
Taxes on the change in unrealized gains/losses	3.3	-8.3
Net realized gains/losses	34.1	-0.4
Taxes due to net realized gains/losses	-8.0	3.2
Profit on cash flow hedges	**19.3**	**21.0**
Changes in the period	177.0	-110.7
Tax effect	-25.1	13.3
Profit on currency translation differences	**151.9**	**-97.4**
Items which will be recognized in profit or loss in the future	**171.2**	**-76.4**
Changes in the period	9.0	81.1
Taxes on changes in the period	-0.2	-1.2
Profit on equity instruments at fair value in other comprehensive income	**8.8**	**79.9**
Change in actuarial gains/losses, net	-18.6	37.0
Tax effect	5.8	-12.6
Profit on actuarial gains and losses from pensions and similar obligations	**-12.8**	**24.4**
Items which will not be recognized in profit or loss in the future	**-4.0**	**104.3**
Other comprehensive income	**167.2**	**27.9**
Total comprehensive income	**3,507.2**	**2,858.8**
Attributable to:		
Vonovia's shareholders	3,395.8	2,669.3
Vonovia's hybrid capital investors	40.0	38.4
Non-controlling interests	71.4	151.1

Consolidated Balance Sheet

Assets

in € million	Notes	Dec. 31, 2020	Dec. 31, 2021
Intangible assets	D26	1,611.7	3,005.3
Property, plant and equipment	D27	387.6	654.1
Investment properties	D28	58,071.8	94,100.1
Financial assets	D29	383.1	1,016.7
Investments accounted for using the equity method	D30	32.9	548.9
Other assets	D31	128.5	199.6
Deferred tax assets	D32	16.4	19.8
Total non-current assets		**60,632.0**	**99,544.5**
Inventories	D33	8.7	16.4
Trade receivables	D34	268.9	449.9
Financial assets	D29	0.4	1,063.3
Other assets	D31	119.0	220.9
Income tax receivables	D32	39.8	201.9
Cash and cash equivalents	D35	613.3	1,432.8
Real estate inventories	D36	570.4	671.2
Assets held for sale	D37	164.9	2,719.4
Total current assets		**1,785.4**	**6,775.8**
Total assets		**62,417.4**	**106,320.3**

Equity and Liabilities

in € million	Notes	Dec. 31, 2020	Dec. 31, 2021
Subscribed capital		565.9	776.6
Capital reserves		9,037.9	15,458.4
Retained earnings		13,368.2	16,925.9
Other reserves		171.9	126.2
Total equity attributable to Vonovia shareholders		**23,143.9**	**33,287.1**
Equity attributable to hybrid capital investors		1,001.6	–
Total equity attributable to Vonovia shareholders and hybrid capital investors		**24,145.5**	**33,287.1**
Non-controlling interests		686.3	3,258.0
Total equity	E38	**24,831.8**	**36,545.1**
Provisions	E39	711.3	866.3
Trade payables	E40	5.0	5.4
Non-derivative financial liabilities	E41	22,375.1	40,171.9
Derivatives	E42	76.8	66.2
Lease liabilities	E43	467.3	634.9
Liabilities to non-controlling interests	E44	26.8	224.5
Financial liabilities from tenant financing	E45	45.3	44.9
Other liabilities	E46	2.6	5.2
Deferred tax liabilities		10,959.6	18,693.9
Total non-current liabilities		**34,669.8**	**60,713.2**
Provisions	E39	389.0	727.2
Trade payables	E40	229.5	444.4
Non-derivative financial liabilities	E41	1,709.6	6,857.1
Derivatives	E42	222.2	266.0
Lease liabilities	E43	27.8	44.2
Liabilities to non-controlling interests	E44	16.3	16.0
Financial liabilities from tenant financing	E45	118.1	112.6
Other liabilities	E46	203.3	228.8
Liabilities associated with assets classified as held for sale	D37	–	365.7
Total current liabilities		**2,915.8**	**9,062.0**
Total liabilities		**37,585.6**	**69,775.2**
Total equity and liabilities		**62,417.4**	**106,320.3**

Consolidated Statement of Cash Flows

for the period from January 1 until December 31

in € million	Notes	2020	2021
Profit for the period		3,340.0	2,830.9
Net income from fair value adjustments of investment properties	B13	-3,719.8	-7,393.8
Revaluation of assets held for sale	B11	-78.2	-87.4
Depreciation and amortization	D26	92.3	3,482.2
Interest expenses/income and other financial result	B19/B20/B21	435.5	554.9
Income taxes	B22	1,674.4	2,651.5
Profit on disposal of investment properties	B11	-103.9	-77.6
Results from disposals of other non-current assets		-0.1	-0.6
Other expenses/income not affecting cash		3.2	-94.4
Change in working capital		-134.6	51.2
Income tax paid		-78.3	-93.0
Cash flow from operating activities		**1,430.5**	**1,823.9**
Proceeds from disposals of investment properties and assets held for sale		587.4	1,084.8
Proceeds from disposals of other assets		0.8	132.7
Payments for investments in investment properties	D28	-1,723.7	-1,957.1
Payments for investments in other assets	D26/D27/D29	-272.3	-352.7
Payments for acquisition of shares in consolidated companies, in due consideration of liquid funds	A4	-330.3	-17,122.8
Payments for acquisition of other financial assets		–	-912.8
Interest received		8.2	12.1
Cash flow from investing activities		**-1,729.9**	**-19,115.8**

in € million	Notes	2020	2021
Capital contributions on the issue of new shares (including premium)	E38	1,003.0	8,080.5
Cash paid to shareholders of Vonovia SE and non-controlling interests	E38	-520.8	-514.6
Cash paid to hybrid capital investors	E38	-40.0	-1,040.0
Proceeds from issuing financial liabilities	E41	4,188.6	23,945.3
Cash repayments of financial liabilities	E41	-3,721.5	-11,534.0
Cash repayments of lease liabilities	E43	-23.1	-27.3
Payments for transaction costs in connection with capital measures	E41	-42.4	-346.1
Payments for other financing costs		-17.7	-28.5
Payments in connection with the disposal of shares in non-controlling interests		-14.3	-7.7
Interest paid	A4	-409.2	-402.6
Cash flow from financing activities		402.6	18,125.0
Influence of changes in foreign exchange rates on cash and cash equivalents		9.4	-2.3
Change in cash and cash equivalents related to assets held for sale		–	-11.3
Net changes in cash and cash equivalents		112.6	819.5
Cash and cash equivalents at the beginning of the period	D35	500.7	613.3
Cash and cash equivalents at the end of the period*		**613.3**	**1,432.8**

* Includes € 298.8 million (Dec. 31, 2020: € 0.0 million) in current securities classified as cash equivalents and total restricted cash of € 117.6 million (Dec. 31, 2020: € 159.9 million).

Consolidated Statement of Changes in Equity

				Other reserves	
in € million	Subscribed capital	Capital reserves	Retained earnings	Cash flow hedges	Equity instruments at fair value in other comprehensive income
As of Jan. 1, 2021	**565.9**	**9,037.9**	**13,368.2**	**-32.9**	**50.0**
Profit for the period			**2,641.9**		
Changes in the period			23.9	18.2	79.9
Reclassification affecting net income				2.8	
Other comprehensive income			**23.9**	**21.0**	**79.9**
Total comprehensive income			**2,665.8**	**21.0**	**79.9**
Capital increase	210.7				
Premium on the issue of new shares		8,340.1			
Transaction costs in connection with the issue of shares		-93.4			
Reclassification of equity instruments at fair value in other comprehensive income			49.2		-49.2
Withdrawal from the capital reserves		-1,826.2	1,826.2		
Dividend distributed by Vonovia SE			-956.3		
Addition of non-controlling interests due to acquisition of Deutsche Wohnen					
Changes recognized directly in equity			-27.2		
As of Dec. 31, 2021	**776.6**	**15,458.4**	**16,925.9**	**-11.9**	**80.7**
As of Jan. 1, 2020	**542.3**	**8,239.7**	**10,534.4**	**-52.2**	**41.2**
Profit for the period			**3,228.5**		
Changes in the period			-12.7	-6.8	8.8
Reclassification affecting net income				26.1	
Other comprehensive income			**-12.7**	**19.3**	**8.8**
Total comprehensive income			**3,215.8**	**19.3**	**8.8**
Capital increase	23.6				
Premium on the issue of new shares		1,326.2			
Transaction costs in connection with the issue of shares		-5.8			
Withdrawal from the capital reserves		-522.2	522.2		
Dividend distributed by Vonovia SE			-851.4		
Changes recognized directly in equity			-52.8		
As of Dec. 31, 2020	**565.9**	**9,037.9**	**13,368.2**	**-32.9**	**50.0**

Currency translation differences	Total	Equity attributable to Vonovia's shareholders	Equity attributable to Vonovia's hybrid capital investors	Equity attributable to Vonovia's share-holders and hybrid capital investors	Non-controlling interests	Total equity
154.8	**171.9**	**23,143.9**	**1,001.6**	**24,145.5**	**686.3**	**24,831.8**
		2,641.9	**38.4**	**2,680.3**	**150.6**	**2,830.9**
-97.4	0.7	24.6		24.6	0.5	25.1
	2.8	2.8		2.8		2.8
-97.4	**3.5**	**27.4**		**27.4**	**0.5**	**27.9**
-97.4	**3.5**	**2,669.3**	**38.4**	**2,707.7**	**151.1**	**2,858.8**
		210.7		210.7		210.7
		8,340.1		8,340.1		8,340.1
		-93.4		-93.4		-93.4
	-49.2	0.0		0.0		0.0
		0.0		0.0		0.0
		-956.3		-956.3		-956.3
					2,436.6	2,436.6
		-27.2	-1,040.0	-1,067.2	-16.0	-1,083.2
57.4	**126.2**	**33,287.1**	**0.0**	**33,287.1**	**3,258.0**	**36,545.1**
2.9	**-8.1**	**19,308.3**	**1,001.6**	**20,309.9**	**813.9**	**21,123.8**
		3,228.5	**40.0**	**3,268.5**	**71.5**	**3,340.0**
151.9	153.9	141.2		141.2	-0.1	141.1
	26.1	26.1		26.1		26.1
151.9	**180.0**	**167.3**		**167.3**	**-0.1**	**167.2**
151.9	**180.0**	**3,395.8**	**40.0**	**3,435.8**	**71.4**	**3,507.2**
		23.6		23.6		23.6
		1,326.2		1,326.2		1,326.2
		-5.8		-5.8		-5.8
		0.0		0.0		0.0
		-851.4		-851.4		-851.4
		-52.8	-40.0	-92.8	-199.0	-291.8
154.8	**171.9**	**23,143.9**	**1,001.6**	**24,145.5**	**686.3**	**24,831.8**

Notes

(A): Principles of the Consolidated Financial Statements

1 General Information

Vonovia SE is incorporated and domiciled in Germany. The company is registered in the commercial register in Bochum under HRB 16879. Its registered office is at Universitätsstrasse 133, 44803 Bochum, Germany.

The consolidated financial statements as of and for the year ended December 31, 2021 have been prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted in the EU. In addition, the supplementary commercial law provisions under Section 315e (1) of the German Commercial Code (HGB) have been observed. Changes due to reclassifications are set out in chapter [A2] Adjustment to Prior-year Figures.

The consolidated financial statements have been prepared on the basis of amortized cost except for investment properties, assets held for sale, derivative financial instruments, plan assets and equity instruments at fair value in other comprehensive income. These are measured at their fair value. The income statement has been prepared using the nature of expense method.

These consolidated financial statements are presented in euros, which is the Group's functional currency. Unless stated otherwise, all figures are shown in million euros (€ million).

The following overview indicates the chapters on the individual topics containing disclosures on accounting policies, judgments and estimates:

Chapter	Accounting policies, judgments, estimates
A6	Currency translation
A7	Government grants
B	Profit for the period
B12	Profit on the disposal of properties
B22	Income taxes
C24	Earnings per share
D26	Other intangible assets
D27	Property, plant and equipment
D28	Investment properties
D29	Financial assets
D33	Inventories
D29	Impairment losses on financial assets
D35	Cash and cash equivalents
D36	Real estate inventories
D37	Assets and liailities held for sale
E38	Total equity
E39	Provisions
E41	Non-derivative financial liabilities
E43	Leases
E44	Liabilities to non-controlling interests
E45	Financial liabilities from tenant financing
F48	Share-based payment

2 Adjustment to Prior-year Figures

In connection with the acquisition of the Deutsche Wohnen Group, material non-current financial assets accounted for using the equity method were also acquired. Due to the increased significance of the balance sheet item, the financial assets measured using the equity method and recognized in non-current financial assets in previous years were shown on a separate line in the balance sheet. Compared to the prior-year reporting, non-current financial assets declined by € 32.9 million in the 2021 fiscal year and are recognized on a separate line.

The capital increase implemented in December 2021 also involved the issue of subscription rights for existing shareholders. Since the subscription price for the new shares was lower than the market price of the existing shares, the capital increase included a bonus element. According to IAS 33, the bonus element is the result of an implicit change in the number of shares outstanding for all periods prior to the capital increase without a fully proportionate change in resources. As a consequence, the average number of shares outstanding has been adjusted retroactively for prior-year disclosures accordingly from 550,416,020 to 587,143,419. For additional information on disclosures, see chapter [C24] Earnings per share.

3 Consolidation Principles

Business Combinations

An entity shall account for each business combination by applying the acquisition method if it obtains control. All hidden reserves and charges of the company acquired are disclosed as part of the necessary remeasurement. Any excess of the cost of a business combination over the net fair value of the identifiable assets, liabilities and contingent liabilities, following the disclosure of hidden reserves and charges, is recognized as goodwill in the balance sheet. The consideration transferred at the time of the acquisition and the identifiable net assets that are acquired are measured at fair value as a general rule. Transaction costs are recognized as an expense immediately insofar as they do not relate to costs pertaining to the raising of capital or the issue of debt capital.

Subsidiaries

Subsidiaries are companies that are controlled by the Group. The Group controls an investee if it is exposed to risks or has rights to variable returns from its involvement with the investee and has the ability to use its power of control over the investee to influence the level of these returns. In the process of full consolidation, the assets and liabilities of a subsidiary are included in the consolidated financial statements in their entirety. Subsidiaries are included in the consolidated financial statements from the date on which Vonovia SE obtains control until the day control ceases.

Non-Controlling Interests

The equity of a subsidiary that is not attributable to Vonovia is shown as a separate component of equity under non-controlling interests. Non-controlling interests are measured based on their share of the identified net assets of the acquired company at the time of acquisition.

Changes in a parent's ownership interest in a subsidiary that do not result in the parent losing control of the subsidiary are equity transactions.

Loss of Control

If Vonovia loses control over a subsidiary, the assets and liabilities of the subsidiary in question as well as any corresponding non-controlling interests are derecognized. The result is recognized in the income statement. Any investment retained is recognized at fair value when control is lost.

Associates and Joint Arrangements

Associates and joint arrangements classified as joint ventures are accounted for using the equity method. An associate is an entity over which the investor has significant influence. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. If the arrangement involves rights to the assets and obligations for the liabilities of a joint arrangement instead, then these are recognized using quota consolidation.

Business Transactions Eliminated on Consolidation

The effects of the business transactions between the entities included in the Vonovia consolidated financial statements are eliminated.

Results from business transactions with companies accounted for using the equity method are only eliminated in line with the Group's share in the investee.

The financial statements of Vonovia SE and all subsidiaries are consistently prepared according to uniform accounting policies.

4 Scope of Consolidation and Business Combinations

All in all, and including Vonovia SE, 736 companies (Dec. 31, 2020: 588) – thereof 441 (Dec. 31, 2020: 285) domestic companies and 295 (Dec. 31, 2020: 303) foreign companies – have been included in the consolidated financial statements as of December 31, 2021. In addition, joint activities were performed with two domestic companies (Dec. 31, 2020: two). In addition, 25 (Dec. 31, 2020: four) domestic companies and one (Dec. 31, 2020: one) foreign company were included as joint ventures and five domestic companies (Dec. 31, 2020: zero) and two (Dec. 31, 2020: two) foreign companies were included as associates accounted for using the equity method.

Three (Dec. 31, 2020: three) foreign companies are no longer included in the scope of consolidation as they are no longer considered to be material. These companies are shown as non-consolidated affiliated companies.

For all subsidiaries included in the consolidated financial statements, the reporting date is December 31.

The → list of Vonovia shareholdings is appended to the Notes to the consolidated financial statements as an integral part thereof.

Companies that have made use of the exemption provision set out in Section 264 (3) of the German Commercial Code (HGB) are marked accordingly in the list of shareholdings.

The year-over-year changes in the consolidated companies as of December 31, 2021 result from 166 acquisitions, 14 mergers, an accrual, a liquidation and two sales. The change in joint ventures results from 23 acquisitions and two liquidations; the change in associates results from five acquisitions.

Acquisition of Deutsche Wohnen SE

On June 23, 2021 Vonovia SE, Bochum, published the offer document regarding its takeover offer to the shareholders of Deutsche Wohnen SE, Berlin, for the acquisition of the no-par-value shares held by them in Deutsche Wohnen SE against payment of a cash consideration of € 52.00 per share. The acceptance period for the takeover offer expired at midnight (local time in Frankfurt am Main) on July 21, 2021 (reference date).

By the end of the acceptance period, the takeover offer had been accepted for a total of 105,336,403 shares in Deutsche Wohnen. This corresponded to approx. 29.27% of the share capital and voting rights of Deutsche Wohnen.

As of the reference date, Vonovia SE directly held a total of 66,057,759 shares in Deutsche Wohnen that were purchased either on the market or by way of individual agreements. This corresponds to around 18.36% of the share capital and voting rights of Deutsche Wohnen SE.

On the reference date, the total number of Deutsche Wohnen shares to be taken into account for the minimum acceptance threshold therefore came to 171,394,162, corresponding to around 47.62% of the share capital and voting rights of Deutsche Wohnen SE.

The closing condition described in the offer of reaching the minimum acceptance threshold of 179,947,733 Deutsche Wohnen shares (corresponding to around 50% of the current share capital of Deutsche Wohnen SE) had not been reached as of the acceptance deadline. The closing condition had therefore definitively failed.

As a consequence of the definitive failure of this closing condition, both the takeover offer had lapsed and the agreements entered into as a result of the acceptance of the takeover offer ceased to exist. They were not executed. The 105,336,403 shares in Deutsche Wohnen that had been submitted were returned.

In addition, as of the reporting date, the bidder held financial instruments relating to 12,708,563 Deutsche Wohnen shares on the basis of a share purchase agreement concluded with Deutsche Wohnen SE but not yet executed. This corresponds to around 3.53% of the share capital and voting rights of Deutsche Wohnen SE. As the takeover offer was not successful, the condition precedent of the share purchase agreement has occurred and the share purchase agreement has been consummated.

This means that Vonovia SE held a total of 78,766,322 shares in Deutsche Wohnen as of July 21, 2021. This corresponds to approx. 21.89% of the share capital and voting rights of Deutsche Wohnen. As a result, Vonovia had a significant influence with effect from July 21, 2021.

As a result, the shares in Deutsche Wohnen SE were classified as an associate from this point onwards. For the period from July 21, 2021 until the acquisition date on September 30, 2021 profit shares of € 0.8 million were included in Vonovia's income statement as net income from non-current financial assets accounted for using the equity method. This profit share corresponds to an average pro rata interest of 29.8% and reflects the proportion for which shares in the profit for the period under review existed. As part of Deutsche Wohnen's inclusion as an associate as of July 21, 2021 the assets and liabilities of the Deutsche Wohnen Group, and in particular its real estate assets, were remeasured.

On August 1, 2021 Vonovia SE and Deutsche Wohnen SE announced that the business combination agreement had been revised and another offer would be published. The publication of another offer document was subject to approval for another timely public takeover offer made to the shareholders of Deutsche Wohnen SE being granted to Vonovia SE by the German Federal Financial Supervisory Authority (BaFin). The approval was granted on August 5, 2021.

Following the announcements made on August 1 and August 5, 2021 Vonovia SE announced the start of another voluntary public takeover offer for all outstanding shares in Deutsche Wohnen SE on August 23, 2021 publishing a corresponding offer document. As described in the offer document that was published, Vonovia offered cash consideration of € 53.00 for each share in Deutsche Wohnen. A minimum acceptance threshold of 50% was also a key closing condition. The offer period originally started on August 23 and ended at midnight (CEST) on September 20, 2021.

Up until the publication of the new offer document, Vonovia SE had acquired a further 29,201,317 shares in Deutsche Wohnen SE either on the market or by way of individual agreements. At this point in time, the total number of shares in Deutsche Wohnen held by Vonovia SE came to 107,967,639, corresponding to around 29.99% of the share capital and voting rights of Deutsche Wohnen.

On September 13, 2021 Vonovia SE announced that it would be waiving all offer conditions of the voluntary public takeover offer for the shares in Deutsche Wohnen SE. This was consistent with the offer document published on August 23, 2021 and was coordinated with Deutsche Wohnen SE. This move also resulted in the minimum acceptance threshold ceasing to apply. This meant that the offer was no longer subject to any further closing conditions; the acceptance period was extended by two weeks, meaning that it ended at midnight (CEST) on October 4, 2021. The further acceptance period started on October 8 and ended at midnight (CEST) on October 21, 2021.

Up until September 30, 2021 Vonovia SE had acquired a further 33,500,856 shares in Deutsche Wohnen either on the market or by way of individual agreements, and 42,999,948 shares in Deutsche Wohnen had been submitted during the acceptance period for the public takeover offer. All in all, this corresponds to a share of around 50.38% in the share capital entered in the commercial register on September 30, 2021 less 3,362,003 shares held by Deutsche Wohnen SE, for which the voting rights cannot be exercised.

The acquisition date on which Vonovia SE obtained control of Deutsche Wohnen SE was September 30, 2021. This transaction shall be treated as a business combination in accordance with IFRS 3.

The new valuation of the existing shares in Deutsche Wohnen SE required in connection with the first-time consolidation resulted in income of € 87.5 million. This was recognized in other operating income.

By the end of the further acceptance period at midnight CEST on October 21, 2021 the takeover offer had been accepted for a total of 198,463,161 shares in Deutsche Wohnen.

Since the acquisition of shares within the further acceptance period were effected under exactly the same conditions as in the first acceptance period and the two business transactions were related in terms of content and timing, these transactions are to be regarded as linked transactions. All in all, 87.36% of the share capital entitled to voting rights was included in the recognition of the business combination.

On October 14, 2021 Vonovia also converted convertible bonds of Deutsche Wohnen SE previously acquired on the market into 7,796,827 Deutsche Wohnen SE shares in a transaction not related to the takeover offer.

Therefore, the total number of shares entitled to voting rights held by Vonovia in Deutsche Wohnen SE as of December 31, 2021 amounts to 347,728,483. Of these shares, 198,463,161 were tendered as part of the takeover offer, 141,468,495 were acquired on the market or by way of individual agreements and 7,796,827 were added through the conversion of acquired convertible bonds. As of December 31, 2021 this represents 87.60% of the share capital entitled to voting rights. Deutsche Wohnen SE also holds a further 3,362,003 shares as own shares.

The following tables summarizes the development of the share capital shareholding in Deutsche Wohnen SE.

	until date	number of shares	share quota
Market acquisitions	Jul. 21, 2021	66,057,759	
Acquisition through conditional purchase agreement	Jul. 21, 2021	12,708,563	
Date of inclusion using the equity method	**Jul. 21, 2021**	**78,766,322**	**21.89%**
Market acquisitions	Aug.23, 2021	29,201,317	
Market acquisitions	Sept. 30, 2021	33,500,856	
Shares tendered during the offer phase	Sept. 30, 2021	42,999,948	
Acquisition date	**Sept. 30, 2021**	**184,468,443**	**50.38%**
Shares tendered during the extended offer phase	Oct. 21, 2021	155,463,213	
Shares recognised in course of the business combination		**339,931,656**	**87.36%**
Conversion of convertible bonds held	Oct. 14, 2021	7,796,827	
Reporting date	**Dec. 31, 2021**	**347,728,483**	**87.60%**

As part of the provisional purchase price allocation, the total consideration of the acquisition comprises the following:

in € billion	
Fair value of shares held as of September 30, 2021	7.5
Net cash purchase price component for shares tendered	10.5
Total consideration	**18.0**

The allocation of the total purchase price to the acquired assets and liabilities (PPA) of the Deutsche Wohnen Group as of the date of first-time consolidation is based on the financial statements of the Deutsche Wohnen Group as of September 30, 2021 and on the known necessary adjustments to the fair values of the assets and liabilities. As the acquisition date fell so close to the date on which the financial statements were prepared, the allocation was only provisional.

The assets and liabilities assumed in the course of the business combination had the following preliminary fair values as of the date of first-time consolidation:

in € billion	
Investment properties	28.2
Financial assets	1.0
Cash and cash equivalents	0.8
Assets held for sale	2.2
Fair value of other assets	1.4
Total assets	**33.6**
Provisions	0.5
Non-derivative financial liabilities	11.2
Deferred tax liabilities	5.4
Non-controlling interests	0.5
Fair value of other liabilities	0.7
Total liabilities	**18.3**
Fair value net assets	**15.3**
Consideration	18.0
Non-controlling interests	2.0
Goodwill	**4.7**

The non-controlling interests are included based on the share of the assets and liabilities of Deutsche Wohnen SE that have been recognized.

The goodwill represents synergies from the future integration of the Deutsche Wohnen Group, in particular through the shared administration and management of the respective residential units. The goodwill was only provisionally allocated to one or several cash-generating units due to the still provisional allocation of the consideration to assets and liabilities.

In general, the discounted cash flow (DCF) method was used to measure investment properties. Under the DCF methodology, the expected future income and costs of a property are forecast over a detailed period and discounted to the date of valuation as the net present value. The measurement was performed at the level of a homogeneous valuation unit, meaning that it is consistent with the principle of individual valuation.

The fair value of the loans under the item non-derivative liabilities was determined as the sum of the amounts of future cash flows discounted to the acquisition date using a DCF method. The contractually agreed maturities and the interest and repayment schedules were used to determine the future cash flows of the loans. The yield curve used in the DCF calculation to discount the cash flows consists of a risk-free base curve and a premium for the risk of non-performance ("risk spread").

Due to the change of ownership of more than 50% of the subscribed capital/voting rights in Deutsche Wohnen SE, tax loss carryforwards of Deutsche Wohnen SE and a small number of subordinated companies have been lost with effect for the future. Deferred tax assets were recognized on the company's loss carryforward and offset against deferred tax liabilities. This offsetting was reversed and the deferred tax assets were no longer recognized due to the loss carry-fowards that were eliminated as part of the PPA. In addition, deferred taxes that were not recognized due to the initial recognition exemption (also initial difference exemption) were recognized as part of the business combination. An initial recognition exemption refers to an exceptional scenario in which a deferred tax liability/deferred tax asset cannot be recognized if it results from the first-time recognition of an asset or liability, the underlying transaction is not a business combination and, at the time the transaction is executed, neither the earnings before tax recognized in the balance sheet nor the taxable net income are affected. The corresponding adjustments were made under deferred tax liabilities.

The measurement of the acquired joint ventures and associates under the item fair value of other assets took place using a DCF methodology based on the planning of the respective companies and the use of company-specific weighted average costs of capital (WACC).

The acquired brand rights in the area of nursing care, i.e., "Pflege & Wohnen Hamburg" and "Katharinenhof" under the item fair value of other assets, were measured using the relief-from-royalty method. This method is based on the assumption that the value of this intangible asset will correspond to the present value of the royalty fees saved after tax that are attributable to the asset concerned.

The multi-period excess earnings method (MEEM) was used to measure the existing care agreements under the item fair value of other assets. Using this method, the fair value of intangible assets is calculated as the residual value following deduction of hypothetical payments for the use of so-called "supporting assets." In the process, it is assumed that a company that only owns the measurable intangible asset itself either licenses, leases or rents all other supporting assets necessary for the company's operations. As such, fictitious usage fees for all supporting assets ("contributory asset charges [CACs]") need to be determined and deducted as part of the MEEM.

As of September 30, 2021 the Deutsche Wohnen Group comprised 163 fully consolidated companies. The Deutsche Wohnen Group also held interests in 23 joint ventures and four associates. In addition to residential property management as its core business, the company's business activities include nursing and assisted living, disposals/acquisitions and new construction/development as core business areas. In addition to its core business areas, the Deutsche Wohnen Group offers property-related services, such as property energy-efficiency management, the multimedia business and technical facility management, via subsidiaries or strategic shareholdings.

Starting on September 30, 2021 the Deutsche Wohnen Group contributed € 971.0 million to income, as well as € 262.9 million to profit for the period. This amount includes income of € 68.8 million from the business areas nursing and assisted living.

If the Deutsche Wohnen Group had already been fully included in the consolidated Group as of January 1, 2021 it would have contributed to the income in the amount of € 2,297.4 million and to profit/loss for the period in the amount of € 1,034.9 million.

Out of the trade receivables that were acquired, an amount of € 20.1 million is likely to have been uncollectible at the time of acquisition. The gross amount of the acquired trade receivables was € 80.9 million. The net carrying amount, which corresponds to the fair value, was € 60.8 million.

In the 2021 fiscal year, transaction costs related to the acquisition of the Deutsche Wohnen Group in the amount of € 210.8 million were recognized in other operating expenses affecting net income. € 89.0 million of this amount is recognized in other operating expenses, € 109.4 million in other financial result and € 12,4 million in interest expenses.

Acquisition of H&L Immobilien GmbH

On December 2, 2020 Vonovia SE announced that it had signed a contract concerning the acquisition of a 94.9% stake in H&L Immobilien GmbH (renamed Fjord Immobilien GmbH with an entry in the commercial register being made on February 8, 2021), Kiel, Germany, ("H&L") via its wholly owned subsidiary Deutsche Annington Acquisition Holding GmbH.

The acquisition date, the time at which Vonovia SE obtained control of H&L, was December 30, 2020. This was the date on which the offer was settled. This transaction shall be treated as a business combination in accordance with IFRS 3.

As part of the purchase price allocation, the consideration transferred for the business combination comprises the following:

in € billion	
Net cash purchase price component	93.2
Total consideration	**93.2**

The allocation of the total purchase price to the acquired assets and liabilities (PPA) of H&L as of the date of first-time consolidation is based on the financial statements of H&L as of December 31, 2020 and on the known necessary adjustments to the fair values of the assets and liabilities. The assets and liabilities assumed in the course of the business combination had the following fair values as of the date of first-time consolidation:

in € million	
Investment properties	123.0
Trade receivables	0.1
Cash and cash equivalents	2.2
Fair value of other assets	0.1
Total assets	**125.4**
Provisions	0.5
Non-derivative financial liabilities	36.6
Deferred tax liabilities	26.1
Fair value of other liabilities	3.4
Total liabilities	**66.6**
Fair value net assets	**58.8**
Consideration	93.2
Goodwill	**34.4**

There were no changes compared with the preliminary allocation of the total consideration as of December 31, 2020.

The valuation of the investment properties is based on the fair value determination as of December 31, 2020 which was carried out by CBRE on behalf of Vonovia.

The fair value of the loans was determined as the sum of the amounts of future cash flows discounted to the acquisition date using a discounted cash flow (DCF) methodology. The contractually agreed maturities and the interest and repayment schedules were used to determine the future cash flows of the loans. The yield curve used in the DCF calculation to discount the cash flows consists of a risk-free base curve and a premium for the risk of non-performance ("risk spread").

The goodwill represents synergies from the future integration of H&L, in particular through the shared administration and management of the respective residential units in the North region. It was allocated to the cash-generating unit North business area.

In the 2021 fiscal year, H&L contributed € 5.8 million to income, as well as € 10.6 million to profit for the period.

The gross carrying amount of the acquired trade receivables was € 0.4 million. Transaction costs of € 0.0 million have been recognized in connection with the transaction in the 2021 fiscal year.

5 Financial Reporting of Financial Assets and Financial Liabilities

Loans and Receivables

Loans and receivables are first recognized as incurred, other non-derivative financial assets as of the day of trading. The day of trading is the date on which Vonovia becomes a contracting party of the financial instrument. All financial instruments are initially measured at fair value, taking account of transaction costs. A financial asset is derecognized when the contractual rights to the cash flows from the financial asset expire, or the financial asset is transferred and Vonovia neither retains control nor retains material risks and rewards associated with ownership of the financial asset.

Loans and receivables are stated at amortized cost using the effective interest method.

Vonovia determines whether there is an objective indication of an impairment at the level of individual financial instruments if they are material, and, for financial instruments for which no impairments have been identified at the level of the individual financial instruments or such impairments are immaterial, grouped according to risk profile. Impairments are identified for individual financial instruments when the counterparty has defaulted or breached a contract or there are indications of risks of impairments due to a rating downgrade and general information (loss event). For groups of financial instruments with similar risks, historical default probabilities in relation to the time overdue are drawn upon (loss event). An impairment is calculated after the occurrence of a loss event as the difference between the carrying amount and the value of the discounted estimated future cash flow. The original effective interest rate is taken as the discount rate. Impairment losses are recognized with effect on net income and offset directly with the carrying amount of the financial instrument. Any interest income on impaired financial instruments is still recognized. If there are indications that the amount of the impairment loss will be smaller, this reduction is credited to the financial instrument affecting net income to the extent that the sum does not exceed the amortized cost that would have been recognized if the impairment had not occurred.

Derivative Financial Instruments

Derivative financial instruments are stated at their fair value on the day of trading when they are recognized for the first time. The fair values of the derivative financial instruments are calculated using standard market valuation methods for such instruments on the basis of the market data available on the valuation date.

With derivatives that are not designated as a hedging instrument in the balance sheet, changes in the fair value are recognized in profit or loss with effect on net income.

Compared with IAS 39, the IFRS 9 regulations relating to hedge accounting include, among other things, an expanded range of eligible hedged items, changes regarding the posting approach for certain undesignated value components of hedging instruments, the abolition of the fixed effectiveness ranges and retrospective effectiveness testing as well as the first-time introduction of “recalibration.” The less restrictive provisions compared with IAS 39 make it easier to reflect economic risk management in the balance sheet, which can, in turn, reduce artificial volatility in the income statement.

At the time of application of IFRS 9, Vonovia will opt to continue to apply the hedge accounting provisions set out in IAS 39 as opposed to the provisions of IFRS 9. Vonovia will apply this accounting method to all hedge relationships.

Contracts concluded for the purpose of receiving or supplying non-financial items in accordance with the company’s expected purchase, sale, or use requirements (own-use contracts) are not recognized as derivative financial instruments, but rather as pending transactions under IAS 37.

With derivatives designated as hedging instruments, the recognition of changes in the fair value depends on the type of hedge:

> With a fair value hedge, the changes in the fair value of the derivative financial instruments and of the underlying hedged items attributable to the hedged risk are recognized affecting net income.
> With a cash flow hedge, the unrealized gains and losses are initially recognized in other comprehensive income to the extent that the hedge is effective. Amounts accumulated in other comprehensive income are reclassified to the income statement at the same time the underlying hedged item affects net income. To the extent that the hedge is ineffective, the change in fair value is immediately recognized in net interest.

Embedded derivative financial instruments that are combined with a non-derivative financial instrument (host contract) to form a hybrid financial instrument are to be separated from the underlying contract pursuant to IFRS 9 as a general rule and accounted for separately if (i) its economic risks and characteristics are not closely related to those of the host contract, (ii) a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and (iii) the hybrid instrument is not measured at fair value affecting net income with changes in fair value recognized in the income statement. As soon as the derivative is to be separated from its host contract, the individual components of the hybrid financial instrument are to be accounted for based on the provisions that apply to the individual financial instruments.

In order to measure interest rate swaps, future cash flows are calculated and then discounted. The calculated cash flows result from the contract conditions. The contract conditions regularly refer to the EURIBOR/STIBOR reference rates (3M and 6M EURIBOR/STIBOR). Discounting is based on market interest rate data as of the reporting date for comparable instruments (EURIBOR/STIBOR rate of the same tenor). The fair value contains the credit risk of the interest rate swaps and therefore allows for adjustments for the company’s own credit risk or for the counterparty credit risk.

To measure the cross currency swaps, future cash flows are calculated and then discounted. The calculated cash flows result from the contract conditions and the USD forward rates (development of exchange rates expected by the market). Discounting is based on market interest rate data as of the reporting date for comparable instruments (EURIBOR rate of the same tenor). The fair value contains the credit risk of the cross currency swaps and therefore allows for adjustments for the company's own credit risk or for the counterparty credit risk.

Equity Instruments to Be Recognized at Fair Value in Other Comprehensive Income

In general, the equity instruments to be recognized at fair value in other comprehensive income are shares in companies that were acquired with long-term strategic intentions.

These equity instruments to be recognized at fair value in other comprehensive income are initially stated at their fair value, plus the directly attributable transaction costs. Subsequent measurement is at fair value as a general rule. Changes in the fair value are recognized in other comprehensive income.

The fair value of equity instruments to be recognized at fair value in other comprehensive income is based on quoted market prices as of the reporting date. If these equity instruments are derecognized, the cumulative gain or loss recognized in other comprehensive income is transferred to retained earnings, not affecting net income. Interest on interest-bearing financial instruments of this category is calculated using the effective interest method. Dividends on equity instruments in this category are shown in the income statement.

6 Currency Translation

Accounting Policies

Foreign currency transactions involving Group companies are converted into the functional currency, in accordance with the temporal method, at the exchange rate that applies on the day of the transaction. Monetary balance sheet items denominated in a foreign currency are converted at the exchange rate that applies on each reporting date. Any exchange differences are recognized affecting net income. Non-monetary items that are measured in terms of historical cost are recorded on the reporting date at the exchange rate on the date they were first recognized. Non-monetary items that are measured at fair value are translated on the reporting date using the exchange rate on the date the fair value was determined. Exchange differences relating to non-monetary items are recognized affecting net income insofar as a profit or loss on the corresponding line item is also recognized affecting net income. Otherwise, they are disclosed in other comprehensive income.

The main foreign subsidiaries included in the consolidated financial statements operate their business independently in line with functional theory. The annual financial statements of those subsidiaries whose functional currency is not the euro are converted into the reporting currency using the modified closing rate method. The functional currency of individual foreign units is always the respective local currency. Any resulting exchange differences are disclosed as a separate item in other comprehensive income. When a foreign subsidiary leaves the scope of consolidation, the cumulative exchange differences are reversed and recognized in profit or loss.

Vonovia applies the concept of functional currency translation in accordance with IAS 21 Effects of Changes in Foreign Exchange Rates to its consolidated financial statements. The functional currency of Vonovia SE and the reporting currency of the Vonovia Group is the euro.

The exchange rates of the currencies relevant to the Vonovia Group have developed as follows:

	Closing rate		Average for period	
Basis: € 1	Dec. 31, 2020	Dec. 31, 2021	2020	2021
SEK – Swedish krona	10.03	10.25	10.48	10.15
USD – US dollar	1.23	1.13	1.14	1.18

7 Government Grants

Accounting Policies

Government grants are recognized when there is reasonable assurance that the relevant conditions will be fulfilled and that the grants will be awarded.

Government grants that do not relate to investments are regularly recognized as income in the periods in which the relevant expenses are incurred.

Expenses subsidies granted in the form of rent, interest and other expenses subsidies are recorded as income in the periods in which the expenses are incurred and shown within other income from property management.

The low-interest loans are grants from public authorities that – insofar as the company received them as part of a business combination – are recorded at present value. The difference between face value and present value is recognized with an effect on net income over the maturity term of the corresponding loans.

New expenses loans or low-interest loans are initially recognized at their present value within the non-derivative financial liabilities on the basis of the market interest rate at the time the loans are taken out. The difference between the face value and the present value of the loan is recognized as deferred income. Reversal occurs, in principle, with an effect on net income in line with the length of the fixed-interest-rate period of the relevant loans. In cases where the low-interest loans are issued as part of capitalized modernization measures, the difference between the face value and the present value of the loan is deducted from the capitalized acquisition cost. In subsequent measurements, the loans are measured at amortized cost.

The companies that belong to the Group receive government grants in the form of construction subsidies, expenses subsidies, expenses loans and low-interest loans. In the 2021 fiscal year, Vonovia was granted low-interest loans of € 130.4 million (2020: € 182.4 million).

8 Changes in Accounting Policies, Estimates, Assumptions, Options and Judgments

Changes to Key Accounting Methods

The Group did not have to apply any Interest Rate Benchmark Reform as of January 1, 2021.

Measures to Address the Interest Rate Benchmark Reform and the Associated Risks

General

The key interest rate benchmarks are being fundamentally reformed across the globe, including the replacement of some interbank offered rates (IBORs) with alternative, virtually risk-free rates (referred to as the IBOR Reform).

Financial instruments held by the Group are subject to IBORs that have not been replaced or reformed as part of these market-wide initiatives. The biggest risk for the Group in connection with the IBOR as of December 31, 2021 was the connection to EURIBOR and STIBOR. As these are likely to remain in place until 2025, no changes had to be made to the financial instruments as of December 31, 2021 meaning that no new interest rate benchmarks have to be taken into account in this respect.

Although USD-LIBOR was to have been discontinued by the end of 2021, the ICE Benchmark Administration (IBA), the LIBOR administrator regulated and licensed by the UK Financial Conduct Authority (FCA), announced in November 2020 that it had started discussing ending the publication of certain USD-LIBORs after June 2023. As of December 31, 2021 it remains unclear when the date on which publication of USD-LIBOR will cease will be announced. The Group does not hold any financial instruments subject to USD-LIBOR.

The IBOR risks to which the Group is exposed as of December 31 relate to EURIBOR-linked corporate bonds. As explained above, the Group did not have to make any amendments to the contractual terms to reflect any risks resulting from the connection with EURIBOR.

The EURIBOR calculation method changed in the course of 2019.

In July 2019, the Belgian Financial Services and Markets Authority approved EURIBOR pursuant to the European Union Benchmarks Regulation. This allows market participants to continue to use EURIBOR for both existing and new contracts, and the Group expects EURIBOR to remain the interest rate benchmark for the foreseeable future.

Derivatives

The Group holds interest rate swaps designated in hedging relationships for the hedging of cash flows for risk management purposes. The variable amounts under the interest rate swaps are linked to EURIBOR.

Hedge accounting

The Group's hedged items and hedging instruments are linked to EURIBOR as of the reporting date. These benchmarks are fixed daily and the IBOR cash flows are exchanged with the contractual counterparties as usual.

Changes in Accounting Policies Due to New Standards and Interpretations

The following new or amended standards and interpretations became mandatory for the first time in the 2021 fiscal year. They did not have any material effects on Vonovia's consolidated financial statements.

> IAS 39 "Financial Instruments: Recognition and Measurement"
> IFRS 4 "Insurance Contracts"
> IFRS 7 "Financial Instruments: Disclosures"
> IFRS 9 "Financial Instruments"
> IFRS 16 "Leases"

IFRS 16

Due to the rent concessions (deferrals, waivers) granted in a large number of countries as a result of the COVID-19 pandemic, IFRS 16 was amended to provide companies with an exemption from assessing whether a COVID-19-related rent concession is a lease modification within the meaning of IFRS 16. Instead, they can opt to account for COVID-19-related rent concessions as if they were not lease modifications. This would spare them the work involved in evaluating the lease contracts to check for possible contractually defined rent concessions as well as the work involved in reassessing these contracts applying a new discount rate (which is always required for lease modifications). This relief was initially limited until June 30, 2021 but was extended until June 30, 2022 in April 2021.

No rent concessions were granted by the lessor within the Vonovia Group. This is due primarily to the Group's encouraging and robust financial position, even in times dominated by the COVID-19 pandemic. As a result, the Group is not exercising this option as it is not relevant. The amendments to IFRS 16 do not have any material effects on the consolidated financial statements.

New Standards and Interpretations Not Yet Applied

Application of the following standards, interpretations and amendments to existing standards was not yet mandatory for the 2021 fiscal year. Vonovia also did not choose to apply them in advance. It is expected that the application of the new or amended standards and interpretations will have no material effects on Vonovia's consolidated financial statements. Their application will be mandatory for the fiscal years following the dates stated in the following table:

Relevant New Standards, Interpretations and Amendments to Existing Standards and Interpretations		Effective date for Vonovia
Annual Improvements 2018–2020		Jan. 1, 2022
Amendments to Standards		
IAS 1	"Presentation of Financial Statements"	Jan. 1, 2023*
IAS 8	"Accounting policies, Changes in Accounting Estimates and Errors"	Jan. 1, 2023*
IAS 12	"Income Taxes"	Jan. 1, 2023*
IAS 16, IAS 37 and IFRS 3	"Property, Plant and Equipment", "Provisions, Contingent Liabilities and Contingent Assets" and "Business Combinations"	Jan. 1, 2022
New Standards		
IFRS 17	"Insurance Contracts"	Jan. 1, 2023

* Not yet endorsed.

Estimates and Assumptions

To a certain extent, the preparation of the consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the reporting date as well as reported amounts of income and expenses during the reporting year. The actual amounts may differ from the estimates as the business environment may develop differently than assumed. In this case, the assumptions and, where necessary, the carrying amounts of the assets or liabilities affected are prospectively adjusted accordingly. Specific estimates and assumptions relating to individual elements of financial statements are also explained in the corresponding notes to the consolidated financial statements.

Assumptions and estimates are reviewed on an ongoing basis and are based on experience and other factors, including expectations regarding future events that appear reasonable under the given circumstances.

The estimates and assumptions that may have a material risk of causing an adjustment to the carrying amounts of assets and liabilities mainly relate to the determination of the fair value of investment properties.

The best evidence of fair value of investment properties is current prices in an active market for comparable residential properties. As such information is not completely available, however, Vonovia uses standard valuation techniques.

A detailed description of the discounted cash flow (DCF) method used can be found in chapter [D28] Investment Properties.

In accordance with IAS 40 in conjunction with IFRS 13, the respective market values of the investment properties owned by Vonovia are determined. Changes in certain market conditions such as prevailing rent levels and vacancy rates may affect the valuation of investment properties. Any changes in the fair value of the investment portfolio are recognized as part of the profit for the period in the income statement and can thus substantially affect Vonovia's results of operations.

The statement of financial liabilities at amortized cost using the effective interest method takes the expected contractual cash flows into account. In some cases, the agreements do not have any fixed maturity terms. As a result, the cash flows included in the valuation are subject to management assumptions in terms of amount and term.

As explained in chapter [D26] Intangible Assets, Vonovia checks for goodwill impairments on an annual basis, or if there is any reason to suspect such impairments. The next step involves calculating the recoverable amount of the group of cash-generating units (CGU). This corresponds to either the fair value less costs of sale or the value in use, whichever is higher. Determining the value in use includes adjustments and estimates regarding the forecast and discounting of the future cash flow. Although the management believes that the assumptions used to determine the recoverable amount are appropriate, any unforeseeable changes in these assumptions could result in impairment losses, with a detrimental impact on the net assets, financial position and results of operations.

When determining the volume of current and deferred taxes, the Group takes into account the effects of uncertain tax items and whether additional taxes and interest may be due. This assessment is made on the basis of estimates and assumptions about future events. New information may become available that causes the Group to change its discretionary decisions regarding the appropriateness of existing tax liabilities; such changes to tax liabilities will affect the tax expense in the period in which such a change is made.

Deferred tax assets are recognized to the extent that it can be demonstrated that it is probable that future taxable profits will be available against which the temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that there will be sufficient future taxable profits to realize the tax benefit in the future.

In connection with the application of IFRS 15, it is assumed with respect to determining progress in relation to revenue recognition over time that the costs incurred appropriately reflect the progress as a share of total costs.

Additional estimates and assumptions mainly relate to the uniform definition of useful lives, the assumptions made on the value of land and buildings, the recognition and measurement of provisions as well as the realization of future tax benefits.

Options and Judgments

Options exercised and judgments made by Vonovia's management in the process of applying the entity's accounting policies that may have a significant effect on the amounts recognized in the consolidated financial statements include the following:

> The group of investments accounted for using the equity method is determined by assessing significant influence.
> Determining whether the acquisition of investment properties as part of a business combination constitutes the acquisition of a "business" or the acquisition of an individual asset or group of assets can involve discretionary judgments.
> Vonovia measures investment properties at fair value. If management had opted to use the acquisition costs model as permitted under IAS 40, the carrying amounts of the investment properties as well as the corresponding income and expense items in the income statement would differ significantly.
> The criteria for assessing in which category a financial asset is to be classified may involve discretionary judgments.
> Within the scope of revenue recognition in accordance with IFRS 15, discretionary decisions relating to the expected revenue, the total costs of a project and the degree of completion may be necessary. These have an impact on the amount and timing of revenue.
> When accounting for leases in accordance with IFRS 16, the assessment of the exercise or non-exercise of unilaterally granted termination or renewal options may involve discretionary judgment, particularly if there is no economic incentive for the exercise or non-exercise of options.
> The need to include information concerning the future in the valuation of expected defaults results in discretionary decisions regarding the impact that changes in economic factors will have on the expected defaults.
> The decision on how to define a group of cash-generating units to which goodwill is allocated may involve discretionary judgments.
> Allocating the goodwill to the group of individual cash-generating units may also involve discretionary judgments. The parameters used in the impairment test, such as the determination of undiscounted cash flows, the weighted average cost of capital and the growth rate, may also involve discretionary judgments. Due to a lack of any detailed definition of the term "operation" (IAS 36.86), the disposal of goodwill within the context of real estate sales may involve discretionary decisions.
> Due to a lack of any detailed definition of the term "a separate major line of business or geographical area of operations" (IFRS 5), a disposal group within the context of real estate sales may involve discretionary decisions.
> At the moment, there are no definitive provisions on how to reflect a mandatory acquisition of non-controlling

interests following the acquisition of control as part of a voluntary public takeover offer. In general, the acquisition of shares as part of a public offer during the second offer period is based on exactly the same conditions as those that applied in the first offer period, and the two acquisitions are closely related in terms of content and timing. This means that, even if it is executed in two offer periods, the acquisition constitutes one and the same transaction (linked transaction). Following the completion of the later acquisition, the original purchase price allocation is to be adjusted with retroactive effect from the acquisition date, resulting in a change in the consideration transferred, the fair value of net assets transferred and, consequently, the resulting goodwill.

9 Subsequent Events

The Supervisory Board of Vonovia SE appointed Philip Grosse as a member of the Management Board as CFO effective from January 1, 2022. At the same time, Helene von Roeder, previously the company's CFO, was appointed Chief Transformation Officer (CTO) of the newly created Innovation and Digitalization executive division. In implementing the business combination agreement concluded between Vonovia and Deutsche Wohnen as part of the merger, Vonovia is therefore enlarging the Management Board from four to five members.

Vonovia SE extended Rolf Buch's contract as CEO, which is set to expire in February 2023, by a further five years.

Vonovia and Deutsche Wohnen sold residential and commercial units to public housing companies in Berlin in September 2021. In the majority of cases, title was transferred in January 2022 with a volume of € 2,339.0 million.

On August 5, 2021 Morgan Stanley, Société Générale and Bank of America provided Vonovia SE with bridge financing with a term of up to two years as part of the acquisition of Deutsche Wohnen, the value of which came to around € 3,490.0 million as of December 31, 2021. This bridge financing was syndicated with 11 further banks. As of January 7, 2022 € 2,060.0 million was repaid. The outstanding bridge financing was reduced by a further € 500 million on January 21, 2022 and was repaid in full on March 1, 2022.

On February 16, 2022 Vonovia SE issued promissory note loans of € 1.0 billion with terms of five to 30 years and an average interest rate of 1.13%.

On October 29, 2021 Vonovia SE published the document for its voluntary public takeover offer (cash offer) for the shareholders of GSW Immobilien AG, Berlin (GSW), through which it would acquire the no-par-value bearer shares held in GSW in return for a consideration of €114.81 per share. By the end of the further acceptance deadline at midnight (local time in Frankfurt am Main) on January 6, 2022 (reference date), the bidder's takeover offer for a total of 497,591 GSW shares was accepted. This corresponds to around 0.88% of the share capital and voting rights of GSW. Overall, Vonovia therefore holds around 94.02% of the share capital and voting rights in GSW.

On February 22, 2022 control of 20.5% of shares in the Adler Group, which were previously held by Aggregate Holdings Invest S.A., was transferred to Vonovia SE in the course of security recovery. The shares had been pledged to secure a loan that Vonovia had granted on October 7, 2021 through the repayment of a bank loan from Aggregate Holdings. The exercise of voting rights from shares of Vonovia is subject to the approval of the cartel office.

Section (B): Profit for the Period

The figures from the previous year are only comparable to a limited extent due to acquisitions made in the previous year and, in particular, in the fiscal year under review.

Accounting Policies

Income from property management includes income from the rental of investment properties and assets held for sale which is recognized, net of discounts, over the duration of the contracts when the remuneration is contractually fixed or can be reliably determined and collection of the related receivable is probable.

In Vonovia's financial statements, the corresponding income for all the services for **ancillary costs** performed by the end of the year is also recognized in the year in which the service is performed. This amount is recognized on a non-netted basis using the principal method, in particular due to Vonovia's business model, which provides for a large proportion of services relevant to ancillary costs being performed by Vonovia itself as Vonovia is considered by the tenant to be the primary party responsible for providing the service. For all services that it does not perform itself, Vonovia also bears an inventory risk due to the settlement method (based on rentable area), as is standard practice in the real estate sector.

Income from **real estate sales** is recognized as soon as the material risks and rewards of ownership have been transferred to the buyer and Vonovia has no substantial further obligations. As far as any remaining obligations are concerned, a provision is recognized for the probable risk.

Expenses are recognized when they arise or at the time they are incurred. Interest is recognized as income or expense in the period in which it is incurred using the effective interest method.

10 Income from Property Management

in € million	2020	2021
Rental income	2,288.5	2,571.9
Ancillary costs	780.9	893.1
Income from property letting	3,069.4	3,465.0
Other income from property management	77.7	158.9
	3,147.1	**3,623.9**

Other income from property management includes income of € 68.8 million (2020: € - million) from the business area nursing and assisted living for the period from October 1, 2021 to December 31, 2021. This business area was new in 2021, compared to the previous year, due to the acquisition of the Deutsche Wohnen Group.

11 Profit on the Disposal of Properties

in € million	2020	2021
Income from the disposal of investment properties	321.3	239.2
Carrying amount of investment properties sold	-217.4	-161.6
Profit on the disposal of investment properties	103.9	77.6
Income from sale of assets held for sale	265.0	883.0
Retirement carrying amount of assets held for sale	-265.0	-883.0
Revaluation of assets held for sale	78.2	87.4
Profit on the disposal of assets held for sale	78.2	87.4
	182.1	**165.0**

The change in fair value of residential properties held for sale, for which a purchase contract had been signed but for which transfer of title had not yet taken place, led to a gain of € 87.4 million as of December 31, 2021 (2020: € 78.2 million).

The increase in income from the sale of assets held for sale mainly results from the transfer of benefits and encumbrances in the fourth quarter of 2021 for two portfolio transactions of the Deutsche Wohnen Group with a total of 3,126 units in Rhineland-Palatinate, which were visited in May 2021 and certified in August 2021.

12 Profit on Disposal of Real Estate Inventories

Accounting Policies

Income from the disposal of real estate inventories is realized either over time or at a specific point in time as soon as the customer obtains control over the asset in question. If, upon conclusion of the certified purchase agreement, control within the meaning of IFRS 15.35 (c) passes to the customer before or during the construction phase, the revenue is to be recognized as of this point in time based on the degree of completion of the construction project. Disclosure of the contract assets that fall within the scope of IFRS 15 occurs on a net basis with the corresponding advance payments received under trade receivables.

Contractual balances with an expected term of less than one year are not adjusted to reflect the time value of money.

No separate agreements are reached, in the contracts on the sale of apartments as part of the development business, on extraordinary rights of return or rescission, meaning that such rights are based on the relevant legal provisions. The same applies to warranty commitments, which are not to be treated as a separate contractual component within the meaning of IFRS 15 as a result. Existing warranty claims are always accounted for in line with the provisions of IAS 37.

In accordance with IFRS 15.94, costs for the initiation of the contracts with customers are recognized as an expense as soon as they are incurred, as the depreciation period generally would not amount to more than a year. The costs relate primarily to brokerage commission.

In cases involving **revenue recognition over time**, the percentage of completion/progress made has to be assessed. Vonovia uses the cost-to-cost method, as an input-based procedure, for this purpose. The progress made is determined based on the ratio of the capitalized contract costs incurred up until the reporting date to the estimated total contract costs that can be capitalized.

Income from the disposal of real estate inventories in the amount of € 519.6 million (2020: € 297.7 million) comprises € 420.1 million (2020: € 194.4 million) in period-related income from the disposal of real estate inventories together with € 99.5 million (2020: € 103.3 million) in time-related income from the disposal of real estate inventories. As of the reporting date, contract assets of € 247.0 million (2020: € 121.5 million) are recognized within trade receivables in connection with the period-related revenue recognition. As of the reporting date, this amount includes advance payments received of € 236.2 million (2020: € 87.1 million). The year-on-year increase is due to the overall increase in the project volume, as well as to the transfer of benefits and encumbrances for a project in Vienna in connection with the sale to an individual investor (Global Exit).

A transaction price of € 197.9 million (2020: € 124.2 million) has been allocated to the remaining performance obligations that had not yet been satisfied (in full) at the end of the current reporting period. These amounts are expected to be recognized, affecting net income, within the next two fiscal years, with an amount of € 174.2 million attributable to 2022 and an amount of € 23.7 million to 2023.

13 Net Income from Fair Value Adjustment of Investment Properties

Investment properties in the German and Austrian portfolios are measured by the in-house valuation department according to the fair value model. The external appraiser Savills Sweden AB is responsible for the valuation of the portfolios in Sweden. The nursing care properties are valued by W&P Immobilienberatung GmbH. Any gains or losses from a change in fair value are recognized in the income statement.

The measurement of the investment properties led to a valuation gain during the 2021 fiscal year of € 7,393.8 million (2020: € 3,719.8 million; see explanatory information in chapter [D28] Investment Properties). This includes € -12.1 million (2020: € -1.8 million) for the measurement of right-of-use assets (IFRS 16).

The figure also includes the valuation result from buildings under construction (new construction/development to hold) that were completed during the reporting period and were moved to the Rental portfolio. A fair value measurement is performed for the first time when the properties are completed. This resulted in a valuation effect of € 83.9 million in the 2021 fiscal year (2020: € 62.0 million).

The valuation result for 2021 is mainly due, in addition to the investment activity and strong development of Vonovia's operating business, to the dynamic market conditions for residential properties at the moment. These are reflected both in rental price developments and, in particular, also in an increase in real estate purchase prices triggered, among other things, by yield compression on the demand side.

14 Capitalized Internal Expenses

Capitalized internal expenses in the fiscal year amount to € 662.6 million (2020: € 659.4 million) and mainly relate to the expenses of the Group's own craftsmen's organization contained in the capitalized modernization costs as well as the management costs for major modernization projects.

15 Cost of Materials

in € million	2020	2021
Expenses for ancillary costs	780.5	898.1
Expenses for maintenance and modernization	586.4	635.9
Other cost of purchased goods and services	126.5	137.1
	1,493.4	**1,671.1**

16 Personnel Expenses

in € million	2020	2021
Wages and salaries	488.0	558.3
Social security, pensions and other employee benefits	106.9	124.0
	594.9	**682.3**

The personnel expenses include expenses for severance payments in the amount of € 17.8 million (2020: € 3.6 million), allocations to the provisions for pre-retirement part-time work arrangements in the amount of € 0.0 million (2020: € 0.4 million) and expenses for the long-term incentive plan (LTIP) at € 6.2 million (2020: € 17.5 million) (see chapter [E39] Provisions).

In the fiscal year under review, employers' contributions to statutory pension insurance amounted to € 49.2 million (2020: € 41.4 million).

As of December 31, 2021, Vonovia had 15,871 employees (Dec. 31, 2020: 10,622) with the annual average coming to 13,351 employees (2020: 10,572). Vonovia also employed 857 apprentices as of December 31, 2021 (Dec. 31, 2020: 510).

17 Other Operating Income

in € million	2020	2021
Compensation paid by insurance companies	54.1	65.3
Reversal of provisions	33.4	45.2
Compensation for damages and cost reimbursements	15.6	16.3
Reversal of impairment losses	4.3	5.4
Dunning and debt collection fees	5.9	5.3
Miscellaneous	49.7	139.4
	163.0	**276.9**

The increase in miscellaneous other operating income results from the value adjustment of the Deutsche Wohnen shares purchased prior to September 30, 2021 in the amount of € 87.5 million (2020: € 0.0 million).

18 Other Operating Expenses

in € million	2020	2021
Consultants' and auditors' fees	47.6	136.8
Vehicle and traveling costs	30.5	30.2
Communication costs and work equipment	24.4	26.8
Advertising costs	16.6	26.6
Additions to provisions	21.5	20.0
Administrative services	16.9	17.8
Rents, leases and ground rents	17.7	17.7
Sales incidentals	1.4	10.9
Insured losses	12.1	9.8
Non-capitalizable expenses from real estate development	5.2	8.7
Costs of sale associated with real estate inventories	4.1	7.3
Impairment losses	4.3	2.9
Dunning and debt collection fees	3.3	2.6
Legal and notary costs	2.6	2.2
Miscellaneous	70.6	68.6
	278.8	**388.9**

The increase in consultants' and auditors' fees results from expenses related to the acquisition of the Deutsche Wohnen Group.

19 Interest Income

in € million	2020	2021
Income from non-current securities and non-current loans	1.9	13.1
Other interest and similar income	20.0	8.4
	21.9	**21.5**

The increase in income from other non-current securities and non-current loans mainly arises from first-time inclusion of Deutsche Wohnen in Vonovia's consolidated financial statements and relates to income from loans to the QUARTERBACK Immobilien Group. In the previous year, other interest and similar income included income from a bond issue above par in the amount of € 11.9 million.

20 Interest Expenses

The interest expenses mainly relate to interest expense on financial liabilities measured at amortized cost.

in € million	2020	2021
Interest expense from non-derivative financial liabilities	374.0	409.5
Swaps (current interest expense for the period)	16.8	20.6
Effects from the valuation of non-derivative financial instruments	-48.6	-43.3
Effects from the valuation of swaps	42.4	-20.4
Prepayment penalties and commitment interest	6.2	22.7
Interest accretion to provisions	6.2	10.2
Interest from leases	16.1	15.8
Other financial expenses	-1.7	-3.5
	411.4	**411.6**

The prepayment penalties include the fees for the unscheduled repayment of loans during the fixed interest period; in the reporting year, this applied in particular to the sale of unencumbered portfolios to the State of Berlin (Berlin Deal).

A reconciliation of net interest to net interest to be classified in accordance with IFRS 9 is shown in the following table:

in € million	2020	2021
Interest income	21.9	21.5
Interest expense	-411.4	-411.6
Net interest	**-389.5**	**-390.1**
Less:		
Net interest from provisions for pensions in acc. with IAS 19	5.6	4.5
Net interest from other provisions in acc. with IAS 37	0.6	5.3
Net interest from leases	16.1	15.8
Net interest to be classified	**-367.2**	**-364.5**

The net interest classified pursuant to IFRS 9 is as follows:

in € million	2020	2021
Financial assets measured at (amortized) cost	21.8	21.1
Derivatives measured at FV through P&L	-59.2	-0.2
Financial liabilities measured at (amortized) cost	-329.8	-385.4
Classification of net interest	**-367.2**	**-364.5**

21 Other Financial Result

in € million	2020	2021
Result from currency translation	4.8	-
Income from other investments	13.4	27.7
Transaction costs	-18.9	-119.2
Purchase price liabilities from put options/rights to reimbursement	-31.4	-40.6
Miscellaneous other financial result	-0.5	-5.0
	-32.6	**-137.1**

The currency effects relate primarily to the financial relationships with Swedish subsidiaries.

The income from investments includes financial income resulting from the collection of profits from the investment in AVW GmbH & Co. KG, Hamburg, in the amount of € 10.5 million (2020: € 9.3 million) for the previous fiscal year in each case.

It also comprises financial income from investments in other residential real estate companies in the amount of € 15.7 million (2020: € 2.4 million).

The transaction costs mainly relate to expenses in connection with the voluntary public takeover offers to the shareholders of Deutsche Wohnen SE, Berlin.

22 Income Taxes

Accounting Policies

Income taxes for the current and prior fiscal years are recognized as current income tax liabilities to the extent that they have not yet been paid.

Deferred tax assets and liabilities are recognized using the liability method under the temporary concept, providing for all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. Deferred tax assets are only recognized for temporary differences and on loss carryforwards to the extent that there are deferred tax liabilities that can be netted against them – regarding deferred tax assets on loss carryforwards taking the minimum taxation into account – or, based on the predictable profits in the foreseeable future, it can be verified that they will be realized.

Deferred tax assets and liabilities are not recognized where the temporary difference arises from initial recognition of goodwill in connection with a business combination or the initial recognition (other than a business combination) of other assets and liabilities in a transaction that neither affects taxable income nor net income.

The carrying amount of a deferred tax asset is reviewed at each reporting date. If necessary, the carrying amount of the deferred tax asset is reduced to the extent that it is no longer offset by deferred tax liabilities that can be netted against it or that it is no longer probable that sufficient taxable profit will be available in the future.

Deferred taxes are measured at the tax rates that apply, or are expected to apply, to the period when the tax asset is realized or the liability is settled based on the current legislation in the countries in question. As in 2020, the combined tax rate of corporate income tax and trade tax of 33.1% was used to calculate domestic deferred taxes for 2021. The corporate income tax rate for the companies based in Austria remains unchanged at 25.0%, while the rate for companies based in Sweden is 20.6%.

Deferred tax assets and liabilities are netted against each other only if Vonovia has a legally enforceable right to set off the recognized amounts, when the same tax authority is involved and when the realization period is the same. In accordance with the regulations of IAS 12 "Income Taxes," deferred tax assets and liabilities are not discounted.

in € million	2020	2021
Current income tax	57.7	102.1
Prior-year current income tax	-14.6	19.2
Deferred tax – temporary differences	1,607.5	2,523.6
Deferred tax – unutilized loss carryforwards	23.8	6.6
	1,674.4	**2,651.5**

The current tax expense is determined on the basis of the taxable income for the fiscal year. For the 2021 fiscal year, the combined tax rate of corporate income tax and solidarity surcharge for domestic companies is 15.8% (2020: 15.8%). Including trade tax at a rate of about 17.3% (2020: 17.3%), the combined domestic tax rate in 2021 is 33.1% (2020: 33.1%). The corporate income tax rate for the companies based in Austria is 25.0% (2020: 25.0%) while the rate for companies based in Sweden is 20.6% (2020: 21.4%). The income generated by Vonovia Finance B.V. is subject to Dutch tax law; current taxes of € 2.8 million were incurred there (2020: € 2.8 million). The other companies that hold properties and are based in the Netherlands have limited corporation tax liability in Germany. These companies, together with the other foreign companies, pay tax that is of a negligible amount from the Group's perspective in the countries in which they are domiciled.

For deductible temporary differences (excl. loss carryforwards) in the amount of € 44.4 million (Dec. 31, 2020: € 20.6 million), no deferred corporate income taxes or deferred trade taxes were recognized because they are not likely to be used in the future.

As of December 31, 2021, there were domestic corporate income tax loss carryforwards amounting to € 4,756.3 million (Dec. 31, 2020: € 3,961.3 million) as well as trade tax loss carryforwards amounting to € 2,992.0 million (Dec. 31, 2020: € 2,171.5 million), for which deferred tax assets have been recognized to the extent that their realization is sufficiently probable. As of December 31, 2021, there were corporate income tax loss carryforwards abroad amounting to € 536.0 million (Dec. 31, 2020: € 676.2 million) as well as trade tax loss carryforwards amounting to € 17.5 million (2020: € 16.4 million), for which deferred tax assets have also been recognized to the extent that their realization is sufficiently probable. The increase in tax loss carryforwards resulted from current tax losses at individual companies.

No deferred taxes were recognized in the balance sheet for domestic and foreign corporate income tax loss carryforwards amounting to € 1,339.4 million (Dec. 31, 2020: € 870.2 million). Of this amount, € 9.0 million (2020: € 25.5 million) arose for the first time in the 2021 fiscal year.

Under current tax law, these loss carryforwards are not subject to restrictions either with regard to time or the amount of the loss carryforward. The fact that no deferred tax assets were recognized on the new corporate income tax loss carryforwards results in a tax effect of € 1.5 million (2020: € 4.3 million). In addition, there are further trade tax loss carryforwards subject to no restrictions with regard to how they can be carried forward in the amount of € 606.0 million in total (Dec. 31, 2020: € 562.1 million). These did not give rise to any deferred tax assets. Of this amount, € 9.8 million arose for the first time in the 2021 fiscal year (2020: € 11.5 million) and the resulting tax effect is € 1.5 million (2020: € 1.8 million).

The remeasurement of deferred tax assets on temporary differences and loss carryforwards from the previous year led to tax expense amounting to € 82.5 million in the 2021 fiscal year (2020: € 6.3 million). This increase is mainly due to the remeasurement of the tax loss carryforward of two companies that were included in a tax group for income tax purposes.

Deferred taxes on interest carryforwards are recognized if the interest carryforward is likely to be able to be used in the future. Due to the Group's capital structure, no interest carryforwards are likely to be able to be used in the future. As a result, no deferred tax assets have been recognized on interest carryforwards in the amount of € 1,325.6 million (Dec. 31, 2020: € 1,059.4 million). Of this amount, € 259.3 million (2020: € 171.6 million) arose for the first time in the 2021 fiscal year. The fact that no deferred tax assets were recognized on the new interest carryforward generated a tax effect of € 83.3 million in Germany (2020: € 55.5 million). Sweden has had a regulation similar to the German interest threshold since 2019. As a result, no deferred tax assets have been recognized on interest carryforwards in the amount of € 119.3 million in Sweden either (2020: € 102.0 million). Of this amount, € 22.1 million (2020: € 57.8 million) arose for the first time in the 2021 fiscal year. The fact that no deferred taxes were recognized generated a tax effect of € 4.5 million in Sweden (2020: € 11.9 million).

A reconciliation between disclosed effective income taxes and expected tax expense, which is the product of the accounting profit for the period multiplied by the average tax rate applicable in Germany, is shown in the table below.

in € million	2020	2021
Earnings before tax	5,014.4	5,482.4
Income tax rate in %	33.1	33.1
Expected tax expense	1,659.8	1,814.7
Trade tax effects	-57.4	-215.6
Non-deductible operating expenses	58.8	70.2
Tax-free income	-35.4	-59.5
Change in the deferred tax assets on loss carryforwards and temporary differences	6.3	82.5
New loss and interest carryforwards not recognized	73.5	90.8
Prior-year income tax and taxes on guaranteed dividends	19.8	-78.5
Tax effect from goodwill impairment	–	1,120.1
Differing foreign tax rates	-40.7	-186.3
Other tax effects (net)	-10.3	13.1
Effective income taxes	**1,674.4**	**2,651.5**
Effective income tax rate in %	**33.4**	**48.4**

The deferred taxes refer to temporary differences in balance sheet items and unutilized loss carryforwards as follows:

in € million	Dec. 31, 2020	Dec. 31, 2021
Intangible assets	–	6.8
Investment properties	12.1	37.0
Property, plant and equipment	37.3	41.3
Financial assets	3.2	6.8
Other assets	158.5	271.0
Provisions for pensions	104.4	118.9
Other provisions	22.5	44.5
Liabilities	120.1	293.3
Loss carryforwards	905.9	1,119.5
Deferred tax assets	**1,364.0**	**1,939.1**

in € million	Dec. 31, 2020	Dec. 31, 2021
Intangible assets	20.2	61.1
Investment properties	11,959.8	20,090.2
Assets held for sale	38.7	71.6
Property, plant and equipment	9.2	49.3
Financial assets	26.4	13.2
Other assets	153.5	229.5
Provisions for pensions	–	0.5
Other provisions	78.5	79.0
Liabilities	20.9	18.8
Deferred tax liabilities	**12,307.2**	**20,613.2**
Excess deferred tax liabilities	**10,943.2**	**18,674.1**

Deferred tax assets and liabilities are netted against each other when the same company and the same tax authority are involved and the realization period is the same. As a result, the following deferred tax assets and liabilities are stated:

in € million	Dec. 31, 2020	Dec. 31, 2021
Deferred tax assets	16.4	19.8
Deferred tax liabilities	10,959.6	18,693.9
Excess deferred tax liabilities	**10,943.2**	**18,674.1**

The increase in deferred tax liabilities can be attributed primarily to investment properties.

The change in deferred taxes is as follows:

in € million	2020	2021
Excess deferred tax liabilities as of Jan. 1	9,228.9	10,943.2
Deferred tax expense in income statement	1,631.3	2,530.2
Deferred tax due to first-time consolidation and deconsolidation	43.4	5,411.7
Change in deferred taxes recognized in other comprehensive income due to equity instruments measured at fair value	0.2	0.4
Change in deferred taxes recognized in other comprehensive income on actuarial gains and losses from pensions and similar obligations	-5.8	12.7
Change in deferred taxes recognized in other comprehensive income on derivative financial instruments	4.7	5.1
Deferred taxes recognized in equity on accrued capital procurement costs resulting from the issuance of a hybrid bond with an indefinite term	-0.3	0.5
Deferred taxes recognized in the capital reserve on capital procurement costs of capital increases	-2.9	-44.1
Currency translation differences	48.5	-28.5
Disposal group share deal Berlin		-157.5
Other	-4.8	0.4
Excess deferred tax liabilities as of Dec. 31	**10,943.2**	**18,674.1**

No deferred tax liabilities are recognized for profits accumulated at subsidiaries of € 55,312.7 million (Dec. 31, 2020: € 31,244.0 million), as these profits are to remain invested for an indefinite period or are not subject to taxation. In the event of distribution or disposal of the subsidiaries, 5% of the distributed amounts or the capital gains would be subject to German taxation so that there would normally be an additional tax obligation.

Section (C): Other Disclosures on the Results of Operations

23 Segment Reporting

Vonovia is an integrated residential real estate company with operations across Europe. The company's strategy is focused on sustainably increasing the value of the company. This is achieved by managing the company's own portfolio sustainably and with a view to enhancing its value, investing in existing residential properties in order to create value, building new residential buildings and selling individual apartments as well as by engaging in active portfolio management and offering property-related services. For the purposes of managing the company, we make a distinction between five segments **Rental, Value-add, Recurring Sales, Development** and **Deutsche Wohnen**. We also report the **Other** segment, which is not relevant from a corporate management perspective, in our segment reporting. This includes the sale, only as and when the right opportunities present themselves, of entire buildings or land (Non-core Disposals) that are likely to have below-average development potential in terms of rent growth in the medium term and are located in areas that can be described as peripheral compared with Vonovia's overall portfolio and in view of future acquisitions. Ancillary costs are also reported under "Other."

The **Rental** segment combines all of the business activities that are aimed at the value-enhancing management of our own residential real estate. It includes our property management activities in Germany, Austria and Sweden. The consolidation of our property management activities in Germany, Austria and Sweden to form one single reporting segment is based on the similarities that we see in the property management business in these three countries. This applies to the way in which services are provided and the individual service processes that form part of the property management business as well as to the customers in the residential rental market and the type of customer acquisition used. Overall, the residential rental market in all three countries is characterized by a shortage of housing and is regulated by statutory requirements, resulting in return expectations that are similar in the long term.

The **Value-add** segment bundles all of the housing-related services that we have expanded our core rental business to include. These services include both the maintenance and modernization work on our residential properties and services that are closely related to the rental business. We allocate the activities relating to the craftsmen's and residential environment organization, the condominium administration business, the cable TV business, metering services, energy supplies and our insurance services to the Value-add segment.

The **Recurring Sales** segment includes the regular and sustainable disposals of individual condominiums and single-family houses from our portfolio. The consolidation of our sales activities in Germany and Austria to form one single reporting segment is based on the similarities that we see in the property management business in these two countries. It does not include the sale of entire buildings or land (Non-Core Disposals). These properties are only sold as and when the right opportunities present themselves, meaning that the sales do not form part of the Recurring Sales segment. We report these opportunistic sales in the **Other** column of the segment report.

The **Development** segment combines cross-country development activities and includes the project development of new residential buildings. The consolidation of our development activities in Germany, Austria and Sweden to form one single reporting segment is based on the similarities that we see in the business in these three countries. The business covers the value chain starting with the purchase of land without any development plan/dedicated purpose and ending with the completion of new buildings and new construction measures on our own properties. These properties are either incorporated into our own portfolio or sold to third parties. The Development segment deals with projects in selected attractive locations. Project development work is currently focusing on Berlin, Hamburg and Vienna. The adjusted EBITDA of the Development segment includes the fair value step-up for properties that were completed in the reporting period and have been added to our own portfolio.

The **Deutsche Wohnen** segment encompasses all activities of the Deutsche Wohnen Group (excluding effects from non-core sales; these are assigned to the "Other" column of the segment report). In addition to residential property management as its core business, the company's business activities include nursing and assisted living, disposals/acquisitions and new construction/development as core business areas. The Deutsche Wohnen Group uses these business areas to offer property-related services, such as energy-efficiency property management, the multimedia business and technical facility management, via subsidiaries or strategic shareholdings.

Due to the short time between the acquisition and the preparation period and the fact that activities within the Deutsche Wohnen Group have not yet been subdivided, the activities described are presented collectively in the financial statements as of December 31, 2021 – matching the consolidated presentation within the management report. Presentation in individual segments will take place once the activities have been subdivided and this subdivision has been included in management reporting.

Planning and controlling systems ensure that resources are efficiently allocated and their successful use is monitored on a regular basis. Reporting to the chief decision-makers and thus the assessment of business performance as well as the allocation of resources are performed on the basis of this segmentation. Asset and liability items are not reported separately by segment. Internal reporting is based on the IFRS reporting standards in general.

The Management Board as chief decision-makers of Vonovia monitor the contribution made by the segments to the company's performance on the basis of the segment revenue as well as the adjusted EBITDA.

The following table shows the segment information for the reporting period:

in € million	Rental	Value-add	Recurring Sales	Development	Deutsche Wohnen	Segments total	Other*	Consolidation*	Group
Jan. 1–Dec. 31, 2021									
Segment revenue	**2,361.6**	**1,165.8**	**477.0**	**867.8**	**307.7**	**5,179.9**	**1,538.2**	**-1,452.4**	**5,265.7**
thereof external revenue	2,361.6	58.6	477.0	505.5	302.2	3,704.9	1,538.2	22.6	5,265.7
thereof internal revenue		1,107.2		362.3	5.5	1,475.0	–	-1,475.0	
Carrying amount of assets sold			-410.1		-0.2	-410.3	-634.1		
Revaluation from disposal of assets held for sale			66.4			66.4	14.9		
Expenses for maintenance	-332.7				-41.7	-374.4			
Cost of development to sell				-367.2	-14.5	-381.7			
Cost of development to hold**				-277.4		-277.4		277.4	
Operating expenses***	-380.9	-1,017.0	-19.3	-35.5	-80.5	-1,533.2	-10.4	1,036.3	
Ancillary costs							-898.1		
Adjusted EBITDA Total	**1,648.0**	**148.8**	**114.0**	**187.7**	**170.8**	**2,269.3**	**10.5**	**-138.7**	**2,141.1**
Non-recurring items									-37.1
Period adjustments from assets held for sale									6.0
Income from investments in other real estate companies									15.7
Net income from fair value adjustments of investment properties									7,393.8
Depreciation and amortization									-3,482.2
Income from other investments									-27.7
Interest income									21.5
Interest expenses									-411.6
Other financial result									-137.1
EBT									**5,482.4**
Income taxes									**-2,651.5**
Profit for the period									**2,830.9**

* The revenue for the Rental, Value-add, Recurring Sales, Development and Deutsche Wohnen segments constitutes income that is regularly reported to the Management Board as the chief operating decision-maker and that reflects Vonovia's sustainable business. The revenue/costs in the "Other" and "Consolidation" columns are not part of the Management Board's segment management.

** Excluding capitalized interest on borrowed capital of € 0.9 million (12M 2020: € 0.8 million).

*** Operating costs in the "Other" column incl. € 0.8 million equity result for Deutsche Wohnen.

in € million	Rental	Value-add	Recurring Sales	Develop-ment	Segments total	Other*	Consolida-tion*	Group
Jan. 1–Dec. 31, 2020								
Segment revenue	2,285.9	1,104.6	382.4	597.1	4,370.0	984.8	-1,323.7	4,031.1
thereof external revenue	2,285.9	51.6	382.4	298.9	3,018.8	984.8	27.5	4,031.1
thereof internal revenue		1,053.0		298.2	1,351.2	–	-1,351.2	–
Carrying amount of assets sold			-308.9		-308.9	-173.5		
Revaluation from disposal of assets held for sale			34.9		34.9	27.9		
Expenses for maintenance	-321.1				-321.1			
Cost of development to sell				-235.9	-235.9			
Cost of development to hold				-235.4	-235.4		235.4	
Operating expenses	-410.6	-952.3	-16.0	-14.9	-1,393.8	-6.0	992.0	
Ancillary costs						-780.5		
Adjusted EBITDA Total	1,554.2	152.3	92.4	110.9	1,909.8	52.7	-96.3	1,866.2
Non-recurring items								-61.5
Period adjustments from assets held for sale								15.3
Income from investments in other real estate companies								2.4
Net income from fair value adjustments of investment properties								3,719.8
Depreciation and amortization								-92.3
Income from other investments								-13.4
Interest income								21.9
Interest expenses								-411.4
Other financial result								-32.6
EBT								5,014.4
Income taxes								-1,674.4
Profit for the period								**3,340.0**

* The revenue for the Rental, Value-add, Recurring Sales, Development and Deutsche Wohnen segments constitutes income that is regularly reported to the Management Board as the chief operating decision-maker and that reflects Vonovia's sustainable business. The revenue/costs in the "Other" and "Consolidation" columns are not part of the Management Board's segment management.

To show the development of operating performance and to ensure comparability with previous periods, we calculate adjusted EBITDA for each of our segments: Rental, Value-add, Recurring Sales, Development and Deutsche Wohnen. The sum of these key figures produces the Group's Adjusted EBITDA Total. The adjustments made include items that are not related to the period, items that recur irregularly and items that are atypical for business operation. The non-recurring items include the expenses for pre-retirement part-time work arrangements and severance payments, the development of new fields of business and business processes, acquisition projects including integration costs, research and development, and expenses for refinancing and equity increases (where not treated as capital procurement costs).

The non-recurring influences eliminated **in the Adjusted EBITDA Total** are broken down as follows. In fiscal year 2021, costs for transactions were offset by income resulting from the valuation of shares in Deutsche Wohnen amounting to € 87.5 million.

in € million	2020	2021
Transactions*	24.0	14.1
Personnel matters	27.5	1.6
Business model optimization	13.9	24.2
Research & development	–	3.6
Refinancing and equity measures	-3.9	-6.4
Total non-recurring items	**61.5**	**37.1**

* Including one-time expenses in connection with acquisitions, such as HR measures relating to the integration process and other follow-up costs.

The breakdown of non-Group revenue from contracts with customers (pursuant to IFRS 15.114f.) and its allocation to the segments referred to above is as follows:

in € million	Rental	Value-add	Recurring Sales	Development	Deutsche Wohnen	Other	Consolida-tion	Total
Jan. 1–Dec. 31, 2021								
Revenue from ancillary costs (IFRS 15)	–	–	–	–	–	749.5	–	749.5
Income from the disposal of investment properties	–	–	213.5	–	0.2	25.5	–	239.2
Income from the disposal of real estate inventories (Development)	–	–	–	503.7	15.9	–	–	519.6
Other revenue from contracts with customers	–	57.2	–	–	79.0	–	22.6	158.8
Revenue from contracts with customers	**–**	**57.2**	**213.5**	**503.7**	**95.1**	**775.0**	**22.6**	**1,667.1**
thereof period-related	–	–	–	418.2		1.9	–	420.1
thereof time-related	–	57.2	213.5	85.5	95.1	773.1	22.6	1,247.0
Revenue from rental income (IFRS 16)	2,361.6	1.4	–	1.8	207.1	–	–	2,571.9
Revenue from ancillary costs (IFRS 16)*	–	–	–	–	–	143.7	–	143.7
Income from sale of assets held for sale (IFRS 5)	–	–	263.5	–	–	619.5	–	883.0
Other revenue	**2,361.6**	**1.4**	**263.5**	**1.8**	**207.1**	**763.2**	**–**	**3,598.6**
Revenues	**2,361.6**	**58.6**	**477.0**	**505.5**	**302.2**	**1,538.2**	**22.6**	**5,265.7**
Jan. 1–Dec. 31, 2020								
Revenue from ancillary costs (IFRS 15)	–	–	–	–	–	645.7	–	645.7
Income from the disposal of investment properties	–	–	234.9	–	–	86.4	–	321.3
Income from the disposal of real estate inventories (Development)	–	–	–	297.7	–	–	–	297.7
Other revenue from contracts with customers	–	50.2	–	–	–	–	27.5	77.7
Revenue from contracts with customers	**–**	**50.2**	**234.9**	**297.7**	**–**	**732.1**	**27.5**	**1,342.4**
thereof period-related	–	–	–	194.4	–	–	–	194.4
thereof time-related	–	50.2	234.9	103.3	–	732.1	27.5	1,148.0
Revenue from rental income (IFRS 16)	2,285.9	1.4	–	1.2	–	–	–	2,288.5
Revenue from ancillary costs (IFRS 16)*	–	–	–	–	–	135.2	–	135.2
Income from sale of assets held for sale (IFRS 5)	–	–	147.5	–	–	117.5	–	265.0
Other revenue	**2,285.9**	**1.4**	**147.5**	**1.2**		**252.7**	**–**	**2,688.7**
Revenues	**2,285.9**	**51.6**	**382.4**	**298.9**	**–**	**984.8**	**27.5**	**4,031.1**

* Includes land tax and buildings insurance.

External income and non-current assets, excluding financial instruments, deferred tax assets, post-employment benefits and rights under insurance contracts are distributed among Vonovia's country of origin and other countries as follows. The revenue and the assets are allocated based on the registered office of the unit providing the service.

in € million	External income		Assets	
	Jan. 1– Dec. 31, 2020	Jan. 1– Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2021
Germany	3,299.0	4,347.2	49,902.9	87,506.6
Austria	393.4	555.1	3,189.9	3,382.7
Sweden	338.7	362.3	7,294.5	7,588.9
France	0.0	0.0	110.7	109.7
Other countries	0.0	1.2	117.5	387.9
Total	**4,031.1**	**5,265.8**	**60,615.5**	**98,975.8**

24 Earnings per Share

Accounting Policies

The basic **earnings per share** are calculated by dividing the profit for the period attributable to the shareholders by the weighted average number of ordinary shares in circulation during the reporting period. The diluted earnings per share are obtained by adjusting the profit for the period and the number of outstanding shares on the basis of the assumption that convertible instruments will be converted, options or warrants will be exercised or ordinary shares will be issued under certain conditions. Potential ordinary shares will only be included in the calculation if the conversion into ordinary shares would reduce the earnings per share.

	2020	2021
Profit for the period attributable to Vonovia shareholders (in € million)	3,228.5	2,641.9
Weighted average number of shares*	587,143,419	626,466,541
Earnings per share (basic and diluted) in €	**5.50**	**4.22**

* The number of average outstanding shares was adjusted for all periods in order to take account of the effect of the bonus element for subscription rights issued in December 2021 as part of the capital increase.

The capital increase implemented in December 2021 also involved the issue of subscription rights for existing shareholders. Since the subscription price for the new shares was lower than the market price of the existing shares, the capital increase includes a bonus element. According to IAS 33, the bonus element is the result of an implicit change in the number of shares outstanding for all periods prior to the capital increase without a fully proportionate change in resources. As a consequence, the average number of shares outstanding has been adjusted retroactively for prior-year disclosures accordingly.

At the end of the reporting period, no diluting financial instruments were in circulation. The basic earnings per share correspond to the diluted earnings per share.

25 Management Board's Proposal for the Appropriation of Profit

The Management Board and the Supervisory Board propose to the Annual General Meeting that, of the profit of Vonovia SE for the 2021 fiscal year of € 1,325,000,000.00, an amount of € 1,289,151,665.74 on the 776,597,389 shares of the share capital as of December 31, 2021 (corresponding to € 1.66 per share) be paid as a dividend to the shareholders, and that the remaining amount of € 35,848,334.26 be carried forward to the new account or be used for other dividends on shares carrying dividend rights at the time of the Annual General Meeting and which go beyond those as of December 31, 2021.

As in the 2018, 2019 and 2020 fiscal years, the dividend for the 2021 fiscal year, payable after the Annual General Meeting in April 2022, will again include the option of a non-cash dividend in shares, to the extent that the Management Board and the Supervisory Board consider this to be in the interests of the company and its shareholders.

Section (D): Assets

26 Intangible Assets

in € million	Concessions, industrial property rights, license and similar rights	Self-developed software	Customer relationships and non-competition clause	Trademark rights	Goodwill	Total
Cost						
As of Jan. 1, 2021	107.7	7.1	13.8	66.6	4,616.8	4,812.0
Additions due to business combinations	26.2	0.4	45.6	86.0	4,666.3	4,824.5
Additions	11.9	1.1	–	–	–	13.0
Disposals	-3.2	-0.4	-1.9	–	–	-5.5
Changes in value from currency translation	–	–	–	–	-19.0	-19.0
Transfers	1.0	-0.1	–	–	–	0.9
As of Dec. 31, 2021	143.6	8.1	57.5	152.6	9,264.1	9,625.9
Accumulated amortization						–
As of Jan. 1, 2021	66.3	4.7	7.2	–	3,122.1	3,200.3
Additions due to business combinations	19.6	–	8.5	–	–	28.1
Amortization in reporting year	15.4	1.3	4.2	–	–	20.9
Impairment	–	–	–	–	3,384.1	3,384.1
Disposals	-2.9	–	-1.9	–	–	-4.8
Changes in value from currency translation	–	–	–	–	-8.6	-8.6
Transfers	0.6	–	–	–	–	0.6
As of Dec. 31, 2021	99.0	6.0	18.0	–	6,497.6	6,620.6
Carrying amounts						
As of Dec. 31, 2021	44.6	2.1	39.5	152.6	2,766.5	3,005.3
Cost						
As of Jan. 1, 2020	85.7	5.1	10.4	66.6	4,514.9	4,682.7
Additions due to business combinations	3.5	0.2	3.4	–	66.5	73.6
Additions	24.5	1.8	–	–	–	26.3
Disposals	-4.8	–	–	–	–	-4.8
Changes in value from currency translation	–	–	–	–	35.4	35.4
Transfers	-1.2	–	–	–	–	-1.2
As of Dec. 31, 2020	107.7	7.1	13.8	66.6	4,616.8	4,812.0
Accumulated amortization						
As of Jan. 1, 2020	49.7	3.1	3.7		3,122.0	3,178.5
Additions	21.4	1.6	3.5	–	–	26.5
Disposals	-4.8	–	–	–	–	-4.8
Changes in value from currency translation	–	–	–	–	0.1	0.1
As of Dec. 31, 2020	66.3	4.7	7.2	–	3,122.1	3,200.3
Carrying amounts						
As of Dec. 31, 2020	41.4	2.4	6.6	66.6	1,494.7	1,611.7

Accounting Policies

Acquired other intangible assets are stated at amortized cost. **Internally generated other intangible assets** are stated at amortized cost provided that the requirements of IAS 38 for the capitalization of internally generated intangible assets are met. Acquired trademark rights that are identified have an indefinite useful life and are subject to regular impairment testing. All of Vonovia's miscellaneous other intangible assets have definite useful lives and are amortized on a straight-line basis over their estimated useful lives. Software and licenses are amortized on the basis of a useful life of three years.

In accordance with IAS 36 "Impairment of Assets," other intangible assets are tested for impairment whenever there is an indication of an impairment. Impairment testing is performed at least once a year. An impairment loss is recognized when an asset's recoverable amount is less than its carrying amount. If the recoverable amount cannot be determined for the individual asset, the impairment test is conducted on the cash-generating unit (CGU) to which the asset belongs. Impairment losses are recognized as expenses in the income statement affecting net income.

An impairment loss recognized for prior periods is reversed if there has been a change in the estimates used to determine the asset's (or the CGU's) recoverable amount since the last impairment loss was recognized. The carrying amount of the asset (or the CGU) is increased to the newly estimated recoverable amount. The carrying amount is limited to the amount that would have been determined if no impairment loss had been recognized in prior years for the asset (or the CGU).

Customer Relationships and Similar Values

The brand names "Pflegen & Wohnen Hamburg" and "Katharinenhof" were identified as material assets with indefinite useful lives in the context of the purchase price allocation for the Deutsche Wohnen Group and were recognized at a total value of € 86.0 million. In addition, customer relationships for these activities were identified and recognized as assets with definite useful lives of between five and six years in the amount of € 37.1 million. The "BUWOG" brand name, which was acquired in the previous year, is still recognized with a value of € 66.6 million for the development business. There were no signs of impairment losses for any of the brand names or customer relationships.

Goodwill

Accounting Policies

Goodwill results from a business combination and is defined as the amount by which the total consideration for shares in a company or group of companies exceed the pro rata net assets acquired. The net assets are the total of the identifiable assets acquired that are valued at fair value in accordance with IFRS 3 as well as the assumed liabilities and contingent liabilities.

Goodwill is not subject to amortization, but rather is subjected to impairment testing on an annual basis. It is also tested for impairment whenever events or circumstances indicating an impairment arise.

The impairment testing of goodwill is performed at the level of cash generating units (CGUs) or a group of CGUs. A CGU is the smallest group of assets which generates cash inflows that are largely independent of the cash inflows generated by other assets or other groups of assets. Goodwill purchased as part of a business combination is allocated to the CGUs or groups of CGUs that are expected to produce benefits resulting from the synergy effects of the combination.

At Vonovia, each property meets the requirements for classification as a CGU as a general rule. As part of operational management, these properties are grouped first of all to form geographically structured business units and then to form regional business areas. Since the regional business areas are the lowest level within the company at which goodwill is monitored for internal management purposes, the impairment test is performed at business area level and, as a result, in accordance with IAS 36.80 for a group of CGUs. The acquired assets are allocated to the business areas based on the geographical location of the properties. A further group of CGUs for which goodwill is monitored for internal management purposes relates to the Value-add Business segment. The third group of CGUs, to which goodwill is allocated and for which goodwill is monitored for management purposes, relates to the Development segment. The acquisition of Deutsche Wohnen SE has resulted in the addition of a new CGU in the nursing and assisted living sector. Part of the goodwill resulting from the acquisition of Deutsche Wohnen SE has been provisionally allocated to this segment for the purposes of impairment testing.

The group of CGUs to which goodwill has been allocated are tested for impairment on a regular basis. This involves comparing the recoverable amount with the carrying amount of the group of CGUs. The recoverable amount of the group of CGUs is either its value in use or fair value less costs of sale, whichever is higher. When calculating the value in use, the estimated future cash flows are discounted to their cash value. Discount rates before tax are used that reflect the current market assessment of the interest rate effect and the specific risks associated with the business areas, the Value-add and Development segments, and the nursing and assisted living sector.

If goodwill has been allocated to a group of CGUs and its carrying amount exceeds the recoverable amount, the goodwill is to be written down in the amount of the difference in the first instance. Any need for impairment in excess of this amount is distributed among the other assets in the group of CGUs in proportion to their carrying amount. The individual fair value less costs to sell, value in use or zero must not be undercut in this regard.

Impairment losses that have been realized as part of the valuation of goodwill are not reversed in the following years.

Groups of Cash-Generating Units

in € million	Rental segment North area	East area	West area	South area	Central area	Sweden Business Area	Value-add segment	Development segment	Nursing and assisted living sector	not allocated	Group
Goodwill as of Dec. 31, 2021	**73.7**	**0.0**	**84.0**	**0.0**	**0.0**	**885.9**	**278.5**	**138.2**	**0.0**	**34.4**	**1,494.7**
Additions due to business combinations*	588.3	1,462.0	754.9	571.1	22.7		1,232.1		35.2		4,666.3
Allocation	34.4									-34.4	0.0
Impairment	-391.5	-1,462.0	-84.0	-571.1		-875.5					-3,384.1
Currency translation differences						-10.4					-10.4
Goodwill as of Dec. 31, 2021	**304.9**	**0.0**	**754.9**	**0.0**	**22.7**	**0.0**	**1,510.6**	**138.2**	**35.2**	**0.0**	**2,766.5**
WACC before tax Dec. 31, 2021 in %	4.0	4.1	4.0	4.0	3.9	3.9	4.1	6.3	4.3	–	–
WACC before tax Dec. 31, 2020 in %	3.8	–	3.8	–	–	3.6	3.9	6.0	–	–	–
Sustainable rate of increase 2021 in %	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	–	–
Sustainable rate of increase 2020 in %	1.0	–	0.9	–	–	1.0	1.0	1.0	–	–	–

* Goodwill still not allocated, preliminary allocation for goodwill impairment test purposes.

Goodwill came to € 2,766.5 million as of December 31, 2021. This means that goodwill has risen by € 1,271.8 million compared with December 31, 2020. The change is due to additions of € 4,666.3 million resulting from the acquisition of Deutsche Wohnen SE, impairment losses of € 3,384.1 million and negative exchange rate effects of € 10.4 million.

Part of the impairment loss is the result of the ad hoc impairment test performed as of June 30, 2021. Within the meaning of IAS 36, the triggering event was the increase in the value of the real estate portfolio in the first half of the 2021 fiscal year amounting to € 3,698.6 million (thereof € 3,039.5 million in Germany and € 596.8 million in Sweden) in combination with the increased cost of capital of the Rental segment's business areas in Germany and the Sweden business area. Other than for these aforementioned business areas, no triggering events were identified for any other groups of cash-generating units in the second quarter.

The goodwill of the North (€ 108.1 million) and West (€ 84.0 million) business areas of € 192.1 million was impaired as a result of the impairment test as of June 30, 2021. There was no impairment of the Sweden business area.

In general, an increase in the value of the real estate portfolio increases the carrying amount of the CGU affected by the measurement, which can, in turn, lead to impairment losses being recognized on the goodwill allocated to the business areas.

The regular annual impairment test was performed in the fourth quarter. Other material increases in the value of the real estate portfolio in the second half of 2021 also triggered an ad hoc impairment test. For the purposes of this process, the new goodwill of € 4,666.3 million resulting from the acquisition of Deutsche Wohnen was provisionally allocated to Vonovia's corresponding CGUs.

The allocation of goodwill to the business areas of the Rental segment, the Value-add segment and the the nursing and assisted living sector were performed based on the two indicators that reflect the synergy effects expected to be generated as a result of the business combination: "direct planned synergies" and "fair values."

All in all, the impairment tests in the fouth quarter resulted in a further goodwill impairment of € 3,192.0 million.

As part of the impairment test in accordance with IAS 36.19, first the value in use was calculated based on the Management Board-approved detailed plan with a planning period of five years. This was derived from the five-year plan at Group level approved by the Management Board and the Supervisory Board. The main parameters for calculating the value in use are the sustainable rate of increase, the average total cost of capital (WACC) and the expected cash flows. In the Development segment, another normalized planning year was added to the five-year plan to reflect a "steady state."

The growth rate for the CGUs of the Rental segment was limited to 1% for the CGU Germany. With regard to the regional business areas of the Rental segment, the main drivers behind the results of the five-year plan are the increase in gross rental income by an average of 2.5% every year as well as the planned vacancy rate of 2.5% at the end of the detailed planning period. The growth rate for the CGU Sweden was also set at 1%. The average gross rent increase within the five-year plan comes to 3.1%, based on an assumed vacancy rate of 2% at the end of the detailed planning period.

Developments in the Value-add segment are characterized primarily by the extension of existing business areas (craftsmen's organization, multimedia, management of residential property, smart metering, etc.). On the other hand, there is an increase in operating expenses, taking into account the rate of inflation. The development in these values is in line with past experiences of business model development.

The Development segment is characterized by the construction of new buildings for Vonovia's own portfolio and by the sale of properties to third parties. The main drivers of the results in the Development segment are the investment costs, the number of units sold and completed and the sales margin that can be generated.

The nursing and assisted living sector comprises the rental of senior citizens' and care facilities, as well as services for elderly people as part of the assisted living concept.

The cash flows from the last detailed planning year were derived to calculate the perpetual annuity.

A constant growth rate of 1.0% was assumed for the Value-add, Development and nursing and assisted living CGUs.

The weighted average cost of capital before tax is based on the risk-free interest rate calculated as a three-month average using the Svensson method, a market risk premium and a levered beta. The levered beta and the equity ratios used are determined on the basis of a peer comparison. In addition, a country-specific cost surcharge was also calculated for the Development segment. The main parameters are shown in the following table:

Parameters for WACC Calculation

	Rental segment				
	Germany	Sweden	Value-add segment	Development segment	Nursing and assisted living sector
Dec. 31, 2021					
Risk-free interest rate in %	0.08	0.08	0.08	0.08	0.08
Market risk premium in %	7.75	7.75	7.75	7.75	7.75
Levered beta	0.67	0.70	0.68	0.91	0.79
Country-specific premium in %	–	–	–	0.08	–
Dec. 31, 2020					
Risk-free interest rate in %	-0.20	-0.20	-0.20	-0.20	–
Market risk premium in %	7.75	7.75	7.75	7.75	–
Levered beta	0.65	0.65	0.65	0.84	–
Country-specific premium in %	–	–	–	0.12	–

The identified impairment as of December 31, 2021 relates to the North, East, South and Sweden business areas, with the goodwill allocated in each case being completely written off, except for the North business area.

The impairment loss was recognized in the consolidated income statement under depreciation and amortization. The value in use for the East area amounted to € 22.3 billion, with a value of € 9.2 billion for the North business area,

€ 11.3 billion for the South business area and € 6.4 billion for the Sweden business area.

An increase in the cost of capital would result in the following need for impairment:

	Rental segment					
	North area	West area	Central area	Value-add segment	Development segment	Nursing and assisted living sector
2021 goodwill in € million	304.9	754.9	22.7	1,510.6	138.2	35.2
Impairment starts with an increase of the WACC in percentage points	0.01	0.09	0.51	2.98	1.96	0.68
Full write-off in the event of an increase in the WACC in %	0.09	0.27	0.75	16.70	2.61	1.01
2020 goodwill in € million	73.7	84.0	–	278.5	138.2	–
Impairment starts with an increase of the WACC in percentage points	0.05	0.17	–	9.70	3.40	–
Full write-off in the event of an increase in the WACC in %	0.06	0.18	–	19.50	4.40	–

If the planned sustainable rate of increase were to decline by 0.25 percentage points, this would result in a full impairment loss of € 304.9 million being recognized against the goodwill remaining in the North business area. In the West area, an impairment loss of € 670.4 million would be recognized if the sustainable rate of increase were to decline by 0.25 percentage points. A 0.28 percentage point drop in the sustainable rate of increase in West would result in a complete impairment. The estimated recoverable amount for the West business area exceeds its carrying amount by € 0.5 billion.

In the Central business area as well as in the Value-add and Development segments and the nursing and assisted living sector, a 0.25 percentage point drop in the sustainable rate of increase would not result in any goodwill impairment.

In the previous year, if the planned sustainable rate of increase had declined by 0.25 percentage points, this would have resulted in a full impairment loss of € 73.7 million being recognized against the goodwill in the North business area. In the West area, a full impairment loss of € 84.0 million would have been recognized if the sustainable rate of increase had declined by 0.25 percentage points. The estimated recoverable amount for the North business area exceeded its carrying amount by € 184.8 million and that of the West business area by € 810.3 million.

In the Value-add and Development segments, a 0.25 percentage point drop in the sustainable rate of increase in the previous year would not have resulted in any goodwill impairment.

27 Property, Plant and Equipment

in € million	Owner-occupied properties	Technical equipment, plant and machinery	Other equipment, fixtures, furniture and office equipment	Total
Cost				
As of Jan. 1, 2021	201.3	65.2	284.2	550.7
Additions due to business combinations	64.6	9.8	251.7	326.1
Additions	3.1	13.9	105.6	122.6
Capitalized modernization costs	2.3	0.4	0.1	2.8
Disposals	-0.4	-5.5	-52.8	-58.7
Transfer from investment properties	12.6	–	–	12.6
Transfer to investment properties	-11.6	–	–	-11.6
Transfer to assets held for sale	-0.7	–	1.6	0.9
Other transfers	2.1	-0.2	0.7	2.6
Revaluation from currency effects	–	0.1	-0.2	-0.1
As of Dec. 31, 2021	273.3	83.7	590.9	947.9
Accumulated depreciation				
As of Jan. 1, 2021	10.0	37.0	116.1	163.1
Additions due to business combinations	7.6	–	97.7	105.3
Depreciation in reporting year	3.8	8.7	64.0	76.5
Impairment	0.5	–	–	0.5
Reversal of impairments	-0.4	–	–	-0.4
Disposals	-0.4	-5.4	-48.6	-54.4
Transfer to assets held for sale	-0.1	–	1.8	1.7
Other transfers	0.9	-0.8	1.4	1.5
Revaluation from currency effects	–	0.0	0.0	–
As of Dec. 31, 2021	21.9	39.5	232.4	293.8
Carrying amounts				
As of Dec. 31, 2021	251.4	44.2	358.5	654.1
Cost				
As of Jan. 1, 2020	193.5	51.7	228.9	474.1
Additions due to business combinations	2.2	–	0.6	2.8
Additions	12.0	12.9	68.9	93.8
Capitalized modernization costs	1.7	0.6	0.2	2.5
Disposals	-6.0	-0.1	-14.8	-20.9
Transfer from investment properties	10.7	–	–	10.7
Transfer to investment properties	-12.8	–	–	-12.8
Other transfers	–	0.1	0.1	0.2
Revaluation from currency effects	–	0.0	0.3	0.3
As of Dec. 31, 2020	201.3	65.2	284.2	550.7
Accumulated depreciation				
As of Jan. 1, 2020	9.9	26.9	78.7	115.5
Depreciation in reporting year	4.3	9.8	51.7	65.8
Impairment	0.5	–	–	0.5
Reversal of impairments	-0.6	–	–	-0.6
Disposals	-4.1	-0.2	-14.1	-18.4
Other transfers	–	0.4	-0.3	0.1
Revaluation from currency effects	–	0.1	0.1	0.2
As of Dec. 31, 2020	10.0	37.0	116.1	163.1
Carrying amounts				
As of Dec. 31, 2020	191.3	28.2	168.1	387.6

Accounting Policies

Items of property, plant and equipment are carried at amortized cost less accumulated depreciation and are depreciated over their respective estimated useful lives on a straight-line basis. In accordance with IAS 36 "Impairment of Assets," the need for impairment is tested whenever there are signs or changed circumstances indicative of an impairment.

Subsequent costs of replacing part of an item of property, plant and equipment are capitalized provided it is probable that future economic benefits associated with the item will flow to Vonovia and the cost can be estimated reliably.

The properties used by the company itself are subject to depreciation over a term of 50 years, with fixtures, furniture and office equipment subject to depreciation over a period of 3–13 years and technical equipment, plant and machinery over a period of 5–20 years.

As of December 31, 2021 the item "Owner-occupied properties" includes € 151.8 million (Dec. 31, 2020: € 107.9 million), which mainly enclose amortized production costs for the construction of the new Vonovia headquarters in Bochum, the BUWOG headquarters in Vienna, Austria, and the Deutsche Wohnen headquarters in Berlin.

Carrying amounts of owner-occupied properties amounting to € 79.9 million as of December 31, 2021 (Dec. 31, 2020: € 36.3 million) are encumbered with land charges in favor of various lenders.

28 Investment Properties

in € million	
As of Jan. 1, 2021	**58,071.8**
Additions due to business combinations	28,181.7
Additions	792.3
Capitalized modernization costs	1,124.2
Grants received	-2.7
Transfer to property, plant and equipment	-12.6
Transfer from property, plant and equipment	11.6
Transfer from real estate inventories	20.0
Transfer to real estate inventories	-27.4
Transfer to assets held for sale	-1,221.6
Other transfers	-0.5
Disposals	-167.7
Net income from fair value adjustments of investment properties	7,393.8
Revaluation of assets held for sale	87.4
Revaluation from currency effects	-150.2
As of Dec. 31, 2021*	**94,100.1**
As of Jan. 1, 2020	**52,736.6**
Additions due to business combinations	123.0
Additions	605.1
Capitalized modernization costs	1,114.5
Grants received	-19.6
Transfer to property, plant and equipment	-10.7
Transfer from property, plant and equipment	12.8
Transfer from down payments made	42.2
Transfer from real estate inventories	14.2
Transfer to real estate inventories	-88.2
Transfer from assets held for sale	2.4
Transfer to assets held for sale	-298.1
Disposals	-217.6
Net income from fair value adjustments of investment properties	3,719.8
Revaluation of assets held for sale	78.2
Revaluation from currency effects	257.2
As of Dec. 31, 2020*	**58,071.8**

* The values as of Dec. 31, 2021 include assets of € 1,270.2 million (Dec. 31, 2020: € 425.4 million) that are measured using the acquisition cost model, as their fair value cannot be measured reliably on a continuing basis.

Accounting Policies

When Vonovia acquires properties, whether through a business combination or as part of a separate transaction, the intended use determines whether such properties are classified as investment properties or as owner-occupied properties.

Investment properties are properties that are held for the purpose of earning rental income or for capital appreciation or both and are not owner-occupied or held for sale in the ordinary course of business. Investment properties include undeveloped land, land and land rights including buildings and land with hereditary building rights of third parties. Investment properties also include right-of-use assets from rented, developed and undeveloped land (hereditary building rights) and from rented residential and commercial properties (interim leasing) within the meaning of IFRS 16 that are classified as investment properties.

Investment properties are initially measured at cost. Related transaction costs, such as fees for legal services or real estate transfer taxes, are included in the initial measurement. If properties are purchased as part of a business combination and if the transaction relates to a "business," then IFRS 3 applies as far as recognition is concerned. Transaction costs are recognized as an expense.

Following initial recognition, investment properties are measured at fair value. Any change therein is recognized as affecting net income in the income statement. During the land or project development phase, reliable measurement at fair value is often not possible due to the lack of marketability and the lack of comparable transactions. In such cases, the cost model is continued until a reliable measurement can be carried out, but at the latest until the property in question is completed.

Investment properties are transferred to property, plant and equipment when there is a change in use evidenced by the commencement of owner-occupation. The properties' deemed cost for subsequent measurement corresponds to the fair value at the date of reclassification.

The additions in 2021 include € 526.6 million (2020: € 435.5 million) in production costs for new construction activities.

The total amount reported for investment properties as of December 31, 2021 includes right-of-use assets from recognized hereditary building rights (including right-of-use assets arising from leased and sublet care homes since first-time consolidation of Deutsche Wohnen as of September 30, 2021) in the amount of € 1,689.1 million (2020: € 1,433.2 million). In this respect, we also refer to chapter [E43] Leases.

The majority of € 1,685.3 million is attributable to right-of-use assets from hereditary building rights (2020: € 1,431.9 million). This includes right-of-use assets of € 80.9 million (2020: € 76.3 million) relating to the Spree-Bellevue (Spree-Schlange) property in Berlin. The property has been leased from DB Immobilienfonds 11 Spree-Schlange von Quistorp KG until 2044. The lease agreement includes an obligation to pay compensation for loss of use as agreed by contract. At the end of 2028, each fund subscriber is entitled to return his share to the property fund at a fixed redemption price. If all of the fund investors make use of this option, Vonovia is obliged to acquire the property at a fixed purchase price after deduction of borrowings. If more than 75% of the shares are returned in this way, Vonovia has a call option for the purchase of all fund shares.

For the investment properties encumbered with land charges in favor of various lenders, see chapter [E41] Non-derivative Financial Liabilities.

Directly Attributable Operating Expenses

Rental income from investment properties amounted to € 2,571.9 million during the fiscal year (2020: € 2,288.5 million). Operating expenses directly relating to these properties amounted to € 317.6 million during the fiscal year (2020: € 260.4 million). These include expenses for maintenance, ancillary costs that cannot be passed on to the tenants, personnel expenses from the caretaker and craftsmen's organizations, and income from the capitalized internal expenses. The capitalized internal expenses relate to the work performed by the Group's own craftsmen's organization and the management costs for major modernization projects.

Long-Term Leases

Vonovia as a lessor has concluded long-term leases on commercial properties. These are non-cancelable leases. The minimum future lease receipts from these leases are due as follows:

in € million	Dec. 31, 2020	Dec. 31, 2021
Total minimum lease payments	89.5	85.2
Due within 1 year	25.7	27.0
Due in 1 to 5 years	53.8	49.2
Due after 5 years	10.0	9.0

Fair Values

The value of the entire portfolio of residential properties was determined on the basis of the International Valuation Standard Committee's definition of market value. Portfolio premiums and discounts, which can be observed when portfolios are sold in market transactions, were not included. Nor were time restrictions in the marketing of individual properties. Vonovia determines fair value in accordance with the requirements of IAS 40 in conjunction with IFRS 13.

Vonovia, in principle, measures its portfolio on the basis of the discounted cash flow (DCF) method. Under the DCF methodology, the expected future income and costs of a property are forecasted over a detailed period and discounted to the date of valuation as the net present value. The detailed period for the German portfolio is ten years. Due to the particular market situation in Austria and in order to reflect the extensive Austrian rent restrictions, a sales scenario involving the recurring sales of apartments is assumed for a subportfolio. In order to present these sales in the correct accounting period, the detailed period for the Austrian DCF model has been extended to 100 years.

The income in the DCF model mainly comprises expected rental income (current in-place rent, market rents as well as their development) taking vacancy losses into account. In Austria, it also includes sales revenues from a subportfolio. The expected rental income is derived for each location from the latest rent indices and rent tables (including Value AG, IVD, the Austrian Economic Chambers [WKÖ]) as well as from studies on spatial prosperity (Federal Institute for Research on Building, Urban Affairs and Spatial Development [BBSR], Prognos, Value AG, the Federal Statistical Office of Germany, Statistik Austria, etc.). The expected sales revenues are derived from historical sale prices as well as market data (e.g., WKÖ, EHL).

On the cost side, maintenance expenses and administrative costs are taken into account. In Germany, these are taken into account in accordance with the II. Berechnungsverordnung and inflated in the reporting period. The II. Berechnungsverordnung (BV) is the German Regulation on Calculations for Residential Buildings in accordance with the Second Housing Construction Law, which stipulates how economic viability calculations for homes are to be performed. These cost approaches are also transferred to the Austrian market. Further cost items are, for example, ground rents, non-allocable ancillary costs, rent losses and, in Austria, selling costs. Modernization measures carried out in the housing stocks are factored in by decreasing the current maintenance expenses and adjusting market rents.

On this basis, the forecast cash flows are calculated on an annual basis and discounted to the date of valuation as the net present value. In addition, the terminal value of properties in the German portfolio at the end of the ten-year period is determined using the expected stabilized net operating income and again discounted to the date of valuation as the net present value. The discount rate applied reflects the market situation, location, type of property, special property features (e.g. hereditary building rights, rent restrictions), the yield expectations of a potential investor and the risk associated with the forecast future cash flows of the property. The derived market value is therefore the result of this net present value and includes standard market transaction costs such as real estate transfer taxes, agent and notary costs. As the detailed period in the Austrian DCF model has been extended to 100 years in order to present the sales scenarios in the correct accounting period, no terminal value is applied here.

The commercial properties in the portfolio are mainly small commercial units for the supply of the local residential environment. Different cost approaches are used to those for residential properties, and discount rates were adjusted to reflect the market specifics.

The valuation is, in principle, performed on the basis of homogeneous valuation units. These meet the criteria of economically cohesive and comparable land and buildings. They include:

> Geographical location (identity of the microlocation and geographical proximity)
> Comparable types of use, building class, construction year class and condition of property
> Same property features such as rent restrictions, hereditary building rights and full or part ownership

The Vonovia portfolio also contains project developments, existing areas with construction potential and land areas with inheritable building rights granted. Project developments that are to be managed within Vonovia's own portfolio are measured using the cost approach until the construction work is complete. Following completion of construction work, they are measured at fair value using the DCF procedure described above. Existing areas with construction potential are valued using a comparable method on the basis of the local standard land value evaluated. Deductions are taken into account in particular for the readiness for construction and potential use as well as for likelihood of development and the development situation. Inheritable building rights granted are valued in the same way as the property portfolio using a DCF method. The input parameters here are the duration and amount of ground rent and the value of the land.

The right-of-use assets from leasehold contracts are recognized at their fair value. The fair value of the leasehold contracts corresponds to the present value of the standard market leasehold fee payments up until the end of the term of the hereditary building right in question. These are calculated based on the current amount of the ground rent. In order to calculate the present value, the leasehold fee payments are discounted using a property-specific interest rate.

Vonovia determined the fair values of its real estate portfolio in Germany and Austria as of December 31, 2021 in its in-house valuation department on the basis of the methodology described above. Vonovia's real estate portfolio, excluding Deutsche Wohnen, was also valued by the independent appraiser CBRE GmbH. The market value resulting from the external report deviates from the internal valuation result by 0.1%.

The Deutsche Wohnen real estate portfolio was also valued by the independent appraiser Jones Lang LaSalle SE. The market value resulting from this external report deviates from the internal valuation result by 0.6%.

For the portfolio in Sweden, the result of the external appraiser Savills Sweden AB was applied. The fair values for the Swedish portfolio were also calculated using a DCF method that is generally comparable to the procedure used by Vonovia, as explained above, but takes account of specific features of the Swedish real estate market. These include, by way of example, the reflection of the inclusive rents received (including costs for heating and water, among other things) and the explicit inclusion of expenses billed as ancillary expenses in Germany, for example, as operator costs on the owner's side.

Deutsche Wohnen's project developments were measured by Jones Lang LaSalle SE using the residual value method as of the cut-off date of September 30, 2021. These values were, as part of what was still the provisional purchase price allocation, reviewed and adopted and were updated to reflect the current reporting date.

For the care facility portfolio of Deutsche Wohnen as of the reporting date December 31, 2021 the result of the external appraiser W&P Immobilienberatung GmbH was applied.

The contractually fixed remuneration for the valuation report is not linked to the valuation results.

The real estate portfolio of Vonovia is to be found in the items investment properties, property, plant and equipment (owner-occupied properties), real estate inventories, contract assets and assets held for sale. The fair value of the portfolio comprising residential buildings, commercial properties, garages and parking spaces, project developments, as well as undeveloped land and any hereditary building rights granted was € 97,845.3 million as of December 31, 2021 (Dec. 31, 2020: € 58,910.7 million). This corresponds to a net initial yield for the developed land of Vonovia, excluding Deutsche Wohnen, of 2.6% (total portfolio including Sweden and Austria; Dec. 31, 2020: 2.9%). For Germany, this results in an in-place-rent multiplier of 28.0 for the Vonovia portfolio excluding Deutsche Wohnen (Dec. 31, 2020: 25.4) and a fair value per m² of € 2,401 (Dec. 31, 2020: € 2,099). The in-place-rent multiplier and fair value for the Austrian portfolio come to 26.5 and € 1,674 per m² (Dec. 31, 2020: 25.5 and € 1,570 per m²), while the values for Sweden come to 20.6 and € 2,475 per m² (Dec. 31, 2020: 17.4 and € 2,090 per m²).

For the developed land in the subportfolio of Deutsche Wohnen real estate, the net initial yield stands at 2.1%, which represents a fair value of € 2,894 per m² and an in-place rent multiplier of 33.5.

The Act on Rent Controls in the Housing Sector in Berlin passed by the Berlin House of Representatives was declared unconstitutional and, as a result, null and void by the German Federal Constitutional Court on April 15, 2021. The development then observed in Berlin in the period leading up to December 31, 2021 has been included in the year-end valuation for 2021.

The material valuation parameters for the investment properties (Level 3) in the real estate portfolio are as follows as of December 31, 2021 broken down by regional markets/ shown separately for the portfolio of Deutsche Wohnen:

	Valuation results*			
Regional market	Fair value (in € million)	thereof assets held for sale (in € million)	thereof owner-occupied properties (in € million)	thereof investment properties (in € million)
Dec. 31, 2021				
Berlin	8,964.6	817.4	6.4	8,140.8
Rhine Main area	5,605.9	17.6	10.2	5,578.1
Southern Ruhr area	5,267.0	9.7	9.5	5,247.9
Rhineland	4,963.1	152.3	5.7	4,805.1
Dresden	4,656.1	0.4	7.6	4,648.1
Hamburg	3,611.8	3.3	4.5	3,604.1
Kiel	3,005.5	1.5	5.1	2,998.8
Munich	2,742.7	7.9	6.3	2,728.5
Stuttgart	2,551.9	3.2	2.1	2,546.6
Hanover	2,392.3	3.1	2.6	2,386.6
Northern Ruhr area	2,179.9	8.1	7.0	2,164.8
Bremen	1,484.2	0.5	2.5	1,481.3
Leipzig	1,229.6	8.9	1.4	1,219.3
Westphalia	1,173.3	0.9	2.0	1,170.4
Freiburg	788.7	0.9	1.5	786.3
Other strategic locations	3,611.2	3.5	6.1	3,601.6
Total strategic locations	**54,227.8**	**1,039.2**	**80.5**	**53,108.3**
Non-strategic locations	236.6	16.4	–	220.2
Vonovia Germany	**54,464.5**	**1,055.7**	**80.5**	**53,328.3**
Vonovia Sweden**	7,386.0	–	–	7,386.0
Vonovia Austria**	2,932.5	9.7	50.0	2,872.8
Deutsche Wohnen	27,628.7	1,633.3	–	25,995.4

* Fair value of the developed land excl. € 5,433.6 million for development, undeveloped land, inheritable building rights granted and other; € 4,141.1 million of this amount relates to investment properties. The investment properties balance sheet item also includes the present value in connection with payments for right-of-use assets in the amount of € 376.5 million.

** The valuation methods used for the portfolio in Austria and Sweden provide valuation parameters that are only partially comparable. Administrative and maintenance expenses are not shown separately.

Management costs residential (€ per residential unit p. a.)	Maintenance costs total residential (€/m² p. a.)	Market rent residential (€/m² per month)	Market rent increase residential	Stabilized vacancy rate residential	Discount rate total	Capitalized interest rate total
Valuation parameters investment properties (Level 3)						
265	14.12	8.08	1.8%	1.0%	4.1%	2.3%
286	14.03	9.67	1.8%	1.1%	4.3%	2.6%
279	12.78	7.27	1.5%	2.6%	4.3%	3.0%
283	13.73	8.52	1.6%	1.8%	4.5%	2.9%
251	14.03	6.74	1.6%	2.4%	4.4%	2.9%
271	14.49	8.78	1.6%	1.3%	4.1%	2.7%
273	14.93	7.75	1.6%	1.6%	4.5%	3.0%
275	14.14	12.03	1.9%	0.6%	4.4%	2.6%
286	14.73	9.50	1.8%	1.2%	4.5%	2.9%
273	14.06	7.77	1.6%	2.0%	4.3%	2.9%
281	13.29	6.56	1.1%	3.3%	4.6%	3.7%
278	13.32	7.21	1.6%	2.1%	4.4%	3.0%
265	14.93	6.88	1.6%	2.7%	4.3%	2.9%
277	13.32	7.48	1.5%	2.0%	4.6%	3.3%
282	15.45	8.84	1.6%	0.9%	4.2%	2.7%
282	14.26	7.89	1.5%	2.3%	4.6%	3.2%
274	**13.94**	**8.00**	**1.6%**	**1.9%**	**4.4%**	**2.8%**
314	15.05	7.67	1.5%	2.8%	4.6%	3.2%
274	**13.95**	**7.99**	**1.6%**	**1.9%**	**4.4%**	**2.8%**
n. a.	n. a.	10.59	2.0%	0.8%	5.3%	3.2%
n. a.	19.72	5.80	1.7%	2.4%	5.2%	n. a.
299	13.49	9.31	1.3%	1.4%	4.0%	2.8%

Regional market	Valuation results* Fair value (in € million)	thereof assets held for sale (in € million)	thereof owner-occupied properties (in € million)	thereof investment properties (in € million)
Dec. 31, 2020				
Berlin	7,815.5	2.4	7.9	7,805.1
Rhine Main area	4,934.0	22.2	6.7	4,905.2
Southern Ruhr area	4,483.3	28.3	8.6	4,446.5
Rhineland	4,213.1	20.0	7.0	4,186.1
Dresden	4,044.5	6.4	6.5	4,031.6
Hamburg	3,087.2	6.7	3.8	3,076.7
Kiel	2,535.7	1.4	3.4	2,531.0
Munich	2,496.3	5.1	4.4	2,486.8
Stuttgart	2,319.9	6.4	2.1	2,311.4
Hanover	2,053.6	0.9	2.3	2,050.4
Northern Ruhr area	1,893.8	8.9	6.2	1,878.7
Bremen	1,318.3	1.1	2.0	1,315.2
Leipzig	1,054.8	10.3	1.2	1,043.4
Westphalia	1,028.7	3.7	1.8	1,023.2
Freiburg	696.8	0.2	2.0	694.5
Other strategic locations	3,198.2	6.1	5.0	3,187.0
Total strategic locations	**47,173.7**	**130.1**	**70.9**	**46,972.8**
Non-strategic locations	609.2	12.9	1.1	595.2
Vonovia Germany	**47,782.8**	**142.9**	**72.0**	**47,567.9**
Vonovia Sweden**	6,219.4	–	–	6,219.4
Vonovia Austria**	2,832.2	17.5	50.2	2,764.5

* Fair value of the developed land excluding € 2,076.3 million for development, undeveloped land, inheritable building rights granted and other; € 1,221.1 million of this amount relates to investment properties. The investment properties balance sheet item also includes the present value in connection with payments for right-of-use assets in the amount of € 298.9 million.

** The valuation methods used for the portfolio in Austria and Sweden provide valuation parameters that are only partially comparable. Administrative and maintenance expenses are not shown separately.

The inflation rate applied to the valuation procedure comes to 1.6% (including Sweden). For the Austrian portfolio, a sales strategy with an average selling price of € 2,282 per m² was assumed for 52.0 % of the portfolio. The inflation rate applied to the valuation of the subportfolio of Deutsche Wohnen real estate comes to 1.5%.

Net income from the valuation of investment properties amounted to € 7,393.8 million in the 2021 fiscal year (Dec. 31, 2020: € 3,719.8 million).

Sensitivity Analyses

The sensitivity analyses performed on Vonovia's real estate portfolio show the impact of value drivers dependent upon market developments. Those influenced in particular are the market rents and their development, the amount of recognized administrative and maintenance expenses, cost increases, the vacancy rate and interest rates. The effect of possible fluctuations in these parameters is shown separately for each parameter according to regional market in the following.

Interactions between the parameters are possible but cannot be quantified owing to the complexity of the interrelationships. The vacancy and market rent parameters, for example, can influence each other. If rising demand for housing is not met by adequate supply developments, then this can result in lower vacancy rates and, at the same time, rising market rents. If, however, the rising demand is com-

Valuation parameters investment properties (Level 3)						
Management costs residential (€ per residential unit p. a.)	Maintenance costs total residential (€/m² p. a.)	Market rent residential (€/m² per month)	Market rent increase residential	Stabilized vacancy rate residential	Discount rate total	Capitalized interest rate total
261	14.00	7.88	1.8%	1.1%	3.9%	2.1%
282	13.97	9.33	1.8%	1.1%	4.6%	2.9%
276	12.69	7.00	1.5%	2.6%	4.8%	3.5%
280	13.71	8.22	1.7%	1.9%	4.9%	3.3%
247	14.08	6.74	1.7%	2.2%	4.8%	3.3%
267	14.36	8.46	1.6%	1.3%	4.5%	3.1%
268	14.67	7.42	1.7%	1.7%	4.9%	3.4%
271	13.97	11.41	1.9%	0.6%	4.4%	2.7%
282	14.61	9.20	1.8%	1.2%	4.7%	3.1%
269	14.00	7.45	1.7%	2.1%	4.8%	3.3%
278	13.22	6.43	1.3%	3.3%	5.2%	4.2%
274	13.27	6.94	1.8%	2.1%	4.8%	3.2%
262	14.87	6.70	1.7%	2.9%	4.9%	3.3%
273	13.17	7.25	1.5%	2.0%	4.9%	3.6%
278	15.22	8.35	1.7%	1.0%	4.5%	2.9%
278	14.09	7.64	1.6%	2.3%	4.9%	3.5%
270	**13.85**	**7.74**	**1.7%**	**1.9%**	**4.7%**	**3.1%**
274	14.72	7.58	1.6%	2.7%	4.8%	3.2%
270	**13.86**	**7.74**	**1.7%**	**1.9%**	**4.7%**	**3.1%**
n. a.	n. a.	10.46	2.0%	0.9%	5.3%	3.7%
n. a.	19.43	5.61	1.4%	2.4%	5.4%	n. a.

pensated for by a high vacancy reserve in the location in question, then the market rent level does not necessarily change.

Changes in the demand for housing can also impact the risk associated with the expected payment flows, which is then reflected in adjusted amounts recognized for discounting and capitalized interest rates. The effects do not, however, necessarily have to have a favorable impact on each other, for example, if the changes in the demand for residential real estate are overshadowed by macroeconomic developments.

In addition, factors other than demand can have an impact on these parameters. Examples include changes in the portfolio, in seller and buyer behavior, political decisions and developments on the capital market.

The table below shows the percentage impact on values in the event of a change in the valuation parameters. The absolute impact on values is calculated by multiplying the percentage impact by the fair value of the investment properties.

	Change in value as a % under varying parameters		
	Management costs residential	Maintenance costs residential	Cost increase/inflation
Regional market	-10%/10%	-10%/10%	-0.5%/+0.5% points
Dec. 31, 2021			
Berlin	0.5/-0.5	1.6/-1.6	5.5/-5.5
Rhine Main area	0.4/-0.4	1.3/-1.3	3.5/-3.6
Southern Ruhr area	0.7/-0.7	2.0/-2.0	5.1/-5.1
Rhineland	0.5/-0.5	1.6/-1.6	4.0/-4.1
Dresden	0.7/-0.7	2.1/-2.1	5.4/-5.4
Hamburg	0.5/-0.5	1.7/-1.7	4.5/-4.6
Kiel	0.7/-0.7	2.0/-2.0	4.8/-4.9
Munich	0.3/-0.3	1.1/-1.1	3.4/-3.5
Stuttgart	0.5/-0.5	1.4/-1.4	3.4/-3.6
Hanover	0.6/-0.6	1.9/-1.9	4.7/-4.7
Northern Ruhr area	1.0/-1.0	2.7/-2.7	5.3/-5.3
Bremen	0.7/-0.7	2.0/-2.0	5.4/-5.4
Leipzig	0.7/-0.7	2.3/-2.3	5.8/-5.8
Westphalia	0.7/-0.7	2.0/-2.0	4.6/-4.7
Freiburg	0.5/-0.5	1.7/-1.7	4.1/-4.3
Other strategic locations	0.6/-0.6	1.9/-1.9	4.2/-4.3
Total strategic locations	**0.6/-0.6**	**1.8/-1.8**	**4.6/-4.7**
Non-strategic locations	0.6/-0.6	2.0/-2.0	4.4/-4.5
Vonovia Germany	**0.6/-0.6**	**1.8/-1.8**	**4.6/-4.7**
Vonovia Sweden*	n. a.	n. a.	1.3/-1.3
Vonovia Austria*	n. a.	0.3/-0.3	0.4/-0.5
Deutsche Wohnen	0.6/-0.6	1.3/-1.3	4.0/-4.0

* The valuation methods used for the portfolio in Austria and Sweden provide valuation parameters that are only partially comparable. Administrative and maintenance expenses are not shown separately.

Change in value as a % under varying parameters			
Market rent residential	Market rent increase residential	Stabilized vacancy rate residential	Discounting and capitalized interest rates total
-2%/+2%	-0.2%/+0.2% points	-1%/+1% points	-0.25%/+0.25% points
-2.4/2.4	-10.0/12.4	1.4/-1.7	12.7/-10.2
-2.3/2.3	-8.2/9.7	1.0/-1.5	10.5/-8.6
-2.5/2.5	-8.1/9.5	1.9/-1.8	9.3/-7.8
-2.4/2.3	-7.9/9.2	1.6/-1.7	9.6/-8.1
-2.5/2.5	-8.3/9.8	1.8/-1.8	9.8/-8.2
-2.4/2.3	-8.7/10.5	1.2/-1.6	11.0/-8.9
-2.4/2.4	-7.9/9.3	1.8/-1.8	9.2/-7.8
-2.1/2.1	-8.4/10.1	0.7/-1.4	11.3/-9.3
-2.3/2.3	-7.8/9.0	1.3/-1.6	9.6/-8.1
-2.4/2.4	-8.1/9.5	1.7/-1.7	9.6/-8.1
-2.6/2.6	-7.1/8.1	2.1/-2.1	7.5/-6.5
-2.4/2.4	-8.3/9.8	1.8/-1.8	9.7/-8.1
-2.5/2.5	-8.5/10.1	1.8/-1.8	9.9/-8.3
-2.4/2.3	-7.5/8.8	1.7/-1.8	8.6/-7.3
-2.4/2.3	-8.4/9.9	1.1/-1.6	10.2/-8.5
-2.4/2.4	-7.4/8.7	1.7/-1.7	8.7/-7.4
-2.4/2.4	**-8.3/9.9**	**1.5/-1.7**	**10.2/-8.4**
-2.3/2.3	-7.2/8.4	1.6/-1.7	9.0/-7.6
-2.4/2.4	**-8.3/9.9**	**1.5/-1.7**	**10.2/-8.4**
-3.0/3.0	-1.3/1.3	0.8/-1.3	7.8/-6.8
-0.4/0.4	-1.0/1.1	0.9/-0.9	4.9/-4.4
-1.3/1.3	-7.0/8.2	1.2/-1.6	10.3/-8.5

	Change in value as a % under varying parameters		
	Management costs residential	Maintenance costs residential	Cost increase/inflation
Regional market	-10%/10%	-10%/10%	-0.5%/+0.5% points
Dec. 31, 2020			
Berlin	0.6/-0.6	1.9/-1.9	7.2/-7.1
Rhine Main area	0.4/-0.4	1.3/-1.3	3.2/-3.4
Rhineland	0.5/-0.5	1.6/-1.6	3.7/-3.8
Southern Ruhr area	0.8/-0.8	2.1/-2.1	4.6/-4.7
Dresden	0.7/-0.7	2.1/-2.1	4.7/-4.8
Hamburg	0.5/-0.5	1.7/-1.7	4.0/-4.2
Munich	0.3/-0.3	1.1/-1.1	3.5/-3.6
Stuttgart	0.5/-0.5	1.5/-1.5	3.3/-3.5
Kiel	0.7/-0.7	2.1/-2.1	4.3/-4.4
Hanover	0.6/-0.6	1.9/-1.9	4.2/-4.3
Northern Ruhr area	0.9/-0.9	2.6/-2.6	4.6/-4.7
Bremen	0.7/-0.7	2.0/-2.0	5.0/-5.1
Leipzig	0.7/-0.7	2.2/-2.2	5.0/-5.0
Westphalia	0.7/-0.7	2.1/-2.1	4.2/-4.3
Freiburg	0.5/-0.5	1.7/-1.7	4.0/-4.1
Other strategic locations	0.6/-0.6	1.9/-1.9	3.9/-4.0
Total strategic locations	**0.6/-0.6**	**1.8/-1.8**	**4.6/-4.7**
Non-strategic locations	0.7/-0.7	2.4/-2.3	6.5/-6.4
Vonovia Germany	**0.6/-0.6**	**1.8/-1.8**	**4.6/-4.7**
Vonovia Sweden*	n. a.	n. a.	1.4/-1.4
Vonovia Austria*	n. a.	0.3/-0.3	0.3/-0.4

* The valuation methods for the portfolio in Austria and Sweden use valuation parameters that are only partially comparable. Administrative and maintenance expenses are not shown separately.

Contractual Obligations

In connection with major acquisitions, Vonovia entered into contractual obligations or assumed such obligations indirectly via acquired companies, among other things in the form of Social Charters, which could limit its ability to freely sell parts of its portfolio, increase rents or terminate existing rent agreements for certain units and which, in the event of a breach, could give rise to substantial contractual penalties in some cases. Moreover, when acquiring and financing some of the properties in the portfolio, Vonovia also entered into an obligation to spend a certain average amount per square meter on maintenance and improvements.

After a certain period of time, these obligations often cease to apply either in full or in part. As of December 31, 2021 around 108,000 residential units in Vonovia's portfolio were subject to one or several contractual restrictions or other obligations.

> **Sale restrictions:** As of December 31, 2021 around 67,000 units were subject to sale restrictions (excl. occupancy rights). Around 18,000 of these units cannot be freely sold before a certain date. Sale restrictions like these include a full or partial ban on the sale of residential units and provisions requiring the consent of certain representatives of the original seller prior to sale.

> **Preemptive rights on preferential terms:** Around 6,000 units from the "Recurring Sales" subportfolio can only be sold if the tenants are offered preemptive rights on preferential terms. This means that Vonovia is obliged to offer these tenants the residential units at a price that is up to

Change in value as a % under varying parameters			
Market rent residential	Market rent increase residential	Stabilized vacancy rate residential	Discounting and capitalized interest rates total
-2%/+2%	-0.2%/+0.2% points	-1%/+1% points	-0.25%/+0.25% points
-2.2/2.2	-10.1/13.1	1.5/-1.7	14.3/-11.1
-2.3/2.3	-7.4/8.7	1.0/-1.5	9.3/-7.8
-2.3/2.3	-7.1/8.3	1.6/-1.6	8.6/-7.4
-2.4/2.5	-7.2/8.4	1.9/-1.9	8.1/-7.0
-2.5/2.5	-7.4/8.5	1.8/-1.8	8.5/-7.3
-2.3/2.3	-7.7/9.1	1.2/-1.6	9.4/-7.9
-2.1/2.1	-8.2/9.8	0.7/-1.5	10.9/-8.9
-2.3/2.3	-7.3/8.6	1.3/-1.5	9.0/-7.6
-2.4/2.3	-7.1/8.2	1.8/-1.8	8.1/-7.0
-2.4/2.4	-7.2/8.4	1.7/-1.7	8.5/-7.2
-2.6/2.6	-6.3/7.1	2.0/-2.0	6.5/-5.8
-2.4/2.4	-7.7/9.0	1.8/-1.8	8.9/-7.6
-2.4/2.5	-7.4/8.6	1.8/-1.8	8.5/-7.2
-2.3/2.3	-6.8/7.8	1.7/-1.8	7.7/-6.7
-2.4/2.4	-8.0/9.4	1.2/-1.6	9.7/-8.1
-2.4/2.4	-6.9/7.9	1.6/-1.7	7.9/-6.8
-2.3/2.3	**-7.8/9.3**	**1.5/-1.7**	**9.6/-8.0**
-2.5/2.5	-8.5/10.2	1.9/-1.9	10.8/-9.0
-2.3/2.3	**-7.8/9.3**	**1.5/-1.7**	**9.6/-8.0**
-3.0/3.0	-1.3/1.3	0.8/-1.2	7.5/-6.5
-0.3/0.3	-0.9/1.0	0.9/-0.9	4.7/-4.3

15% below the price that could be achieved by selling the units in question to third parties.

> **Restrictions on the termination of rent agreements:** Around 96,000 residential units are affected by restrictions on the termination of rent agreements. These restrictions include notice to vacate for personal use and notice to vacate for appropriate commercial utilization. In some cases, units are covered by a lifelong security of tenure.

> **Expenses for minimum maintenance and restrictions on maintenance and modernization measures:** Due to the expiration of one minimum maintenance obligation and the overfulfillment of another, there are no longer any units subject to a minimum maintenance obligation. Consequently, the annual average maintenance and modernization expenses have been reduced to € 0.00 per m². Around 52,000 residential units are affected by restrictions relating to modernization and maintenance measures, which are designed to prevent changes in socio-economic tenant composition (i.e., to limit luxury modernization). Some of the restrictions to prevent luxury modernization have been agreed on a permanent basis.

> **Restrictions on rent increases:** Restrictions on rent increases (including provisions stating that "luxury modernization" measures are subject to approval) affect around 44,000 units. These restrictions could prevent Vonovia from realizing the rent that could potentially be generated from the units in question.

In many cases, in the event that all or part of a portfolio is transferred or individual residential units are sold, the aforementioned obligations are to be assumed by the buyers, who are in turn subject to the obligation to pass them on to any future buyers.

Under structured financing programs, Vonovia is subject to fundamental restrictions on the use of excess property disposal proceeds, such restrictions being particularly in the form of mandatory minimum capital repayments. Excess cash from property management is also restricted to a certain extent.

All contractual obligations that have a material impact on the valuation were taken into account accordingly.

29 Financial Assets

	Dec. 31, 2020		Dec. 31, 2021	
in € million	non-current	current	non-current	current
Non-consolidated subsidiaries	1.5	–	2.4	–
Other investments	309.7	–	374.6	–
Loans to other investments	33.3	–	33.2	–
Securities	4.9	–	5.2	–
Other non-current loans	11.3	–	511.8	563.1
Receivables from finance leases	–	–	23.7	–
Other current financial receivables from financial transactions	–	–	–	499.6
Derivatives	22.4	0.4	65.8	0.6
	383.1	**0.4**	**1,016.7**	**1,063.3**

Accounting Policies

Financial assets are recognized in the balance sheet when Vonovia becomes a contracting party of the financial instrument. A financial asset is derecognized when the contractual rights to the cash flows from a financial asset expire, or the financial asset is transferred and Vonovia neither retains control nor retains material risks and rewards associated with ownership of the financial asset.

In accordance with IFRS 9, the **classification of financial assets** takes into account both the business model in which financial assets are held and the characteristics of the cash flows of the assets in question. These criteria determine whether the assets are measured at amortized cost using the effective interest method or at fair value.

With regard to the business model criterion, all financial investments at Vonovia are to be assigned to the "hold to collect" model pursuant to IFRS 9.4.1.2(a). Whenever financial investments are categorized as equity instruments, Vonovia has exercised the irrevocable option to state future changes to the fair value in other comprehensive income in equity. Gains and losses recognized in other comprehensive income are never reclassified from total equity to the income statement on their disposal.

The carrying amount of financial assets corresponds to maximum risk of loss as of the reporting date.

Other investments comprise the Vesteda Residential Fund FGR, Amsterdam, in the amount of € 193.5 million (Dec. 31, 2020: € 160.2 million) and OPPCI JUNO, Paris, in the amount of € 109.7 million (Dec. 31, 2020: € 110.7 million).

The loans to other investments not yet due relate to a loan to the property fund DB Immobilienfonds 11 Spree-Schlange von Quistorp KG.

The increase in other non-current loans is connected, on the one hand, with the takeover of a Lombard loan in the amount of some € 250 million, which was issued to Aggregate Holdings S.A. by a banking consortium in the period until October 7, 2021 and that is secured by means of 26.6% of shares in the Adler Group.

Vonovia also concluded a call option for 13.3% of the shares in Adler-Group S.A. with a term of eighteen months with Aggregate Holding.

As the two transactions are linked economically and depend on each other, they are considered as a linked transaction in accordance with IFRS.

There was a positive fair value of € 20.2 million for the call option at the time of addition. The fair value of the Lombard loan granted therefore came to € 229.8 million.

In line with the IFRS 9 classification model, subsequent measurement was at fair value through profit and loss for the call option and at amortized cost for the Lombard loan. The conditions required under IFRS 9 for measuring the loan at amortized cost were sufficiently checked and fulfilled by means of the "Business Model Test" and the "SPPI test."

As of December 31, 2021 the subsequent measurement of the call option results in positive net interest from the valuation of € 6.1 million. The positive fair value of this option is recognized under derivatives in the amount of € 26.3 million.

Amortization within net interest of € +3.3 million was applied to the Lombard loan based on the amortized cost approach using the effective interest method. In addition, and in line with IFRS 9.5.5, as of the reporting date the lifetime expected credit losses (ECL) of € 15.9 million were recognized affecting net income within impairment losses on financial assets. The expected credit losses were calculated in accordance with the IFRS 9 general approach. As there was no significant increase in credit risk as of the reporting date, the calculations were performed on the basis of a twelve-month probability of default in line with IFRS 7.35M. Subsequently, the criterion of a significant increase in credit risk pursuant to IFRS 9.5.5.7. will be reviewed on every reporting date. As of the reporting date, the Lombard loan was therefore recognized in the amount of € 217.2 million.

On the other hand the non-current loans include loan receivables from the QUARTERBACK Immobilien Group based on standard market conditions in the amount of € 261.8 million.

The majority of other non-current loans are held with the QUARTERBACK Immobilien Group as the counterparty.

The expected credit losses for the loans granted to the QUARTERBACK Immobilien Group totaling € 806.5 million were calculated based on the general approach under IFRS 9. These credit losses were not recognized in the balance sheet as they are not considered to be material.

The loans generally include a risk concentration. As there was no significant increase in credit risk as of the reporting date, the calculations were performed on the basis of a twelve-month probability of default in accordance with IFRS 7.35M. As a result, these loans are recognized at their face value as of the reporting date.

The receivables from finance leases were added to the Group as part of the acquisition of Deutsche Wohnen. Receivables from the letting of certain broadband cable networks totaled € 23.7 million as of the reporting date, with interest income of € 0.3 million. The debt maturity profile of the receivables is as follows:

in € million	Dec. 31, 2020	Dec. 31, 2021
Nominal value of outstanding lease payments	–	28.2
thereof due within one year	–	–
thereof due between one and two years	–	3.5
thereof due between two and three years	–	3.6
thereof due between three and four years	–	3.0
thereof due between four and five years	–	3.0
thereof due after more than five years	–	15.1
plus unguaranteed residual values	–	0.2
less unrealized financial income	–	-4.7
Present value of outstanding lease payments	**–**	**23.7**

Other non-current financial receivables from financial transactions include time deposits and short-term financial investments in highly liquid money market funds that have an original term of more than three months.

In addition to the call option, non-current derivatives include positive market values from cross currency swaps in the amount of € 35.2 million (Dec. 31, 2020: € 18.4 million), together with positive market values in the amount of € 4.3 million (Dec. 31, 2020: € 4.0 million) from other interest rate derivatives. Due to the high prepayment fees, embedded derivatives from loan termination rights were no longer recognized as of the reporting date. The positive fair value of the previous year in the amount of € 3.6 million was derecognized accordingly in profit or loss.

30 Long-Term Financial Assets Accounted for Using the Equity Method

As of the reporting date, Vonovia held interests in 26 joint ventures and seven associates (previous year: five joint ventures and two associates).

Vonovia holds 40% of the non-listed QUARTERBACK Immobilien AG (QBI) with registered office in Leipzig, which was classed as an associate. Pursuant to its IFRS financial information, the QUARTERBACK Group comprises 133 fully owned subsidiaries and 38 financial investments, accounted for using the equity method, as of December 31, 2021. The operations of QBI and its subsidiaries are focused on the development, realization and marketing of project development properties, as well as in the rental of various existing real estate.

Vonovia also holds interests in eleven non-listed financial investments of QBI, with equity interests of between 44% and 50% (QUARTERBACK property companies), that were classified as joint ventures. The purpose of these property companies and/or holding companies of property companies is real estate project development, either directly or indirectly.

Due to the close proximity of the acquisition date to the time of preparing these financial statements, the purchase price allocation could only be made on a provisional basis as of the reporting date of September 30, 2021.

The table below summarizes the financial information of QBI and the QUARTERBACK property companies as of September 30, 2021 and December 31, 2021. The table also shows a reconciliation of the combined financial statements with the carrying amount of Vonovia's interest in QBI and the combined QUARTERBACK property companies.

in € million	Sept. 30, 2021 QUARTERBACK Immobilien AG	Sept. 30, 2021 QUARTERBACK property companies	Dec. 31, 2021 QUARTERBACK Immobilien AG	Dec. 31, 2021 QUARTERBACK property companies
Non-current assets	705.3	227.4	774.3	234.3
Current assets				
Cash and cash equivalents	108.0	18.5	112.7	15.7
Other current assets	1,090.0	572.3	1,133.6	567.9
Total non-current assets	1,198.0	590.8	1,246.3	583.6
Non-current liabilities				
Financial liabilities (without trade payables)	264.6	87.5	353.7	83.0
Other liabilities	83.1	35.6	416.2	28.9
Total non-current liabilities	347.7	123.1	769.9	111.9
Current liabilities				
Financial liabilities (without trade payables)	112.4	64.4	203.2	75.9
Other liabilities	1,106.4	401.1	705.5	386.3
Total current liabilities	1,218.8	465.5	908.7	462.2
Non-controlling interests	38.0	10.7	40.9	11.9
Net assets (100%)	**298.8**	**218.9**	**301.1**	**231.9**
Group share in %	40%	44% to 50%	40%	44% to 50%
Group share of net assets in EUR	119.5	103.1	120.4	108.8
Group adjustments	1.2	-4.6	-1.6	-4.6
Goodwill	252.3	–	252.3	–
Carrying amount of share in joint venture	**373.0**	**98.5**	**371.0**	**104.2**
Net revenue	–	–	891.6	85.2
Interest income	–	–	4.3	9.1
Depreciation and amortization	–	–	-3.0	-0.2
Interest expenses	–	–	-48.3	-17.1
Income taxes	–	–	-13.7	-1.9
Total gain and comprehensive income for the fiscal year (100%)	**–**	**–**	**16.5**	**7.2**

On the basis of the provisional purchase price allocation as of September 30, 2021 the carrying amount of QUARTERBACK Immobilien AG stands at € 373.0 million, and at € 98.5 million for the QUARTERBACK property companies.

The equity measurement of the investments in the QUARTERBACK Immobilien Group results in a figure of € 3.7 million for the period from October 1, 2021 to December 31, 2021.

Vonovia had business dealings with the QUARTERBACK Immobilien Group in the 2021 fiscal year. These transactions generally resulted from the normal exchange of deliveries and services and all balances were concluded on an arm's-length basis. There were loan receivables of € 806.5 million as of the reporting date. During the fiscal year, an interest rate of 5.5% applied in respect of these loans. Real estate project sales of the QUARTERBACK Immobilien Group to subsidiaries of Vonovia SE totaling € 583.5 million were completed in the 2021 fiscal year as a whole, in respect of which Vonovia made advance payments totaling € 117.5 million. As of December 31, 2021 outstanding balances on receivables were recognized in the amount of € 0.0 million. Furthermore, a guarantee was granted to the QUARTER-BACK Immobilien Group in the amount of € 12.3 million in the 2021 fiscal year.

In addition to these investments, Vonovia also holds interests in 21 other entities that, when taken individually, are of minor importance and that are accounted for using the equity method; quoted market prices are not available.

The following table shows, in aggregated form, the carrying amount and the share of profit and other comprehensive income of these companies:

in € million	Dec. 31, 2020	Dec. 31, 2021
Carrying amount of shares in companies accounted for using the equity method	32.9	73.7
Group share of net income from companies not accounted for using the equity method	25% to 50%	10% to 50%
Pro rata total comprehensive income	**2.7**	**12.0**

In connection with the 21 other entities, Vonovia has no significant financial obligations or guarantees in respect of joint ventures and associates.

31 Other Assets

	Dec. 31, 2020		Dec. 31, 2021	
in € million	non-current	current	non-current	current
Right to reimbursement for transferred pensions	4.3	–	3.5	–
Receivables from insurance claims	0.8	17.8	1.0	19.2
Miscellaneous other assets	123.4	101.2	195.1	201.7
	128.5	**119.0**	**199.6**	**220.9**

The right to reimbursement for transferred pensions is in connection with the indirect obligation shown under provisions for pensions arising from pension entitlements transferred to former affiliated companies of the Viterra Group.

The receivables from insurance claims include the recognition of the excess of the fair value of plan assets over the corresponding pension obligations amounting to € 1.0 million (Dec. 31, 2020: € 0.8 million).

Outside the acquisition, the increase in miscellaneous other assets is due largely to the increase in payments made in advance for residential property in the amount of € 184.5 million (Dec. 31, 2020: € 116.1 million).

32 Income Tax Receivables

The income tax receivables disclosed relate to corporate income tax and trade tax receivables for the current fiscal year and prior years as well as capital gains tax.

The increase in the 2021 fiscal year results mainly from first-time inclusion of the Deutsche Wohnen Group in the consolidated financial statements of Vonovia SE and from a rise in rebate entitlements on tax prepayments and capital gains tax to be credited both at Vonovia SE and certain domestic subsidiaries as well as the Swedish companies.

33 Inventories

Accounting Policies

Inventories are valued at cost or at their net realizable value, whichever is lower.

The raw materials, consumables and supplies recognized mainly relate to repair materials for the internal craftsmen's organization.

34 Trade Receivables

The trade receivables break down as follows:

	Impaired		Not impaired						Carrying amount
				Overdue in the following time bands as at the reporting date					
in € million	Gross amount	Impairment losses	Neither impaired nor past due at the end of the reporting period	less than 30 days	between 30 and 90 days	between 91 and 180 days	between 181 and 360 days	more than 360 days	Corresponds to maximum risk of loss*
Receivables from the sale of investment properties	2.2	-2.2	74.9	2.5	9.9	11.6	1.6	4.1	104.6
Receivables from the sale of real estate properties	0.7	-0.2	9.6	1.7	0.6	1.9	0.7	2.0	17.0
Contract assets			239.0	1.6	1.8	0.7	3.6	0.3	247.0
Receivables from property letting	103.3	-54.7							48.6
Receivables from other management	0.1	-0.1	1.0						1.0
Receivables from other supplies and services	9.2	-3.0	22.2	2.9	0.4				31.7
As of Dec. 31, 2021	**115.5**	**-60.2**	**346.7**	**8.7**	**12.7**	**14.2**	**5.9**	**6.4**	**449.9**
Receivables from the sale of investment properties	7.1	-5.6	20.7	11.0	18.3	3.3	5.7	4.8	65.3
Receivables from the sale of real estate properties	0.7	-0.2	24.5			0.9	1.6	0.6	28.1
Contract assets			119.2	0.6	0.8	0.3	0.6		121.5
Receivables from property letting	85.2	-47.2							38.0
Receivables from other management	0.1	-0.1	0.5	0.6					1.1
Receivables from other supplies and services	6.9	-2.1	9.9		0.2				14.9
As of Dec. 31, 2020	**100.0**	**-55.2**	**174.8**	**12.2**	**19.3**	**4.5**	**7.9**	**5.4**	**268.9**

* The maximum default risk on the receivables from the sale of properties is limited to the margin and the transaction unwinding costs as the title to the properties remains with Vonovia as security until receipt of payment.

Accounting Policies

Impairment losses on financial assets are determined based on the expected credit loss model. The guiding principle of the model is to reflect the general pattern of deterioration or improvement in the credit quality of financial instruments, taking losses that are already expected into account.

The IFRS 9 approach includes the following measurement levels:

> Level 1: Twelve-month expected credit losses (ECLs), which applies to all items (from initial recognition) as long as there is no significant deterioration in credit quality.
> Level 2: Lifetime ECLs (homogeneous debtor portfolios), which applies when a significant increase in credit risk has occurred on an individual or a collective basis of financial instruments.
> Level 3: Lifetime ECLs (based on an individual assessment): If an individual assessment of assets produces objective indications of a need for impairment, then an assessment of the entire maturity of the financial instrument is decisive.

The simplified impairment approach is used with regard to **trade receivables** (e. g., rent receivables, receivables from ancillary costs, receivables from the sale of properties) and for **contract assets** pursuant to IFRS 15. This means that there is no need to track the changes in credit risk. Instead, Vonovia has to set up loan loss provisions in the amount of the lifetime expected credit losses both at the time of initial recognition and on each following reporting date.

The carrying amounts of current trade receivables correspond to their fair values.

In principle, all impaired trade receivables are due and payable. As regards the trade receivables that are neither impaired nor past due, there was no indication on the reporting date that the debtors would not meet their payment obligations.

Receivables from the sale of properties arise on economic transfer of ownership. The due date of the receivable may, however, depend on the fulfillment of contractual obligations. Some purchase contracts provide for the purchase price to be deposited in an escrow account. Impairment losses for doubtful debts are recorded up to the amount of the posted proceeds from sales.

Vonovia's receivables from property letting generally arise at the beginning of the month, are of a short-term nature and result from claims in relation to tenants relating to operating business activities. Due to the (subsequent) measurement at amortized cost, an impairment test has to be performed. The receivables fall under the scope of the calculation of expected credit losses.

In accordance with the general provisions set out in IFRS 9, expected credit losses are to be recognized using the simplified approach for current trade receivables without any significant financing component.

Irrespective of their term, Vonovia initially assigns receivables to Level 2 of the impairment model. In the further course, they need to be moved to Level 3 of the impairment model if there is objective evidence of impairment. The transfer from Level 2 to Level 3 is to be made at the latest when the contractual payments have been overdue for more than 90 days. This assumption can, however, be refuted in individual cases if there are no other objective indications pointing towards a default. Receivables always have to be transferred to the next level if a legally enforceable instrument has been obtained against the tenant as part of a dunning procedure. If the objective evidence of impairment ceases to apply, the receivable is transferred (back) to Level 2 of the impairment model.

If Vonovia becomes aware of any major changes in market conditions and/or a debtor's circumstances, it reevaluates the expected credit losses without delay. This procedure ensures that receivables are transferred to the right level in the impairment model as soon as possible.

Vonovia uses a credit loss matrix when calculating expected credit losses for trade receivables. The matrix is based on historical default rates and takes current expectations into account, including macroeconomic indicators (e.g., GDP). The matrix can be used to calculate the expected credit losses for various homogeneous portfolios.

In order to create portfolios for the purpose of assessing the probability of default, the individual clusters of receivables need to have homogeneous credit risk characteristics. As far as receivables from its operating business activities are concerned, i.e., the letting of rental properties, Vonovia makes a distinction between receivables from existing tenants and receivables from former tenants. Both portfolios include current receivables that are exposed to a low level of volatility, as the company's core operating business is hardly exposed to any major fluctuations. Main effects on receivables in the past are attributable to corporate takeovers by Vonovia.

Calculation Method for Receivables from Former Tenants

The calculation of the probability of default is based on the results of an analysis of the historical probability of default. Cash flows relating to outstanding receivables over the last three years have been analyzed and an average amount of incoming payments for the year in question was calculated on a monthly basis. The average monthly incoming payments were compared against the average monthly receivables for the year in question. Ultimately, Vonovia has been able to collect approx. 4.5% of the average receivables over the last three years. This means that Vonovia sets up risk provisions corresponding to a rounded total of 95% for its receivables from former tenants.

The loss given default comprises the following:

The receivables of former tenants that are being analyzed (amount of the receivable at the time of default) are corrected to reflect retained deposits that serve as security for Vonovia. This is already taken into account as part of the calculation method used for the probability of default.

The average receivables taken as a basis do not include receivables subject to specific valuation allowances that were written off in full.

Receivables from Existing Tenants

When it comes to determining the probability of default with regard to receivables associated with ongoing lease agreements, Vonovia analyzes those receivables that have actually been derecognized over the last three years.

This is performed systematically by way of a receivables management system according to the aspects receivables relating to ancillary expenses, those connected to the product, rent adjustments and payment difficulties.

Impairment losses on trade receivables developed as follows:

in € million	
Impairment losses as of Jan. 1, 2021	55.2
Addition	24.1
Addition due to business combinations	19.5
Utilization	-37.7
Reversal	-0.9
Impairment losses as of Dec. 31, 2021	**60.2**
Impairment losses as of Jan. 1, 2020	40.3
Addition	40.7
Addition due to business combinations	0.2
Utilization	-25.3
Reversal	-0.7
Impairment losses as of Dec. 31, 2020	**55.2**

Within the impairment losses on receivables from property letting, the risk provisions are generally taken into account as follows: For existing tenants, a risk provision corresponding to between 18% and 40% of the receivables, in a total amount of € 12.7 million (Dec. 31, 2020: € 9.6 million) was set up depending on the term. In cases involving payment difficulties, the provision corresponded to between 40% and 95% of the receivables and amounted to € 14.5 million in total (Dec. 31, 2020: € 10.4 million). The risk provisions for former tenants correspond to 95% of the receivables and amount to € 26.2 million in total (Dec. 31, 2020: € 17.5 million).

For contracts with customers who are assigned to Vonovia's development business, the payment terms pursuant to Section 3 (2) of the Real Estate Agent and Commercial

Contractor Regulation (MaBV) generally apply in Germany. Customers also have a contractual obligation to present a financing commitment issued by a credit institution for the entire purchase price. Otherwise, Vonovia is entitled to withdraw from the agreement. In Austria, the installment plan pursuant to Section 10 (2) of the Austrian Property Development Contract Act (BTVG) is normally applied, with customers obliged to pay the entire purchase price into an escrow account. Due to the structure of the standard payment terms in the development business, no separate impairment losses are taken into account on corresponding receivables from customer contracts.

For example, receivables are derecognized if tenants die and have no heirs, if they move to an unknown location or move abroad, if execution is impossible for the court bailiff, in cases involving bankruptcy or if a settlement was reached.

The following table shows the expenses for the full derecognition of receivables as well as income from the receipt of derecognized receivables:

in € million	2020	2021
Expenses for the derecognition of receivables	3.7	5.4
Income from the receipt of derecognized receivables	3.7	2.9

35 Cash and Cash Equivalents

Accounting Policies

Cash and cash equivalents include cash on hand, checks and deposits at banking institutions as well as marketable securities with an original term of up to three months.

Cash and cash equivalents are measured using the general impairment approach in accordance with IFRS 9.

Cash and cash equivalents include cash on hand, checks and deposits at banking institutions totaling € 1,134.0 million (Dec. 31, 2020: € 613.3 million), as well as marketable securities amounting to € 298.8 million (Dec. 31, 2020: € - million).

In the amount of € 117.6 million (Dec. 31, 2020: € 159.9 million) of the bank balances are restricted with regard to their use.

36 Real Estate Inventories

Accounting Policies

Buildings in the sales-related development business as well as land and buildings that are held for sale are disclosed within Real Estate Inventories. The **sales-related development business** refers to subsidized or independently financed condominiums that are under construction or have already been completed. These properties are not held with the aim of generating rental income or achieving increases in value within the meaning of IAS 40, but rather are developed and constructed to be sold at a later date. These development projects are recognized depending on whether there is a customer contract for the residential units that are intended for sale. If this is not the case, the valuation is performed, due to the intention to sell according to IAS 2 at amortized cost or at net realizable value, whichever is lower, with a corresponding disclosure under real estate inventories.

The **land and buildings held for sale** are properties that are sold in line with usual business operations, so that this can exceed a period of 12 months. The initial measurement takes place at acquisition or production cost. The acquisition costs include directly attributable acquisition and handling costs, especially acquisition costs for the property as well as incidental acquisition costs.

Recognized real estate inventories in the amount of € 671.2 million (Dec. 31, 2020: € 570.4 million) mainly concern development projects. These are projects to construct residential units planned for sale that are currently being built in the amount of € 347.7 million (Dec. 31, 2020: € 522.6 million) or that have been completed but have not yet been sold in the amount of € 108.2 million (Dec. 31, 2020: € 47.8 million). The item also includes the properties and buildings intended for sale in the ordinary course of business in the amount of € 215.3 million (Dec. 31, 2020: € - million).

37 Assets and Liabilities Held for Sale

Accounting Policies

To be classified as **held for sale**, the assets must be available for immediate sale in their present condition subject only to terms that are usual and customary for sales of such assets, and it must be highly probable that a sale will take place. A sale is deemed to be highly probable if there is a commitment to a plan to sell the asset, an active program to locate a buyer and complete the plan has been initiated, the asset is being actively marketed for sale at a reasonable price, and a sale is expected to be completed within one year of the date on which the asset is classified as held for sale.

Vonovia accounts for investment properties as assets held for sale when notarized purchase contracts have been signed or a declaration of intent to purchase has been signed by both parties as of the reporting date but transfer of title will, under the contract, not take place until the subsequent reporting period. Initially they are recognized at the contractually agreed selling price and subsequently at fair value following deductions for costs to sell, if the latter is lower.

Vonovia and Deutsche Wohnen sold around 14,750 residential and commercial units to public housing companies in Berlin in September 2021. In addition to properties (asset deal), 17 property-holding companies (share deal) were also sold, with most of the transfers of ownership to be made in 2022.

As of the reporting date, the value of the property stocks sold (asset deal) stood at € 1,358.9 million.

The property-holding companies sold (share deal) were recognized as a disposal group on the balance sheet. To this end, the property stocks and the remaining assets and liabilities were reclassified as of the reporting date as follows:

in € million	
Investment properties	1,039.1
Trade receivables	0.7
Cash and cash equivalents	11.3
Other assets	6.8
Transfer to assets held for sale	**1,057.9**
Provisions	2.1
Non-derivative financial liabilities	200.5
Deferred tax liabilities	160.8
Other liabilities	2.3
Transfer to liabilities associated with assets classified as held for sale	**365.7**

The assets held for sale also include properties totaling € 302.6 million (Dec. 31, 2020: € 164.9 million) for which notarized purchase contracts had already been signed as of the reporting date.

Section (E): Capital Structure

38 Total Equity

Accounting Policies

Other comprehensive income includes changes in total comprehensive income not affecting net income except that resulting from capital transactions with equity holders (e.g., capital increases or dividend distributions). Vonovia includes under this item unrealized gains and losses from the fair value measurement of equity instruments and derivative financial instruments that are designated as cash flow hedges. The item also includes actuarial gains and losses from defined benefit pension commitments as well as certain currency translation differences.

The **other reserves** contain cumulative changes in equity not affecting income. At Vonovia, the effective portion of the net change in the fair value of cash flow hedging instruments, the equity instruments at fair value as well as currency translation differences are recognized in other comprehensive income.

The other reserves from cash flow hedges and from currency translation differences can be reclassified. When the underlying hedged item of the cash flow hedge affects net income, the reserves attributable thereto are reclassified to profit or loss. If a foreign business is disposed of, the reserves attributable thereto are reclassified.

Development of the Subscribed Capital

in €

As of Jan. 1, 2021	**565,887,299.00**
Capital increase against non-cash contributions on May 17, 2021 (scrip dividend)	9,370,028.00
Capital increase against cash contributions on December 2, 2021	201,340,062.00
As of Dec. 31, 2021	**776,597,389.00**

Development of the Capital Reserves

in €

As of Jan. 1, 2021	**9,037,861,361.33**
Premium from capital increase for scrip dividend on May 17, 2021	460,939,787.40
Premium from capital increase on December 2, 2021	7,879,165,876.50
Transaction costs on the issue of new shares (after allowing for deferred taxes)	-93,372,009.30
Withdrawal from capital reserve	-1,826,175,134.25
Other changes not affecting net income	10,481.30
As of Dec. 31, 2021	**15,458,430,362.98**

Cash Capital Increase

On November 21, 2021 the Management Board of Vonovia SE, with the consent of the Supervisory Board, decided to carry out a fully subscribed capital increase with subscription rights for the existing shareholders of Vonovia. The shares were issued in exchange for cash contributions. To this end, the share capital of Vonovia was increased by € 201,340,062.00 from € 575,257,327.00 to € 776,597,389.00, partially using the 2021 authorized capital. This was achieved by issuing 201,340,062 new no-par-value registered shares, each accounting for € 1.00 of the share capital and carrying dividend rights as of January 1, 2021.

During the subscription period, the existing shareholders of Vonovia were offered a total of 201,340,062 new no-par-value registered shares at a subscription price of € 40.00 per new share. By the end of the subscription period on December 7, 2021 subscription rights had been exercised for 198,508,119 new shares, corresponding to a subscription rate of 98.59% of the new shares. The remaining 2,831,943 new shares were issued to institutional investors at € 49.50 per share through a private placement. The increase was entered in the commercial register on December 2, 2021.

Dividend

The Annual General Meeting held on April 16, 2021 resolved to pay a dividend for the 2020 fiscal year in the amount of € 1.69 per share, € 956.3 million in total.

As in previous years, shareholders were offered the option of choosing between being paid the dividend in cash or being granted new shares. During the subscription period, shareholders holding a total of 49.18% of the shares carrying dividend rights opted for the scrip dividend instead of the cash dividend. As a result, 9,370,028 new shares were issued using the company's authorized capital pursuant to Section 5b of the Articles of Association ("2018 authorized capital") at a subscription price of € 50.193, i.e., a total amount of € 470,309,815.40. The total amount of the dividend distributed in cash therefore came to € 486,039,719.91.

Authorized Capital

By way of a resolution of the Annual General Meeting on April 16, 2021 the 2018 authorized capital was canceled. A further resolution at this same Annual General Meeting created new authorized capital in the amount of € 282,943,649.00. On the basis of this resolution, the Management Board is authorized, with the consent of the Supervisory Board, to increase the company's share capital by up to € 282,943,649.00 once or several times on or before April 15, 2026 by issuing up to 282,943,649 new registered no-par-value shares in return for cash contributions and/or contributions in kind (2021 authorized capital). Shareholders shall be granted a subscription right. Shareholder subscription rights can be excluded. As part of the capital increase with subscription rights on December 2, 2021 the authorized capital was utilized in the amount of 201,340,062 shares, meaning that 2021 authorized capital stands at € 81,603,587.00 as of December 31, 2021.

Conditional Capital

By way of a resolution of the Annual General Meeting on April 16, 2021 the 2018 conditional capital was canceled. In order to serve the authorization, passed by the Annual General Meeting of April 16, 2021 to issue convertible bonds, bonds carrying option rights, participating rights, and participating bonds, 2021 conditional capital was created. On the basis of the resolution of this Annual General Meeting, the share capital is conditionally increased by up to € 282,943,649.00 through the issuing of 282,943,649 new no-par-value registered shares carrying dividend rights.

Retained Earnings

As of December 31, 2021 retained earnings amounted to € 16,925.9 million (Dec. 31, 2020: € 13,368.2 million). This figure includes actuarial gains and losses of € -93.4 million (Dec. 31, 2020: € -117.2 million), which cannot be reclassified and therefore may no longer be recognized in profit or loss in subsequent reporting periods.

Other Reserves

Changes in other comprehensive income during the period in the amount of € 0.7 million (2020: € 153.9 million) are mainly the result of currency translation differences due to changes in the exchange rate for the Swedish krona against the euro, as well as the offsetting development of equity instruments at fair value in other comprehensive income and the cash flow hedges.

Equity Attributable to Hybrid Capital Investors

In December 2014, Vonovia issued a hybrid bond with a nominal volume of € 1.0 billion via a subsidiary, Vonovia Finance B.V., Amsterdam/Netherlands (issuer). This subordinated hybrid bond was of unlimited duration and could only be terminated by Vonovia on certain contractually fixed dates or occasions.

The hybrid bond was terminated and repaid as of December 2021.

Pursuant to IAS 32, the hybrid bond was classified as equity in full. The interest payments to be made to the bondholders were recognized directly in equity.

Non-Controlling Interests

Shares of third parties in Group companies are recognized under non-controlling interests.

Non-controlling interests increased by € 2,571.7 million in the 2021 fiscal year, from € 686.3 million as of January 1, 2021 to € 3,258.0 million as of December 31, 2021. This increase is chiefly due to the acquisition of the Deutsche Wohnen Group, with the addition of non-controlling interests in the amount of € 2,436.6 million, which, in turn, are primarily due to the 12.64% of Deutsche Wohnen SE shares not tendered to Vonovia SE.

39 Provisions

	Dec. 31, 2020		Dec. 31, 2021	
in € million	non-current	current	non-current	current
Provisions for pensions and similar obligations	**627.8**	**–**	**684.5**	**–**
Provisions for taxes (current income taxes excl. deferred taxes)	**–**	**124.2**	**–**	**233.2**
Other provisions				
Environmental remediation	11.5	–	19.8	16.8
Personnel obligations	52.3	56.3	39.0	84.4
Outstanding trade invoices	–	93.4	–	267.2
Miscellaneous other provisions	19.7	115.1	123.0	125.6
Total other provisions	**83.5**	**264.8**	**181.8**	**494.0**
Total provisions	**711.3**	**389.0**	**866.3**	**727.2**

Provisions for Pensions and Similar Obligations

Accounting Policies

When valuing the **provisions for pensions**, the company pension obligations are determined using the projected unit credit method pursuant to IAS 19 "Employee Benefits," whereby current pensions and vested pension rights as of the reporting date as well as expected future increases in salaries and pensions, are included in the valuation. An actuarial valuation is performed at every reporting date.

The amount shown in the balance sheet is the total present value of the defined benefit obligations (DBO) after offsetting against the fair value of plan assets.

Actuarial gains and losses are accounted for in full in the period in which they occur and recognized in retained earnings as a component of other comprehensive income and not in profit or loss. The actuarial gains and losses are also no longer recognized with effect on net income in subsequent periods.

Service cost is shown in personnel expenses. The service cost is the increase in the present value of a defined benefit obligation resulting from employee service in the reporting period.

The interest expense is recognized in the financial result. Interest expense is the increase during a period in the present value of a defined benefit obligation that generally arises due to the fact that the benefit obligation is one period closer to being discharged.

Reinsurance contracts that qualify as plan assets have been taken out to cover the pension obligations toward particular individuals. Where the value of those reinsurance contracts exceeds the related pension obligations, the excess is recognized as an asset and shown under other assets.

Obligations from joint defined benefit multi-employer plans at Versorgungsanstalt des Bundes und der Länder (VBL), a pension institution of the Federal Republic of Germany and the Federal States, are stated, in line with IAS 19.34, in the same way as obligations from defined contribution plans, insofar as the information required for the statement of defined benefit plans is not available. The obligations are based on the amounts to be paid for the current period.

Vonovia has pension obligations towards various employees which are based on the length of service. Defined benefit and defined contribution obligations – for which Vonovia guarantees a certain level of benefit – are financed through provisions for pensions. Vonovia has taken out reinsurance contracts for individual people.

Generally, they are pension benefits that depend on the final salary with percentage increases depending on the number of years of service.

The pension commitments cover 6,545 (Dec. 31, 2020: 4,523) eligible persons. The increase results mainly from first-time inclusion of the eligible personnel of the Deutsche Wohnen Group in the pension valuation.

Executives currently working for companies belonging to Vonovia have the opportunity to participate in the "Pension Instead of Cash Remuneration" model (Versorgungsbezüge anstelle von Barbezügen) (eligible persons: 307, incl. persons no longer active). Retirement, invalidity and surviving dependent benefits in the form of a lifelong pension are offered under this deferred compensation model. The retirement benefits can also be paid out as a one-time capital sum. The model was closed in 2021.

Overview of the most important basic data for existing pension plans (all of which have already been closed):

	VO 1/VO 2 Veba Immobilien	VO 60/VO 91 Eisenbahnges.	Bochumer Verband
Type of benefits	Retirement, invalidity and surviving dependent benefits	Retirement, invalidity and surviving dependent benefits	Retirement, invalidity and surviving dependent benefits
Pensionable remuneration	Final salary	Final salary	Not applicable
Max. pension level	Yes	Yes	Depends on individual grouping
Total pension model based on final salary	Yes	No	No
Net benefit limit incl. state pension	None	Yes	None
Gross benefit limit	Yes	None	None
Adjustment of pensions	Section 16 (1,2) BetrAVG	Section 16 (1,2) BetrAVG	Adjustment every 3 years by Bochumer Verband (Management Board resolution)
Supplementary periods	Age of 55	Age of 55	Age of 55 (half)
Legal basis	Works agreement	Works agreement	Commitment to executives in individual contracts
Number of eligible persons	374	654	391

	VO 1991/VO 2002 GAGFAH	VO guideline GAGFAH M	VO 2017 VBL-Ersatzversorgung
Type of benefits	Retirement, invalidity and surviving dependent benefits	Retirement, invalidity and surviving dependent benefits	Retirement, invalidity and surviving dependent benefits
Pensionable remuneration	Salary for September of each year	Final salary	Salary of each year
Max. pension level	Module p.a.	Yes	Module p.a.
Total pension model based on final salary	No	Yes	No
Net benefit limit incl. state pension	None	None	None
Gross benefit limit	None	Yes	None
Adjustment of pensions	1% p.a.	Section 16 (1,2) BetrAVG	1% p.a.
Supplementary periods	Age of 55	Age of 55	None
Legal basis	Works agreement	Works agreement	Individual agreement
Number of eligible persons	1,110	379	107

The current pensions according to the classic pension benefit regulations of Bochumer Verband are adjusted in line with Section 20 of those regulations. Section 20 is a rule which is based on Section 16 (1,2) of the German Occupational Pensions Improvement Act (BetrAVG) but which, according to a ruling of the Federal Labor Court of Germany, is an independent rule. Other company pensions are reviewed and adjusted under the terms of the agreement according to Section 16 (1,2) BetrAVG. On every review date, the development of the cost of living since the individual retirement date is reviewed and compensated for. Only in the aforementioned deferred compensation model is the option, available since January 1, 1999, used to raise the current pensions every year by 1% (Section 16 [3] No. 1 BetrAVG). No further risks are seen.

The company has decided to use the internal financing effect of the provisions for pensions and only to back a relatively small portion of the pension obligations with plan assets. Reinsurance policies have been taken out for former Management Board members against payment of a one-time insurance premium in order to provide additional protection against insolvency; these reinsurance policies were pledged to the eligible persons. They constitute plan assets, which are offset against the gross obligation. The fair value of the reinsurance policies for individual persons is higher than the extent of the obligations towards the respective person. This surplus of the fair values of the assets over the obligation is shown under non-current other assets. The conclusion of further reinsurance policies is not planned.

Pension plan obligations and the expenses necessary to cover these obligations are determined using the projected unit credit method prescribed by IAS 19. Both pensions known on the reporting date and vested rights as well as expected future increases in salaries and pensions are included in the measurement. The following actuarial assumptions were made at the reporting date – in each case related to the end of the year and with economic effect for the following year.

Actuarial Assumptions

in %	Dec. 31, 2020	Dec. 31, 2021
Actuarial interest rate	0.70	1.10
Pension trend	1.75	1.75
Salary trend	2.50	2.50

The 2018 G mortality tables of Prof. Dr. Klaus Heubeck have been taken for the biometric assumptions without any changes.

The defined benefit obligation (DBO) developed as follows:

in € million	2020	2021
DBO as of Jan. 1	591.0	648.1
Additions due to business combinations	–	110.4
Interest expense	5.8	4.6
Current service cost	12.2	14.6
Actuarial gains and losses:		
Changes in the biometric assumptions	-8.4	4.8
Changes in the financial assumptions	27.4	-41.1
Transfer	44.9	–
Benefits paid	-24.8	-29.6
DBO as of Dec. 31	**648.1**	**711.8**

The present value of the pension obligation is divided among the groups of eligible persons as follows:

in € million	Dec. 31, 2020	Dec. 31, 2021
Active employees	140.0	157.3
Former employees with vested pension rights	134.4	141.2
Pensioners	373.7	413.3
DBO as of Dec. 31	**648.1**	**711.8**

Plan assets comprise solely reinsurance contracts. The fair value of the plan assets has developed as follows:

in € million	2020	2021
Fair value of plan assets as of Jan. 1	**21.8**	**21.2**
Additions due to business combinations	–	7.7
Return calculated using the actuarial interest rate	0.2	0.1
Actuarial gains:		
Changes in the financial assumptions	0.4	0.7
Benefits paid	-1.2	-1.4
Fair value of plan assets as of Dec. 31	**21.2**	**28.3**

The actual return on plan assets amounted to € 0.8 million during the fiscal year (2020: € 0.6 million).

The following table shows a reconciliation of the defined benefit obligation to the pension obligation recognized in the balance sheet:

in € million	Dec. 31, 2020	Dec. 31, 2021
Present value of funded obligations	31.2	36.2
Present value of unfunded obligations	616.9	675.6
Total present value of defined benefit obligations	**648.1**	**711.8**
Fair value of plan assets	-21.1	-28.3
Net liability recognized in the balance sheet	**627.0**	**683.5**
Other assets to be recognized	0.8	1.0
Provisions for pensions recognized in the balance sheet	**627.8**	**684.5**

In 2021, actuarial gains of € 37.0 million (excluding deferred taxes) were recognized in other comprehensive income (2020: € -18.6 million).

The weighted average term of the defined benefit obligations is 15.5 years (Dec. 31, 2020: 16.1 years).

The following table contains the estimated, undiscounted pension payments of the coming five fiscal years and the total of those in the subsequent five fiscal years:

in € million	Projected pension payments
2022	31.6
2023	30.9
2024	30.8
2025	31.0
2026	30.5
2027–2031	149.6

Sensitivity Analyses

An increase or decrease in the material actuarial assumptions would have led to the following defined benefit obligation, providing the other assumptions did not change:

in € million		Dec. 31, 2020	Dec. 31, 2021
Actuarial interest rate	Increase of 0.5%	599.5	660.4
	Decrease of 0.5%	703.5	769.6
Pension trend	Increase of 0.25%	660.7	726.5
	Decrease of 0.25%	635.2	696.9

An increase in life expectancy of 4.9% would have resulted in an increase in the DBO of € 27.9 million as of December 31, 2021 (Dec. 31, 2020: € 31.0 million). This percentage rise corresponds to a one-year increase in the life expectancy of a man who was 65 at the reporting date.

If several assumptions are changed simultaneously, the cumulative effect is not necessarily the same as if there had been a change in just one of the assumptions.

The provisions for pensions include € 3.5 million (Dec. 31, 2020: € 4.3 million) for pension obligations which were transferred to third parties as part of an assumption of debt and which relate to vested rights and the payment of current pensions. A corresponding non-current receivable is shown under miscellaneous other assets.

Other Provisions

Accounting Policies

Other provisions are recognized when there is a present obligation, either legal or constructive, vis-à-vis third parties as a result of a past event if it is probable that a claim will be asserted and the probable amount of the required provision can be reliably estimated. Provisions are discounted if the resulting effect is material. The carrying amount of discounted provisions increases in each period to reflect the passage of time and the unwinding of the discount is recognized within interest expense. The discount rate is a pre-tax rate that reflects current market assessments.

Provisions for restructuring expenses are recognized when the Group has set up and communicated a detailed formal plan for restructuring and has no realistic possibility of withdrawing from these obligations.

Provisions for onerous contracts are recognized when the expected benefits from a contract are lower than the unavoidable cost of meeting the obligations under the contract. The provision is stated at the lower of the present value of the fulfillment obligation and the cost of terminating the contract, i.e., a possible indemnity or fine for breach or non-fulfillment of contract.

Provisions are reviewed regularly and adjusted to reflect new information or changed circumstances.

The **provisions for pre-retirement part-time work arrangements** are basically to be classified as other long-term employee benefits that are to be accrued over the employees' service periods.

The assets of the insolvency policy to secure fulfillment shortfalls arising from pre-retirement part-time work arrangements are offset against the amounts for fulfillment shortfalls contained in the provisions for pre-retirement part-time work arrangements.

A contingent liability is a possible obligation toward third parties that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events or a present obligation that arises from past events for which an outflow of resources is not probable or the amount of which cannot be estimated with sufficient reliability. According to IAS 37, contingent liabilities are not generally recognized.

Development of Other Provisions During the Fiscal Year

in € million	As of Jan. 1, 2021	Changes in scope of consolidation	Additions	Reversals	Interest accretion to provisions	Revaluation from currency effects	Utilization	As of Dec. 31, 2021
Other provisions								
Environmental remediation	11.5	10.7	16.6	–	–	–	-2.2	36.6
Personnel obligations	108.6	37.2	55.1	-3.1	0.1	-0.1	-74.4	123.4
Outstanding trade invoices	93.4	172.0	156.5	-8.6	–	-0.1	-146.0	267.2
Miscellaneous other provisions	134.8	124.3	45.1	-31.6	5.6	-0.1	-29.5	248.6
	348.3	**344.2**	**273.3**	**-43.3**	**5.7**	**-0.3**	**-252.1**	**675.8**

Development of Other Provisions During the Previous Year

in € million	As of Jan. 1, 2020	Changes in scope of consolidation	Additions	Reversals	Interest accretion to provisions	Netting plan assets	Utilization	As of Dec. 31, 2020
Other provisions								
Environmental remediation	13.0	–	–	–	0.2	–	-1.7	11.5
Personnel obligations	133.5	0.1	55.8	-5.1	0.1	–	-75.8	108.6
Outstanding trade invoices	109.8	2.8	97.2	-13.6	–	–	-102.8	93.4
Miscellaneous other provisions	155.3	13.9	45.5	-17.2	0.4	–	-63.1	134.8
	411.6	**16.8**	**198.5**	**-35.9**	**0.7**	**–**	**-243.4**	**348.3**

Reversals of provisions are generally offset against the expense items for which they were originally established.

The provisions for environmental remediation primarily refer to site remediation of locations of the former Raab Karcher companies and the Kabelwerk Köpenick cable factory. Remediation has either already begun or an agreement has been reached with the authorities as to how the damage is to be remedied. The cost estimates are based on expert opinions detailing the anticipated duration of the remediation work and the anticipated cost.

The personnel obligations are provisions for pre-retirement part-time work arrangements, provisions for bonuses, severance payments not relating to restructuring and other personnel expenses. The other personnel expenses include a provision for the long-term incentive plan (LTIP) determined in accordance with IFRS 2 of € 22.6 million (Dec. 31, 2020: € 30.0 million) (see chapter [E48] Share-Based Payments).

The material individual cost items under miscellaneous other provisions include costs associated with legal disputes in the amount of € 34.2 million (Dec. 31, 2020: € 23.6 million), litigation costs in the amount of € 31.4 million (Dec. 31, 2020: € 10.7 million), costs associated with company tax audits in the amount of € 8.2 million (Dec. 31, 2020: € 6.0 million), provisions for other contractually agreed guarantees in the amount of € 4.2 million (Dec. 31, 2020: € 3.2 million) and onerous contracts in the amount of € 1.8 million (Dec. 31, 2020: € 2.1 million).

The Group expects to settle the lion's share of the provision over the coming year.

40 Trade Payables

in € million	Dec. 31, 2020 non-current	Dec. 31, 2020 current	Dec. 31, 2021 non-current	Dec. 31, 2021 current
Liabilities				
from property letting	–	85.0	–	133.7
from other supplies and services	5.0	144.5	5.4	310.7
	5.0	**229.5**	**5.4**	**444.4**

41 Non-derivative Financial Liabilities

in € million	Dec. 31, 2020 non-current	Dec. 31, 2020 current	Dec. 31, 2021 non-current	Dec. 31, 2021 current
Non-derivative financial liabilities				
Liabilities to banks	6,375.2	533.8	16,997.3	4,266.1
Liabilities to other creditors	15,999.9	1,060.7	23,174.6	2,418.3
Deferred interest from non-derivative financial liabilities	–	115.1	–	172.7
	22,375.1	**1,709.6**	**40,171.9**	**6,857.1**

Accounting Policies

Vonovia recognizes **non-derivative financial liabilities**, which mainly include liabilities to banks and to investors, at their fair value on the day of trading, less the directly attributable transaction costs (this generally corresponds to the acquisition cost). These liabilities are subsequently measured at amortized cost using the effective interest method. Financial liabilities are derecognized when Vonovia's obligations specified in the contract expire or are discharged or canceled.

Liabilities bearing no interest or interest below market rates in return for occupancy rights at rents below the prevailing market rates are recorded at present value.

Deferred interest is presented as current in order to show the cash effectiveness of the interest payments transparently. In principle, the deferred interest is part of the non-derivative financial liability. Of the deferred interest from non-derivative financial liabilities, € 166.2 million (Dec. 31, 2020: € 109.8 million) is from bonds reported under non-derivative financial liabilities to other creditors.

The non-derivative financial liabilities developed as follows in the fiscal year under review:

in € million	As of Jan. 1, 2021	First-time consolidation	New loans	Scheduled repayments	Unscheduled repayments	Adjusted for effective interest method	Other adjustments	Exchange rate differences	As of Dec. 31, 2021
Bond (US dollar)	202.0					17.3			219.3
Bond (EMTN)	15,186.5		9,500.0	-500.0		-76.2			24,110.3
Bond (Green Bond)			600.0			-3.4			596.6
Promissory note loan	49.9		224.0	-4.0	-40.0	0.1			230.0
Bridge financing			12,950.0*	-9,460.0*		-8.4			3,481.6
Mortgages	8,531.2	12.3	575.8	-521.6	-287.3	-24.2	-123.7	-35.8	8,126.7
Deferred interest	115.1						24.5		139.6
Deutsche Wohnen									
Other financing**		10,752.0	150.2	-61.4	-723.7	-23.8	-1.5		10,091.8
Deferred interest		25.8					7.3		33.1
	24,084.7	**10,790.1**	**24,000.0**	**-10,547.0**	**-1,051.0**	**-118.6**	**-93.4**	**-35.8**	**47,029.0**

* This includes short-term bridge financing from Société Générale of € 1,500.0 million.
** This includes mortgages, convertible bonds, registered bonds and bearer bonds.

The non-derivative financial liabilities developed as follows in the previous year:

in € million	As of Jan. 1, 2020	First-time consolidation	New loans	Scheduled repayments	Unscheduled repayments	Adjusted for effective interest method	Other adjustments	Exchange rate differences	As of Dec. 31, 2020
Bond (US dollar)	219.4					-17.4			202.0
Bond (EMTN)	13,545.9		2,700.0	-1,052.3		-7.1			15,186.5
Commercial paper	300.0			-300.0					0.0
Promissory note loan	49.9								49.9
Mortgages	9,359.5	97.9	1,476.6	-874.2	-1,498.2	-125.7		95.3	8,531.2
Deferred interest	100.2						14.9		115.1
	23,574.9	**97.9**	**4,176.6**	**-2,226.5**	**-1,498.2**	**-150.2**	**14.9**	**95.3**	**24,084.7**

The U.S. dollar bond issued in 2013 is translated at the exchange rate at the end of the reporting period in line with applicable IFRS provisions. Allowing for the hedging rate prescribed through the interest hedging transaction entered into, this financial liability would be € 36.1 million lower than the recognized value (Dec. 31, 2020: € 18.9 million).

The maturities and average interest rates of the nominal obligations of the liabilities to banks and the liabilities to other creditors are as follows during the fiscal year:

				Repayment of the nominal obligations is as follows:					
in € million	Nominal obligation Dec. 31, 2021	Maturity	Average interest rate	2022	2023	2024	2025	2026	from 2027
Bond (US dollar)*	185.0	2023	4.58%		185.0				
Bond (EMTN)*	500.0	2022	2.13%	500.0					
Bond (EMTN)*	500.0	2025	1.50%				500.0		
Bond (EMTN)*	1,000.0	2023	2.25%		1,000.0				
Bond (EMTN)*	500.0	2022	0.88%	500.0					
Bond (EMTN)*	500.0	2026	1.50%					500.0	
Bond (EMTN)*	1,000.0	2024	1.25%			1,000.0			
Bond (EMTN)*	500.0	2022	0.75%	500.0					
Bond (EMTN)*	500.0	2027	1.75%						500.0
Bond (EMTN)*	500.0	2025	1.13%				500.0		
Bond (EMTN)*	500.0	2024	0.75%			500.0			
Bond (EMTN)*	500.0	2028	1.50%						500.0
Bond (EMTN)*	600.0	2022	0.79%	600.0					
Bond (EMTN)*	700.0	2026	1.50%					700.0	
Bond (EMTN)*	500.0	2030	2.13%						500.0
Bond (EMTN)*	500.0	2038	2.75%						500.0
Bond (EMTN)*	500.0	2023	0.88%		500.0				
Bond (EMTN)*	500.0	2025	1.80%				500.0		
Bond (EMTN)*	500.0	2029	0.50%						500.0
Bond (EMTN)*	500.0	2034	1.13%						500.0
Bond (EMTN)*	500.0	2023	0.13%		500.0				
Bond (EMTN)*	500.0	2027	0.63%						500.0
Bond (EMTN)*	500.0	2039	1.63%						500.0
Bond (EMTN)*	500.0	2024	1.63%			500.0			
Bond (EMTN)*	500.0	2030	2.25%						500.0
Bond (EMTN)*	750.0	2026	0.63%					750.0	
Bond (EMTN)*	750.0	2030	1.00%						750.0
Bond (EMTN)*	500.0	2041	1.00%						500.0
Bond (Green Bond)*	600.0	2031	0.63%						600.0
Bond (EMTN)*	500.0	2024	0.00%			500.0			
Bond (EMTN)*	1,000.0	2027	0.38%						1,000.0
Bond (EMTN)*	1,000.0	2029	0.63%						1,000.0
Bond (EMTN)*	1,000.0	2033	1.00%						1,000.0
Bond (EMTN)*	500.0	2041	1.50%						500.0
Bond (EMTN)*	500.0	2023	0.00%		500.0				
Bond (EMTN)*	1,250.0	2025	0.00%				1,250.0		
Bond (EMTN)*	1,250.0	2028	0.25%						1,250.0
Bond (EMTN)*	1,250.0	2032	0.75%						1,250.0
Bond (EMTN)*	750.0	2051	1.63%						750.0
Bridge financing	3,490.0	2022	0.65%	3,490.0					

in € million	Nominal obligation Dec. 31, 2021	Maturity	Average interest rate	Repayment of the nominal obligations is as follows: 2022	2023	2024	2025	2026	from 2027
Promissory note loan*	230.0	2025	0.12%		120.0			50.0	60.0
Mortgages**	8,142.3	2034***	1.17%***	814.5	782.9	1,016.6	734.0	502.0	4,292.3
Deutsche Wohnen									
Other financing****	9,704.1	2028***	1.33%***	279.9	744.7	202.4	1,562.0	889.2	6,025.9
	46,651.4			**6,684.4**	**4,332.6**	**3,719.0**	**5,046.0**	**3,391.2**	**23,478.2**

* Under the conditions of existing loan agreements, Vonovia is obliged to fulfill certain financial covenants, which it fulfilled.
** For a portion of the mortgages, Vonovia is obliged to fulfill certain financial covenants, which it fulfilled.
*** The calculation includes financial liabilities that will be transferred to Berlin housing companies in 2022 as part of the sale of residential units. These financial liabilities are included in the "Assets and liabilities held for sale" as at December 31, 2021.
**** This includes mortgages, convertible bonds, registered bonds and bearer bonds.

In the previous year, the maturities and average interest rates of the nominal obligations were as follows:

				Repayment of the nominal obligations is as follows:					
in € million	Nominal obligation Dec. 31, 2020	Maturity	Average interest rate	2021	2022	2023	2024	2025	from 2026
Bond (US dollar)*	185.0	2023	4.58%			185.0			
Bond (EMTN)*	500.0	2021	3.63%	500.0					
Bond (EMTN)*	500.0	2022	2.13%		500.0				
Bond (EMTN)*	500.0	2025	1.50%					500.0	
Bond (EMTN)*	1,000.0	2023	2.25%			1,000.0			
Bond (EMTN)*	500.0	2022	0.88%		500.0				
Bond (EMTN)*	500.0	2026	1.50%						500.0
Bond (EMTN)*	1,000.0	2024	1.25%				1,000.0		
Bond (EMTN)*	500.0	2022	0.75%		500.0				
Bond (EMTN)*	500.0	2027	1.75%						500.0
Bond (EMTN)*	500.0	2025	1.13%					500.0	
Bond (EMTN)*	500.0	2024	0.75%				500.0		
Bond (EMTN)*	500.0	2028	1.50%						500.0
Bond (EMTN)*	600.0	2022	0.79%		600.0				
Bond (EMTN)*	700.0	2026	1.50%						700.0
Bond (EMTN)*	500.0	2030	2.13%						500.0
Bond (EMTN)*	500.0	2038	2.75%						500.0
Bond (EMTN)*	500.0	2023	0.88%			500.0			
Bond (EMTN)*	500.0	2025	1.80%					500.0	
Bond (EMTN)*	500.0	2029	0.50%						500.0
Bond (EMTN)*	500.0	2034	1.13%						500.0
Bond (EMTN)*	500.0	2023	0.13%			500.0			
Bond (EMTN)*	500.0	2027	0.63%						500.0
Bond (EMTN)*	500.0	2039	1.63%						500.0
Bond (EMTN)*	500.0	2024	1.63%				500.0		
Bond (EMTN)*	500.0	2030	2.25%						500.0
Bond (EMTN)*	750.0	2026	0.63%						750.0
Bond (EMTN)*	750.0	2030	1.00%						750.0
Promissory note loan*	50.0	2026	0.29%						50.0
Mortgages**	8,516.6	2029	1.33%	1,095.3	482.5	876.8	943.1	745.1	4,373.8
	24,051.6			**1,595.3**	**2,582.5**	**3,061.8**	**2,943.1**	**2,245.1**	**11,623.8**

* Under the conditions of existing loan agreements, Vonovia is obliged to fulfill certain financial covenants, which it fulfilled.
** For a portion of the mortgages, Vonovia is obliged to fulfill certain financial covenants, which it fulfilled.

The loan repayments shown for the following years contain contractually fixed minimum repayment amounts.

Of the nominal obligations to creditors, € 13,060.3 million (Dec. 31, 2020: € 7,287.6 million) are secured by land charges and other collateral (account pledge agreements, assignments, pledges of company shares and guarantees of Vonovia SE or other Group companies). In the event that payment obligations are not fulfilled, the securities provided are used to satisfy the claims of the banks.

Financial liabilities to banks and other creditors have an average interest rate of approximately 1.14 %. The financial liabilities as a whole do not contain any significant short-term interest rate risks as they relate either to loans with long-term fixed interest rates or variable-interest liabilities that are hedged using suitable derivative financial instruments (see chapter [G54] Financial Risk Management).

Repayment of Secured Financing

In October 2021, a secured financing agreement of some € 148.0 million that had reached full maturity was repaid.

A € 500.0 million bond issued in 2013 was also repaid in October 2021.

In December 2021, the perpetual hybrid of € 1,000 million taken out in 2014 – and recognized as equity attributable to Vonovia's hybrid capital investors – was terminated and repaid on the first possible repayment date.

Liabilities amounting to around SEK 2,800.0 million (around € 260.0 million) were repaid as scheduled in the Swedish subgroup in the 2021 fiscal year.

Issue of Bonds Under the European Medium-Term Notes Program (EMTN)

Via its Dutch subsidiary Vonovia Finance B.V., Vonovia issued an EMTN bond of € 500.0 million that runs until January 2041 with effect from January 28, 2021. The bond will bear interest at a rate of 1.00% p.a.

On March 24, 2021 Vonovia SE issued a green bond with a total volume of € 600.0 million. The bond will bear interest at a rate of 0.625% and have a term of ten years.

Vonovia SE placed bonds with a total volume of € 4,000.0 million on June 16, 2021. The various tranches have terms of 3, 6, 8, 12 and 20 years and an average annual interest rate of 0.6875%.

Vonovia SE placed bonds with a total volume of € 5,000.0 million on September 1, 2021. They have terms of 2, 4, 7, 11 and 30 years and an average annual interest rate of 0.49%.

Promissory Note Loans

M.M. Warburg provided Vonovia SE with € 20.0 million as part of a fully digital registered bond in January 2021. This bond was repaid in full in the fourth quarter of 2021.

Deutsche Pfandbriefbank issued Vonovia SE with a promissory note loan of € 100.0 million with a term of two years in March 2021.

A promissory note loan in the amount of € 60.0 million with an eight-year term was provided by Degussa Bank in March 2021.

Also in March, M.M. Warburg subscribed to two further promissory notes of Vonovia SE, each in the amount of € 20.0 million and with a two-year term. A promissory note in the amount of € 20.0 million was repaid in full in June 2021.

New Portfolio Loans

Berlin Hyp provided Vonovia Finance B.V. with secured financing of € 200.0 million with a term of ten years, with the agreement signed in December 2020 and the funds disbursed in February 2021.

Bridge Financing

Morgan Stanley, Société Générale and Bank of America provided Vonovia SE with bridge financing in an original amount of € 20,150.0 million on August 5, 2021 with a term of up to two years as part of the acquisition of Deutsche Wohnen. This was utilized in the amount of € 11,450.0 million and still valued at around € 3,490.0 million as of December 31, 2021. This bridge financing was syndicated with eleven further banks.

Working Capital Facility

With an agreement dated September 30, 2021 Commerzbank, Bank of America, BNP Paribas, Deutsche Bank, ING, Morgan Stanley, Société Générale and UniCredit provided Vonovia with a working capital facility of € 2,000.0 million with an initial term of three years; on December 13, 2021 the facility was increased to € 3,000.0 million with the addition of Goldman Sachs, JPMorgan, Citibank and UBS. This credit line had not been used as of December 31, 2021.

42 Derivatives

in € million	Dec. 31, 2020 non-current	Dec. 31, 2020 current	Dec. 31, 2021 non-current	Dec. 31, 2021 current
Derivatives				
Purchase price liabilities from put options/rights to reimbursement		220.5		264.0
Cash flow hedges	29.6		12.3	
Stand-alone derivatives	47.2		53.9	
Deferred interest from derivatives		1.7		2.0
	76.8	**222.2**	**66.2**	**266.0**

Regarding derivative financial liabilities please refer to chapter [G52] Additional Financial Instrument Disclosures and chapter [G56] Cash Flow Hedges and Stand-alone Interest Rate Swaps.

43 Leases

Accounting Policies

IFRS 16 "Leases," which is applied as a mandatory requirement since January 1, 2019 introduces only one accounting model (right-of-use model) for lessees, based on which all leases are to be recognized in the balance sheet as a matter of principle. The distinction between operating and finance leases only remains in place for accounting as the lessor.

All contracts that give the Vonovia Group the right to control the use of an identified asset over a certain period of time in return for consideration are considered leases within the meaning of IFRS 16.

For all lease contracts that meet the definition of leases according to IFRS 16, Vonovia recognizes lease liabilities equal to the present value of the future lease payments, discounted using the term-specific incremental borrowing rate. Correspondingly, right-of-use assets are recognized in the amount of the lease liabilities, plus any advance payments or any initial direct costs.

The lease liabilities are adjusted in line with financial principles. They are increased by the periodic interest expenses and reduced by the lease payments made.

The right-of-use assets are generally recognized at amortized cost, taking depreciation and impairments into account. Right-of-use assets that meet the definition of investment properties (IAS 40) are recognized at fair value in line with the recognition and measurement rules set out in IAS 40.

Changes within the lease term or within the lease payments lead to a remeasurement of the present value and, as a result, to an adjustment of the lease liability and the right-of-use asset.

Periods resulting from extension or termination options granted on an unilateral basis are assessed on a case-by-case basis and are only taken into account if their use is sufficiently probable – for example, due to financial incentives.

There is an accounting option available for short-term leases and leases of low-value assets. Vonovia makes use of this option, meaning that such leases are not recognized. As far as rented IT equipment is concerned, portfolios are, in some cases, set up for lease contracts with similar terms and a single discount rate is applied to these portfolios.

Those variable lease payments, which are not included in the measurement of the lease liabilities, as well as lease payments associated with short-term leases, with leases of low-value assets and with lease contracts that do not meet the definition of leases according to IFRS 16 are recognized as expenses on a straight-line basis over the lease term.

In addition to conventional vehicle leasing over a fixed lease term of three to five years, the Vonovia Group also leases IT equipment (IT leasing), rented residential, commercial and care home properties for subleasing (interim rental agreements), heat generation plants to supply the Group's own properties with heat (contracting), smoke detectors and heat meters (metering technology), leasing of land for the construction of owner-occupied commercial properties, as well as office buildings, office spaces, warehouse spaces and parking spaces (lease agreements). Under license agreements with public-sector institutions, Vonovia is granted the right to use public properties as storage locations or parking spaces, to lay cables or heating pipes, or to construct playgrounds. Long-term leasehold contracts, however, have the biggest impact on the company's net assets, financial position and results of operations. These involve Vonovia leasing land for the rental of constructed residential and commercial properties. These contracts generally have a term of 99 years.

Development of Right-of-use Assets

in € million	Dec. 31, 2020	Dec. 31, 2021
Right-of-use assets		
Leasehold contracts	1,431.9	1,685.3
Interim rental agreements	1.3	3.8
Right-of-use assets within investment properties	**1,433.2**	**1,689.1**
Leasing of land for the construction of owner-occupied commercial properties	27.3	27.4
Lease agreements	22.9	45.1
Contracting	15.9	56.8
Vehicle leases	2.6	4.8
Tenancy and license agreements	0.6	0.5
Leases of IT equipment	3.0	2.1
Metering technology		38.2
Right-of-use assets within property, plant and equipment	**72.3**	**174.9**
	1,505.5	**1,864.0**

As of December 2021 the right-of-use assets resulting from leases amount to € 1,864.0 million (2020: € 1,505.5 million).

The majority of the right-of-use assets amounting to € 1,689.1 million is reported under **investment properties** and does not only result from interim lease agreements (residential and commercial properties) and agreements on subleased care home properties (€ 3.8 million), but mainly from leasehold contracts (€ 1,685.3 million). The other right-of-use assets totaling € 174.9 million are reported under **property, plant and equipment** and mainly include right-of-use assets resulting from heat contracting (€ 56.8 million), concluded lease agreements (€ 45.1 million), contracts connected with leased metering technology (€ 38.2 million), the leasing of land for the construction of owner-occupied comercial properties (€ 27.4 million) and vehicle leases (€ 4.8 million).

Development of Lease Liabilities

in € million	Dec. 31, 2020 Due within one year	Due in 1 to 5 years	Due after 5 years	Dec. 31, 2021 Due within one year	Due in 1 to 5 years	Due after 5 years
Lease liabilities						
Leasehold contracts (IAS 40)	10.6	35.3	371.9	11.5	40.3	446.1
Interim rental agreements	0.9	0.4	–	1.4	2.6	0.0
Leasing of land for the construction of owner-occupied commercial properties	0.1	0.5	27.3	0.1	0.5	27.4
Lease agreements	8.3	13.4	1.5	10.4	23.1	11.8
Contracting	5.0	5.7	7.9	11.8	32.1	14.1
Vehicle leases	1.5	1.1	–	2.2	2.6	–
Tenancy and license agreements	0.1	0.1	0.5	0.0	0.0	0.5
Leases of IT equipment	1.3	1.7	–	1.2	1.0	–
Metering technology				5.6	19.9	12.8
	27.8	**58.2**	**409.1**	**44.2**	**122.1**	**512.8**

As of December 31, 2021 the lease liabilities amount to € 679.1 million (2020: € 495.1 million).

The year-over-year increase in lease liabilities of € 184.0 million is primarily acquisition-related, with € 129.8 million of this figure attributable to the takeover of Deutsche Wohnen SE as of Sep. 30, 2021. Increased lease payments and renewals of leasehold contracts led to a rise in leasing obligations of € 31.4 million. A further € 18.2 million results from the office complex in Essen leased for customer services in December 2021 (rental agreements).

Totaling € 512.8 million, the majority of the lease liabilities recognized as of December 31, 2021 are due after more than five years. Of this amount, € 446.1 million is attributable to lease liabilities from leasehold contracts. € 44.2 million is due within the next year. € 11.5 million of this amount is attributable to leasehold contracts.

The following table shows the development of the right-of-use assets reported under property, plant and equipment:

in € million	Carrying amount of right-of-use assets Jan. 1, 2021	Additions 2021	Depreciation 2021	Carrying amount of right-of-use assets Dec. 31, 2021	Interest expenses 2021
Leasing of land for the construction of owner-occupied commercial properties	27.3	0.3	-0.4	27.4	0.8
Lease agreements	22.9	35.1	-10.2	45.1	0.2
Contracting	15.9	47.4	-6.1	56.8	0.6
Vehicle leases	2.6	5.0	-2.7	4.8	0.0
Tenancy and license agreements	0.6	0.0	-0.1	0.5	0.0
Leases of IT equipment	3.0	1.4	-1.3	2.1	0.0
Metering technology		40.4	-1.2	38.2	0.0
	72.3	**129.6**	**-22.0**	**174.9**	**1.6**

in € million	Carrying amount of right-of-use assets Jan. 1, 2020	Additions 2020	Depreciation 2020	Carrying amount of right-of-use assets Dec. 31, 2020	Interest expenses 2020
Leasing of land for the construction of owner-occupied commercial properties	26.2	1.5	-0.3	27.3	0.7
Lease agreements	21.4	9.3	-7.7	22.9	0.3
Contracting	19.7	0.8	-4.5	15.9	0.5
Vehicle leases	6.3	1.4	-4.9	2.6	-
Tenancy and license agreements	2.4	1.7	-1.5	0.6	-
Leases of IT equipment	4.4	0.2	-1.6	3.0	-
	80.4	**14.9**	**-20.5**	**72.3**	**1.5**

The interest expenses recognized in the 2021 fiscal year resulting from leases pursuant to IFRS 16 amounted to € 15.8 million (2020: € 16.1 million), mainly from leasehold contracts (€ 14.2 million).

In the 2021 fiscal year, a total of 279 lease contracts (2020: 479) were classified as short-term leases and thus were not recognized in line with the accounting option available. The corresponding expenses, recognized in the 2021 fiscal year, amounted to € 0.7 million (2020: € 1.7 million). Expenses relating to leases of low-value assets amounting € 1.2 million in the 2021 fiscal year (2020: € 0.0 million) mostly result from leased office equipment. Expenses totaling € 7.2 million were incurred in connection with variable lease payments made in the 2021 fiscal year (2020: € 9.1 million). These have not been included in the measurement of lease liabilities.

In addition to variable lease payments as well as payments resulting from short-term leases and leases of low-value assets, each included in the cash flow from operating activities, interest payments and repayments of lease liabilities totaling € 43.1 million were incurred in the 2021 fiscal year (2020: € 38.4 million). Thus, the total cash outflow for leases in 2021 amounted to € 52.2 million (2020: € 49.2 million).

Total income from subleasing, mostly from subleasing of right-of-use assets in connection with rented residential, commercial and care home properties, amounts to € 9.4 million (2020: € 8.3 million). As of the reporting date, there were no significant non-cancellable subleases on the Spree-Bellevue property.

The loss arising from the rental of the sold Spree-Bellevue property (sale and leaseback transaction) in 2021 amounted to € 0.9 million (2020: loss of € 0.7 million). This does not have any material impact on the Group's cash flows.

44 Liabilities to Non-controlling Interests

Accounting Policies

Liabilities to non-controlling interests, which include obligations from the guaranteed dividend agreements, in particular, are stated at fair value when they are recognized for the first time. The fair value is, in principle, determined by the value of the respective company; if a contractually agreed minimum purchase price is higher than this amount, this purchase price is recognized.

The liabilities to non-controlling interests relate especially to the obligations to pay multiple guaranteed dividends as part of the valid profit-and-loss transfer agreements or co-investor agreements in an amount of € 240.5 million (Dec. 31, 2020: € 43.1 million).

45 Financial Liabilities from Tenant Financing

Accounting Policies

Financial liabilities from tenant financing include tenant financing contributions. The financing contributions relate to the contributions collected from tenants in Austria for subsidized apartments. These are reimbursed upon the termination of the rental contract following the deduction of a depreciation amount. The amount refunded can be collected again relating to new tenants. As these are generally rental contracts that can be terminated at any time, these liabilities are reported as current liabilities.

Financial liabilities from tenant financing also include maintenance and improvement contributions deposited by tenants (EVB). These contributions are paid by tenants in Austria to finance the costs associated with modernization work. The payment depends on the age of the building and must be used up for modernization work within 20 years of their receipt. Otherwise, the contributions have to be refunded to the tenant.

First-time recognition is at fair value. Subsequent measurement is at amortized cost.

The financial liabilities from tenant financing as of the reporting date include € 112.0 million (Dec. 31, 2020: € 117.4 million) in tenant financing contributions. In addition, the financial liabilities from tenant financing include € 45.5 million (Dec. 31, 2020: € 46.0 million) in maintenance and improvement contributions deposited by tenants (EVB).

46 Other Liabilities

in € million	Dec. 31, 2020 non-current	Dec. 31, 2020 current	Dec. 31, 2021 non-current	Dec. 31, 2021 current
Advance payments received	–	79.6	–	101.2
Miscellaneous other liabilities	2.6	123.7	5.2	127.6
	2.6	**203.3**	**5.2**	**228.8**

The advance payments received include on-account payments of € 38.6 million (Dec. 31, 2020: € 53.1 million) from tenants for ancillary costs after offsetting against the corresponding trade receivables.

The miscellaneous other liabilities include purchase price liabilities in the amount of € 22.9 million (Dec. 31, 2020: € 32.7 million) for the acquisition of further shares in companies that are already consolidated.

Section (F): Corporate Governance Disclosures

47 Related Party Transactions

Vonovia had business relationships with unconsolidated subsidiaries in the 2021 fiscal year. These transactions resulted from the normal exchange of deliveries and services and are shown in the table below:

	Purchased services		Receivables		Liabilities		Advance payments	
in € million	2020	2021	2020	2021	2020	2021	2020	2021
Associated companies	5.8	28.8	3.9	657.9	3.0	0.9		110.0
Joint ventures				148.6				8.8
Other non consolidated subsidiaries			5.0	1.8				
	5.8	**28.8**	**8.9**	**808.3**	**3.0**	**0.9**	**-**	**118.8**

Through the acquisition of Deutsche Wohnen, there were business dealings with the QUARTERBACK Group in the 2021 fiscal year. These transactions generally resulted from the normal exchange of deliveries and services, and all were concluded based on customary market conditions. As of the reporting date, loan receivables were recognized in the amount of € 806.5 million (previous year: € 252.4 million), which are payable at the latest twelve months after the reporting date. The average interest rate for the loans is 5.05%. As of December 31, 2021 the QUARTERBACK Group concluded additional project development sales to subsidiaries of Deutsche Wohnen SE in the amount of € 876.0 million (previous year: € 292.5 million), for which the Deutsche Wohnen Group made advance payments of € 135.8 million (previous year: € 17.0 million). As of December 31, 2021 outstanding balances on receivables were recognized in the amount of € 0.0 million (previous year: € 0.8 million). In connection with new agency services contracted by the QUARTERBACK Group in the amount of € 16.6 million, Deutsche Wohnen has outstanding balances on receivables as of December 31, 2021 of € 0.9 million (previous year: € 0.0 million). Furthermore, a guarantee was granted to the QUARTERBACK Group in the amount of € 12.3 million in the fiscal year under review. In addition, Isaria München Projektentwicklungs GmbH was sold to the QUARTERBACK Immobilien Group for € 12.5 million in the first quarter of 2021.

At Vonovia, the individuals in key positions pursuant to IAS 24 include the members of the Management Board and the Supervisory Board of Vonovia SE.

The emoluments to key management personnel, which are subject to a disclosure requirement under IAS 24, include the remuneration of the active members of the Management Board and of the Supervisory Board.

The active members of the Management Board and Supervisory Board received the following remuneration:

in € million	2020	2021
Short-term benefits (without share-based payment)	7.9	8.0
Post-employment benefits	2.2	2.4
Termination benefits	1.4	0.6
Share-based payment	8.4	4.4
	19.9	**15.4**

The service cost resulting from provisions for pensions for the active Management Board members is reported under post-employment benefits. The disclosure on share-based payments is based on the expenses in the fiscal year, which are also reported in chapter [F48] Share-Based Payments.

The Management Board and Supervisory Board members were not granted any loans or advances.

48 Share-Based Payments

Accounting Policies

The **obligations arising from share-based payments** are calculated using standard valuation methods based on option pricing models.

Equity-settled share-based payments are recognized at the grant date at the fair value of the equity instruments vested by that date. The fair value of the obligation is therefore recognized as personnel expenses proportionally over the vesting period and is offset directly against the capital reserves.

The cash-settled share-based payments are shown under other provisions and remeasured at fair value at each reporting date. The expenses are also recognized as personnel expenses over the vesting period (see chapter [E39] Provisions).

Management Board

As part of the LTIP plan in place since 2015, the Management Board members are granted a fixed number of phantom stocks (performance share units or "PSU") annually, which are paid out at the end of a four-year performance period based on the extent to which a pre-defined target achievement level has been reached and on the development of the share price. The pre-defined target achievement level is based on the targets Relative Total Shareholder Return (RTSR), since this year the development of EPRA Net Tangible Assets (NTA) per share, the development of the Group FFO per share, and since this year the Sustainability Performance Index (SPI), with each target weighted equally at 25%. As a result, this LTIP plan constitutes a form of cash-settled share-based payment pursuant to IFRS 2; in turn, the payout claim can be lost entirely if the defined target achievement level has not been reached.

The value of the total phantom stocks that had been granted but not paid out from the LTIP as of December 31, 2021 was calculated by an external expert based on recognized actuarial principles. The obligation disclosed as of the reporting date breaks down as follows:

Tranche in €	End of vesting period	Dec. 31, 2021
2018–2021	Dec. 31, 2021	4,976,286
2019–2022	Dec. 31, 2022	4,533,910
2020–2023	Dec. 31, 2023	2,792,495
2021–2024	Dec. 31, 2024	1,154,750

The LTIP plan program resulted in expenses pursuant to IFRS 2 totaling € 5.1 million in the 2021 reporting year (2020: € 8.4 million).

Management Boards of Deutsche Wohnen

In the 2021 reporting year, the Management Board members of Deutsche Wohnen received the value of phantom stocks – Restricted Share Units (RSU) – for a total period of four years, which were granted every April 1 when they first assumed the office of company Board Members. The Restricted Share Units represented the virtual value of the Deutsche Wohnen share based on a 30-trading day reference price as of the granting date and the gross dividends accrued (under the law of obligations). Expenses of € 0.1 million were incurred by the Deutsche Wohnen Group for the RSU program in the fourth quarter of 2021. RSUs are no longer in place as instruments of remuneration and were no longer a component of the 2021 remuneration system.

Executives Below Management Board Level

The LTIP plan has been in place for the first level of management since 2016. This LTIP plan is based largely on the LTIP in place for the Management Board, also regarding the identical performance objectives and the calculation of the objective values with regard to the minimum value, the "target achievement value," and the maximum value.

The value of the total phantom stocks that had been granted but not paid out from the LTIP as of December 31, 2021 was calculated by an external expert based on recognized actuarial principles. The obligation disclosed as of the reporting date breaks down as follows:

Tranche in €	End of Vesting Period	Dec. 31, 2021
2018	Dec. 31. 2021	2,288,526
2019	Dec. 31. 2022	1,938,886
2020	Dec. 31. 2023	1,030,527
2021	Dec. 31. 2024	416,961

The LTIP plan program results, in accordance with IFRS, in expenses of € 1.7 million in the 2021 reporting year (2020: € 4.4 million).

Employees

The Group works council "Employee Share Program" was concluded in 2014. The program started in the 2015 calendar year, with the shares granted subject to a vesting period of six months. The costs associated with the securities deposit account are borne by Vonovia. Shares with a value of between € 90.00 and € 360.00 at the most are granted to employees, depending on their gross annual salary, without the employees having to make any contribution of their own.

The new employee share program resulted in expenses totaling € 2.4 million in the 2021 reporting year (2020: € 2.3 million), which have been offset directly against the capital reserves.

49 Remuneration

Remuneration of the Supervisory Board

The members of the Supervisory Board received total remuneration of € 1.8 million during the 2021 fiscal year (2020: € 1.8 million) for their work.

Total Remuneration of the Management Board

The total remuneration paid to the members of the Management Board comprises the following:

Total remuneration of the Management Board in €	Total remuneration	
	2020	2021
Fixed remuneration and short-term variable remuneration	6,800,995	7,186,465
Total long-term variable share-based remuneration	5,412,866	4,828,565
of which		
2020–2023	5,412,866	–
2021–2024	–	4,828,565
(number of shares)	97,115	88,524
Total remuneration	**12,213,861**	**12,015,030**

The remuneration paid to the Management Board members includes the remuneration for all mandates at Vonovia Group companies, subsidiaries and participating interests.

Remuneration of Former Management Board Members and Their Surviving Dependents

Total remuneration of former Management Board members and their surviving dependents amounts to € 0.9 million for the 2021 fiscal year (2020: € 1.7 million). In accordance with the provisions of the termination agreement with Klaus Freiberg, this remuneration includes compensation payable following termination of his contract of employment on December 31, 2019 amounting to € 0.6 million.

The defined benefit obligation (DBO) to former members of the Management Board and their surviving dependents amounts to € 20.5 million (2020: € 22.1 million).

50 Auditors' Fees

In the fiscal year, the following fees (including expenses and excluding VAT) have been credited for the services rendered by the Group auditors KPMG Wirtschaftsprüfungsgesellschaft:

in € million	2020	2021
Audits	5.0	8.4
Other confirmation services	0.4	3.1
	5.4	**11.5**

All of the services rendered were consistent with the activities performed as the auditor of the annual financial statements and consolidated financial statements of Vonovia SE.

The fee paid for auditing services performed by KPMG AG Wirtschaftsprüfungsgesellschaft relates to the audit of the consolidated financial statements and annual financial statements of Vonovia SE as well as to various audits of annual financial statements and a review of one set of annual financial statements of Group companies. The consolidated interim financial statements were reviewed and the financial statements were audited in accordance with audit standard IDW PS 490.

The other confirmation services comprised reviews of reconciliations on the interest threshold based on audit standard IDW PS 900, business audits performed in accordance with ISAE 3000 relating to various housing assistance reports and the use of funds from KfW loans. Other confirmation services also included services associated with the issue of comfort letters, the review of the pro forma financial information and the issue of valuation certificates.

51 Declaration of Conformity with the German Corporate Governance Code

In December 2021, the Management Board and the Supervisory Board issued a Declaration of Conformity with the recommendations of the German Corporate Governance Code in accordance with Section 161 of the German Stock Corporation Act (AktG) and made it permanently available on the **company's website**.

Section (G): Additional Financial Management Disclosures

Other Notes and Disclosures

52 Additional Financial Instrument Disclosures

Measurement categories and classes:

in € million	Carrying amounts Dec. 31, 2021
Assets	
Cash and cash equivalents	
Cash on hand and deposits at banking institutions	1,134.0
Money market funds	298.8
Trade receivables	
Receivables from the sale of properties	104.6
Receivables from property letting	48.6
Other receivables from trading	32.7
Receivables from the sale of real estate inventories (Development)	264.0
Financial assets	
Investments valued at equity	548.9
Finance lease receivables	23.7
Other current financial receivables from financial transactions*	499.6
Loans to other investments	33.2
Other non-current loans	511.8
Other non-current loans to associates and joint ventures	563.1
Non-current securities	5.2
Other investments	377.0
Derivative financial assets	
Cash flow hedges (cross currency swaps)	35.8
Stand-alone interest rate swaps and interest rate caps as well as embedded derivatives	30.6
Liabilities	
Trade payables	449.8
Non-derivative financial liabilities	47,029.0
Derivative financial liabilities	
Purchase price liabilities from put options/rights to reimbursement	264.0
Stand-alone interest rate swaps and interest rate caps	53.9
Cash flow hedges	14.3
Lease liabilities	679.1
Liabilities from tenant financing	157.5
Liabilities to non-controlling interests	240.5

* This includes time deposits and short-term investments in highly liquid money market funds with an original maturity of more than three months.

Amounts recognized in balance sheet in accordance with IFRS 9						
Amortized cost	Fair value affecting net income	Fair value recognized in equity with reclassification	Fair value recognized in equity without reclassification	Amounts recognized in balance sheet in acc. with IFRS 16/IAS 28	Fair value Dec. 31, 2021	Fair value hierarchy level
1,134.0					1,134.0	1
298.8					298.8	2
104.6					104.6	2
48.6					48.6	2
32.7					32.7	2
264.0					264.0	2
				548.9	548.9	n.a.
				23.7	23.7	
499.6					499.6	2
33.2					54.8	2
511.8					511.8	2
563.1					563.1	2
			5.2		5.2	1
			377.0		377.0	2
	-14.0	49.8			35.8	2
	30.6				30.6	2
449.8					449.8	2
47,029.0					-47,596.5	2
264.0					264.0	3
	53.9				53.9	2
	11.4	2.9			14.3	2
				679.1		
157.5					157.5	2
240.5					240.5	2

Measurement categories and classes:

in € million	Carrying amounts Dec. 31, 2020
Assets	
Cash and cash equivalents	
Cash on hand and deposits at banking institutions	613.3
Trade receivables	
Receivables from the sale of properties	65.3
Receivables from property letting	38.0
Other receivables from trading	16.0
Receivables from the sale of real estate inventories (Development)	149.6
Financial assets	
Investments valued at equity	32.9
Loans to other investments	33.3
Other non-current loans	11.3
Non-current securities	4.9
Other investments	311.2
Derivative financial assets	
Cash flow hedges (cross currency swaps)	18.8
Stand-alone interest rate swaps and interest rate caps as well as embedded derivatives	4.0
Liabilities	
Trade payables	234.5
Non-derivative financial liabilities	24,084.7
Derivative financial liabilities	
Purchase price liabilities from put options/rights to reimbursement	220.5
Stand-alone interest rate swaps and interest rate caps	47.2
Cash flow hedges	31.3
Lease liabilities	495.1
Liabilities from tenant financing	163.4
Liabilities to non-controlling interests	43.1

The section below provides information on the financial assets and financial liabilities not covered by IFRS 9:

> Employee benefits in accordance with IAS 19: Gross presentation of right to reimbursement arising from transferred pension obligations in the amount of € 3.5 million (Dec. 31, 2020: € 4.3 million).
> Amount by which the fair value of plan assets exceeds the corresponding obligation of € 1.0 million (Dec. 31, 2020: € 0.8 million).
> Provisions for pensions and similar obligations: € 684.5 million (Dec. 31, 2020: € 627.8 million).

	Amounts recognized in balance sheet in accordance with IFRS 9						
	Amortized cost	Fair value affecting net income	Fair value recognized in equity with reclassification	Fair value recognized in equity without reclassification	Amounts recognized in balance sheet in acc. with IFRS 16/IAS 28	Fair value Dec. 31, 2020	Fair value hierarchy level
	613.3					613.3	1
	65.3					65.3	2
	38.0					38.0	2
	16.0					16.0	2
	149.6					149.6	2
					32.9	32.9	n.a.
	33.3					63.3	2
	11.3					11.3	2
				4.9		4.9	1
				311.2		311.2	2
		-13.1	31.9			18.8	2
		4.0				4.0	2
	234.5					234.5	2
	24,084.7					25,767.7	2
	220.5					220.5	3
		47.2				47.2	2
		12.1	19.2			31.3	2
					495.1		
	163.4					163.4	2
	43.1					43.1	2

The following table shows the assets and liabilities that are recognized in the balance sheet at fair value and their classification according to the fair value hierarchy:

in € million	Dec. 31, 2021	Level 1	Level 2	Level 3
Assets				
Investment properties	94,100.1			94,100.1
Financial assets				
Non-current securities	5.2	5.2		
Other investments	377.0		377.0	
Assets held for sale				
Investment properties (contract closed)	1,661.5		1,661.5	
Derivative financial assets				
Cash flow hedges (cross currency swaps)	35.8		35.8	
Stand-alone interest rate swaps and caps as well as embedded derivatives	30.6		30.6	
Liabilities				
Derivative financial liabilities				
Cash flow hedges	14.3		14.3	
Stand-alone interest rate swaps and caps	53.9		53.9	

in € million	Dec. 31, 2020	Level 1	Level 2	Level 3
Assets				
Investment properties	58,071.8			58,071.8
Financial assets				
Non-current securities	4.9	4.9		
Other investments	311.2		311.2	
Assets held for sale				
Investment properties (contract closed)	164.9		164.9	
Derivative financial assets				
Cash flow hedges (cross currency swaps)	18.8		18.8	
Stand-alone interest rate swaps and caps as well as embedded derivatives	4.0		4.0	
Liabilities				
Derivative financial liabilities				
Cash flow hedges	31.3		31.3	
Stand-alone interest rate swaps and caps	47.2		47.2	

In general, Vonovia measures its investment properties on the basis of the discounted cash flow (DCF) methodology (Level 3). The material valuation parameters and valuation results can be found in chapter [D28] Investment Properties.

The investment properties classified as assets held for sale are recognized at the time of their transfer to assets held for sale at their new fair value, the agreed purchase price (Level 2).

No financial instruments were reclassified to different hierarchy levels as against the comparative period.

Securities and shares in listed companies included in other investments are generally measured using the quoted prices in active markets (Level 1).

For the measurement of financial instruments, cash flows are initially calculated and then discounted. In addition to the tenor-specific EURIBOR/STIBOR rates (3M; 6M), the respective credit risk is taken as a basis for discounting. Depending on the expected cash flows, either Vonovia's own credit risk or the counterparty risk is taken into account in the calculation.

For the consolidated financial statements, Vonovia's own credit risk was fundamentally relevant for interest rate swaps. This credit risk is derived for material risks from rates observable on the capital markets and ranges from 5 to 155 basis points, depending on the residual maturities of financial instruments. Regarding the positive market values of the cross currency swaps, a counterparty risk of 15 basis points was taken into account.

The calculated cash flows of the cross currency swaps result from the forward curves for USD/EUR. The cash flows are discounted on the basis of the reference interest rate of each currency (STIBOR and EURIBOR) and translated into euros at the current exchange rate (Level 2).

The fair values of the cash and cash equivalents, trade receivables and other financial receivables approximate their carrying amounts at the reporting date owing to their mainly short maturities. The amount of the estimated impairment loss on cash and cash equivalents was calculated based on the losses expected over a period of twelve months. It was determined that the cash and cash equivalents have a low risk of default due to the external ratings and short residual maturities and that there is no need for any material impairment of cash and cash equivalents.

The fair value of the purchase price liabilities from put options/rights to reimbursement granted to minority shareholders is generally based on the going concern value of the respective company; if a contractually agreed minimum purchase price is higher than this amount, this purchase price is recognized (Level 3). The unobservable valuation parameters may fluctuate depending on the going concern values of these companies. However, a major change in value is not likely, as the business model is very predictable.

in € million	From interest	Income from other non-current loans	From subsequent measurement: Dividends from other invest-ments	Impairment losses	Derecog-nized re-ceivables	Derecog-nized liabil-ities	Financial result affecting income 2021	Measure-ment of cash flow hedges	Measure-ment of fi-nancial in-struments categorized as equity instru-ments	Total financial result 2021
2021										
Debt instruments carried at (amortized) cost	21.1	13.1	–	-23.2	-2.5	–	8.5	–	–	8.5
Debt instruments measured at FVOCI	–	–	27.7	–	–	–	27.7	–	–	27.7
Derivatives measured at FV through P&L with reclassification	-0.2	–	–	–	–	–	-0.2	–	–	-0.2
Debt instruments measured at FVOCI with reclassification	–	–	–	–	–	–	–	26.1	–	26.1
Equity instruments measured at FVOCI without reclassification	–	–	–	–	–	–	–	–	81.1	81.1
Financial liabilities measured at (amortized) cost	-385.4	–	–	–	–	3.5	-381.9	–	–	-381.9
	-364.5	**13.1**	**27.7**	**-23.2**	**-2.5**	**3.5**	**-345.9**	**26.1**	**81.1**	**-238.7**

in € million	From interest	Dividends from other invest-ments	Impairment losses	Derecog-nized re-ceivables	Derecog-nized liabil-ities	Financial result affecting income 2020	Measure-ment of cash flow hedges	Measure-ment of fi-nancial in-struments categorized as equity instru-ments	Total financial result 2020
			From subsequent measurement						
2020									
Debt instruments carried at (amortized) cost	21.8	–	-40.0	0.0	–	-18.2	–	–	-18.2
Debt instruments measured at FVOCI	–	13.4	–	–	–	13.4	–	–	13.4
Derivatives measured at FV through P&L with reclassification	-59.2	–	–	–	–	-59.2	–	–	-59.2
Debt instruments measured at FVOCI with reclassification	–	–	–	–	–	–	24.0	–	24.0
Equity instruments measured at FVOCI without reclassification	–	–	–	–	–	–	–	9.0	9.0
Financial liabilities measured at (amortized) cost	-329.8	–	–	–	0.7	-329.1	–	–	-329.1
	-367.2	**13.4**	**-40.0**	**0.0**	**0.7**	**-393.1**	**24.0**	**9.0**	**-360.1**

53 Information on the Consolidated Statement of Cash Flows

The statement of cash flows shows how Vonovia's cash has changed during the reporting year as a result of cash inflows and outflows. In accordance with IAS 7 (Statement of Cash Flows), a distinction is made between changes in cash flow from operating activities, investing activities and financing activities.

The cash flow from operating activities is determined from the profit for the period using the indirect method, the profit for the period being adjusted for effects of transactions that are not cash-effective, any deferrals or accruals of past or future operating cash receipts or payments as well as items of income or expense associated with investing or financing cash flows.

The effects of changes in the scope of consolidation are shown separately. Therefore, direct comparison with the corresponding changes in the items of the consolidated balance sheet is not possible.

The proceeds from the disposal of intangible assets, property, plant and equipment and investment properties are shown in cash flow from investing activities.

Exercising the IAS 7 option, interest received is shown under cash flow from investing activities and interest paid is shown under cash flow from financing activities.

The item "Payments for acquisition of investment properties" mainly shows expenses for modernization measures.

54 Financial Risk Management

In the course of its business activities, Vonovia is exposed to various financial risks. The Group-wide financial risk management system aims to identify any potentially negative impact on the financial position of the Group early on and take suitable measures to limit this impact. For the structure and organization of financial risk management, we refer to the management report (see → **Risk Management Structure and Instruments**). This system was implemented on the basis of Group guidelines, which were approved by the Management Board and which are continually reviewed. The risks associated with financial instruments and the corresponding risk management are described in detail as follows:

Market Risks

Currency Risks

The cash-effective currency risks arising in connection with the still to be issued USD bond were eliminated by the contracting of cross currency swaps. Liquidity transfers from the German subgroup to Swedish subsidiaries are usually secured through the conclusion of foreign currency forwards. Nevertheless, currency fluctuations are expected to result from financing relationships with Swedish subsidiaries. The loans paid in Swedish krona to Swedish subsidiaries rose to SEK 20,271.3 million (Dec. 31, 2020: SEK 20,226.3 million). Based on the exchange rate as of December 31, 2021, a -5% change in the value of the Swedish krona against the euro would result in currency gains of € 9.9 million, while a change of +5% would result in a currency loss of € 9.8 million. Vonovia is subject to no further material currency risks in the scope of its usual business activities.

Interest Rate Risks

In the course of its business activities, Vonovia is exposed to cash-effective interest rate risks as a result of floating-rate debt as well as new and follow-on loans. Within this context, the interest markets are continually monitored by the Finance and Treasury department. Its observations are incorporated into the financing strategy.

As part of its financing strategy, Vonovia uses derivative financial instruments, in particular interest rate swaps and caps, to limit or manage interest rate risks. Vonovia's policies permit the use of derivatives only if they are associated with underlying assets or liabilities, contractual rights or obligations and planned, highly probable transactions.

A sensitivity analysis for cash flow hedges is provided under chapter [G56] Cash Flow Hedges and Stand-alone Interest Rate Swaps.

Other Risks

Vonovia also acts as an energy supply company through its subsidiary Vonovia Energie Service GmbH. Contracts used for procurement and in the context of sales do not constitute financial instruments under IFRS 9. However, because the contracts used are managed in a comparable manner, this business area is also presented below. Due in particular to the current strong fluctuations in energy procurement conditions, there is a risk that planned energy procurement prices may not be realized. This indirectly results in the risk of the energy sales business becoming loss-making. Vonovia hedges against these risks with a broad range of risk management instruments, which, in addition to a structured multi-year procurement strategy and systematic risk monitoring, also offers the option of price adjustments during the year. This has significantly reduced market price risks in the current highly dynamic situation on the energy procurement markets.

Credit Risks

Vonovia is exposed to a default risk resulting from the potential failure of a counterparty to fulfill its part of the contract. In order to minimize risks, financial transactions are generally only executed with banks and partners whose credit rating has been found by a rating agency to be at least equivalent to Vonovia's. These counterparties are assigned volume limits set by the Management Board. The counterparty risks are managed and monitored centrally by the Finance and Treasury department.

Liquidity Risks

The companies of Vonovia are financed by borrowings to a notable degree. Due to their high volume, the loans are in some cases exposed to a considerable refinancing risk. The liquidity risks arising from financing transactions with high volumes (volume risks) have become apparent in the financial sector, especially in the wake of the financial crisis. In order to limit these risks, Vonovia is in constant contact with many different market players, continuously monitors all financing options available on the capital and banking markets and uses these options in a targeted manner. Moreover, Vonovia subjects its existing financings to an early review prior to the respective final maturity date in order to ensure refinancing.

Under the conditions of existing loan agreements, Vonovia is obliged to fulfill certain financial covenants such as the debt service coverage ratio or debt-equity ratio. If financial covenants are violated, the breach is not rectified within so-called cure periods and no mutually acceptable agreement can be reached with the lenders, the financing may be restructured and the cost structure changed. Should all commonly practiced solutions be unsuccessful, the lenders could call in the loan. The fulfillment of these financial covenants is continually monitored by the Finance and Treasury department on the basis of current actual figures and budgetary accounting.

In order to ensure its ability to pay at all times, Vonovia has put a system-supported cash management system in place. This system monitors and optimizes Vonovia's cash flows on an ongoing basis and provides the Management Board with regular reports on the Group's current liquidity situation. Liquidity management is supplemented by short-term rolling, monthly liquidity planning for the current fiscal year, of which the Management Board is also promptly notified. In order to minimize credit risks, large amounts of cash on hand are avoided wherever possible. In the event that large reserves are necessary on a short-term basis due to pending investments or refinancing, these are distributed among various instruments and banking partners with good credit ratings.

The following table shows the forecast for undiscounted cash flows of the non-derivative financial liabilities and derivative financial instruments for the 2021 reporting year. The loan repayments shown for the following years contain only contractually fixed minimum repayment amounts:

		2022		2023		2024 to 2028	
in € million	Carrying amount as of Dec. 31, 2021	Interest	Repayment	Interest	Repayment	Interest	Repayment
Non-derivative financial liabilities							
Liabilities to banks	21,263.4	118.0	846.7	149.2	1,619.4	484.1	7,437.7
Liabilities to other creditors	25,592.9	200.7	5,837.7	307.0	2,713.2	1,100.2	11,956.1
Deferred interest from other non-derivative financial liabilities	172.7	172.7	–	–	–	–	–
Lease liabilities	679.1	15.1	22.4	14.8	14.2	71.5	40.0
Financial liabilities from tenant financing	157.5	–	114.6	–	2.1	–	10.2
Derivative financial liabilities							
Purchase price liabilities from put options/rights to reimbursement	264.0	–	47.8	–	–	–	34.0
Cash flow hedges/stand-alone interest rate derivatives	35.6	46.0	–	35.5	–	28.4	–
Cash flow hedges (cross currency swap) USD in €	-35.2	-10.2	–	-10.2	-185.0		
Cash flow hedges (cross currency swap) in €		8.4	–	8.4	185.0		
Deferred interest from swaps	1.4	1.4	–	–	–	–	–

in € million	Carrying amount as of Dec. 31, 2020	2021 Interest	2021 Repayment	2022 Interest	2022 Repayment	2023 to 2027 Interest	2023 to 2027 Repayment
Non-derivative financial liabilities							
Liabilities to banks	6,909.0	93.0	1,075.0	83.2	410.0	282.6	3,599.0
Liabilities to other creditors	17,060.5	124.5	520.3	216.5	2,172.5	668.8	8,744.8
Deferred interest from other non-derivative financial liabilities	115.2	–	–	–	–	–	–
Lease liabilities	495.1	15.1	22.4	14.8	14.2	71.5	40.0
Financial liabilities from tenant financing	163.4	–	118.1	–	2.1	–	10.4
Derivative financial liabilities							
Purchase price liabilities from put options/rights to reimbursement	220.5	–	51.0	–	–	–	27.8
Cash flow hedges/stand-alone interest rate derivatives	72.8	39.2	–	37.5	–	42.7	–
Cash flow hedges (cross currency swap) USD in €	-18.4	-10.2	–	-10.2	–	-10.2	-185.0
Cash flow hedges (cross currency swap) in €		8.5	–	8.4	–	8.4	185.0
Deferred interest from swaps	1.3	1.3	–	–	–	–	–

Credit Line

Up until the end of September, there was an agreement in place on a syndicated revolving credit facility of € 1,000 million between Vonovia Finance B.V. and several banks, led by Commerzbank AG. This agreement, which was originally set to run until 2024, was terminated prematurely in September 2021 and replaced with a comparable master agreement with a volume of € 2,000 million between Vonovia SE and a banking consortium led by Commerzbank AG. An increase option of € 1,000 million was utilized in November, meaning that a total volume of € 3,000 million has been available through this credit facility ever since. Drawdowns can be made in euros or Swedish krona under the agreement, which will end in 2024, with interest based on the EURIBOR or STIBOR, plus an additional margin. This credit line had not been used as of December 31, 2021.

Project-specific credit lines totaling around € 49.8 million were available on the reporting date in connection with bank-financed development projects. The nominal amount of these agreements totals € 227.5 million. These credit lines can be utilized based on the progress of the construction work, provided that corresponding evidence is submitted, taking the contractually agreed payment requirements into account.

In the Deutsche Wohnen subgroup, there are a total of six framework credit agreements with various banks and a total volume of € 450 million. Bills of exchange may also be issued under the terms of one of these agreements, concluded with Aareal Bank in a framework volume of € 10 million. As of the reporting date, bills of exchange with a total volume of around € 1.8 million were outstanding. Three of the credit facilities, with a total volume of € 400 million, are contractually due to end in 2022. There is also a guarantee framework agreement with Euler Hermes in the amount of € 50.0 million, with a volume of some € 31 million having been issued as of the reporting date.

There is also a guarantee credit agreement in place between Vonovia and Commerzbank that was increased from € 35.0 million to € 50.0 million in May 2021. Bills of exchange of approximately € 35.5 million had been drawn from this amount as of December 31, 2021. There is another guarantee credit agreement with Raiffeisen Bank International AG in the amount of € 5.0 million. It had not been drawn by the reporting date.

In December 2019, Vonovia SE concluded two guarantee lines that can be used on a revolving basis with Atradius Credit Insurance N.V. and Swiss Re International SE. Vonovia SE has granted a letter of comfort for a further, already terminated general guarantee agreement between BUWOG Bauträger GmbH and VHV Allgemeine Versicherung AG, under which guarantees of € 0.4 million are currently in force. No new guarantees will be issued under this agreement. Within the BUWOG subgroup, there is also a guarantee line that can be used on a revolving basis with UniCredit Bank Austria AG.

As of December 31, 2021 the total volume available under general guarantee agreements came to € 160.5 million, € 105.2 million of which had been drawn by the reporting date. In addition, a project-specific development financing arrangement with Berliner Volksbank eG allows for the possibility of making use of bills of exchange, bonds and/or guarantees. As of the reporting date of December 31, 2021 an amount of € 0.2 million had been used. As of the reporting date, a guarantee of Frankfurter Sparkasse of approx. € 2.9 million had been drawn, as had a guarantee of Kreissparkasse Gelnhausen of approx. € 0.25 million.

In November 2017, Vonovia concluded a master commercial paper agreement via its Dutch financing company with a total volume of € 500.0 million with Commerzbank AG as lead arranger and several banks as traders. This master program was increased to a total volume of € 1,000.0 million in September 2018. No issues were outstanding as part of this program as of December 31, 2021.

All in all, Vonovia has cash on hand and deposits at banking institutions of € 1,134.0 million as of the reporting date (Dec. 31, 2020: € 613.3 million). The master credit agreements/the commercial paper program, together with the cash on hand, guarantee Vonovia's ability to pay at all times.

We refer to the information on financial risk management in the management report.

55 Capital Management

Vonovia's management aims to achieve a long-term increase in value in the interests of customers, employees and investors. Within this context, maintaining a degree of financial flexibility in order to be able to pursue the company's growth and portfolio optimization strategy is crucial. This is why Vonovia's capital management focuses on ensuring our investment grade rating. The priority is to ensure sufficient liquidity resources and maintain an efficient ratio between secured and non-secured capital components.

As part of the opportunities and risk management of Vonovia, the members of the Management Board are given monthly reports on the development of results and their potential effects on the capital structure.

The equity situation of the subsidiaries is regularly examined.

Vonovia's equity developed as follows:

in € million	Dec. 31, 2020	Dec. 31, 2021
Total equity	24,831.8	36,545.1
Total assets	62,417.4	106,320.3
Equity ratio	39.8%	34.4%

Vonovia plans to continue funding possible acquisitions by an optimal mix of debt capital and equity.

In order to protect itself against changes in exchange rates and interest rates, Vonovia regularly contracts derivative hedging transactions in the case of liabilities with variable interest rates or liabilities in foreign currencies. The Finance and Treasury department is responsible for implementing the approved financing strategy.

56 Cash Flow Hedges and Stand-alone Interest Rate Swaps

On the reporting date, the nominal volume of cash flow hedges held in euros amounts to € 1,109.5 million (Dec. 31, 2020: € 1,117.4 million). Interest rates on hedging instruments are between 0.064% and 3.760% with original swap periods of between 4.75 and 20 years.

For three hedging instruments that are maintained within so-called passive hedge accounting, € 9.6 million was reclassified affecting net income in the reporting year in line with the expected cash flows from the underlying hedged items. This reduced the value recognized in other comprehensive income to € 18.7 million.

All derivatives are included in netting agreements with the issuing banks.

Cross currency swaps were recognized at their positive fair values. While the interest rate swap redesignated by BUWOG – Bauen und Wohnen Gesellschaft mbH in the previous year also shows a positive fair value, each of the other euro interest rate swaps has a negative fair value as of the reporting date.

No economic or accounting offsetting was performed in the reporting year.

Key parameters of the interest rate swaps were as follows:

in € million	Face value	Beginning of term	End of term	Current average interest rate (incl. margin)
Bonds (EMTN)				
Hedged items	600.0	Mar. 22, 2018	Dec. 22, 2022	3M EURIBOR margin 0.45%
Interest rate swaps	600.0	Mar. 22, 2018	Dec. 22, 2022	0.793%
HELABA				
Hedged items	146.6	Jan. 28, 2019	Apr. 30, 2024	1M EURIBOR margin 0.0%
Interest rate swaps	146.6	Jan. 28, 2019	Apr. 30, 2024	0.390%
Berlin Hyp				
Hedged items	146.6	Jan. 28, 2019	Apr. 30, 2024	1M EURIBOR margin 0.0%
Interest rate swaps	146.6	Jan. 28, 2019	Apr. 30, 2024	0.390%
Norddeutsche Landesbank (2)				
Hedged items	77.2	June 28, 2013	June 30, 2023	3M EURIBOR margin 1.47%
Interest rate swaps	77.2	June 28, 2013	June 30, 2023	2.290%
UniCredit Bank AG				
Hedged items	44.1	Oct. 01, 2018	Nov. 30, 2038	3M EURIBOR margin 1.32%
Interest rate swaps	44.1	Oct. 01, 2018	Nov. 30, 2038	1.505%
UniCredit Bank Austria AG				
Hedged items	95.0	Jan. 02, 2015	Dec. 31, 2034	3M EURIBOR margin 1.12%
Interest rate swaps	95.0	Sep. 18, 2020	Dec. 31, 2034	0.064%

In 2013, two cross currency swaps were contracted in equal amounts with each of JP Morgan Limited and Morgan Stanley Bank International Limited; these hedging instruments (cross currency swaps/CCS) became effective on the issuance of two bonds for a total amount of USD 1,000.0 million. The CCS, each for an amount of USD 375.0 million, fell due in October 2017 in line with the bonds. The hedging instruments, each for an amount of USD 125.0 million, originally had a term of ten years. This means that the EUR/USD currency risk resulting from the coupon and capital repayments was eliminated for the entire term of the bonds.

Key parameters of the cross currency swaps were as follows:

	Face value million USD	Face value million €	Beginning of term	End of term	Interest rate USD	Interest rate €	Hedging rate USD/€
J.P. Morgan Securities plc Morgan Stanley & Co. International plc							
Hedged items	250.0	185.0	Oct. 02, 2013	Oct. 02, 2023	5.00%		
CCS	250.0	185.0	Oct. 02, 2013	Oct. 02, 2023		4.58%	1.3517

As of September 30, 2021, 15 euro interest rate swaps with a nominal value of € 657.8 million were adopted as stand-alone hedging instruments by the Vonovia Group in connection with the acquisition of Deutsche Wohnen SE. In total, the fair values amounted to € -28.9 million as of first-time consolidation. The hedged nominal value corresponds to a volume of € 652.9 million as of the reporting date; overall, the fair values decreased to € -20.8 million.

With the takeover of a borrowing to Aggregate Holdings S.A. in the amount of € 250 million, Vonovia concluded a call option for 13.3% of shares in Adler-Group S.A. with the company, with a term of eight months. There was a positive fair value of € 20.2 million for the call option at the time of addition on October 7, 2021. The subsequent measurement of the call option is carried out at fair value through profit and loss in accordance with the IFRS 9 classification model. As of December 31, 2021 the subsequent measurement results in positive net interest of € 6.1 million.

The hedged nominal volume of currently 13 stand-alone interest rate swaps of BUWOG amounted to € 312.3 million as of December 31, 2021 (Dec. 31, 2020: € 351.4 million).

On the reporting date, the Hembla Group still recognized two stand-alone interest rate swaps and eight interest rate caps. The nominal value hedged in Swedish krona corresponds to a volume of € 946.8 million as of December 31, 2021 (Dec. 31, 2020: € 967.6 million), with the positive and negative fair values balancing each other out overall: € 0.0 million (Dec. 31, 2020: € -0.7 million). Due to the high prepayment fees, embedded derivatives from loan termination rights were not longer recognized as of the reporting date. The positive fair value of the previous year in the amount of € 2.7 million was derecognized accordingly in profit or loss.

On the reporting date, the Victoria Park Group recognized 17 stand-alone interest rate swaps and four interest rate caps. The nominal value hedged in Swedish krona corresponds to a volume of € 721.4 million as of December 31, 2021 (Dec. 31, 2020: € 939.6 million) with the fair value amounting to € -1.0 million in total (Dec. 31, 2020: € -7.7 million). The positive fair value of the embedded derivatives from termination rights of loans from the previous year in the amount of € 0.9 million was also derecognized in profit or loss in the reporting year.

The designation of the cash flow hedges as hedging instruments is prospectively determined on the basis of a sensitivity analysis, retrospectively on the basis of the accumulated dollar offset method. The fair value changes of the hedged items are determined on the basis of the hypothetical derivative method. In the reporting year – as in the prior year – the impact of default risk on the fair values is negligible and did not result in any adjustments of the balance sheet item.

In the reporting year, the cash flow hedges held in euros were shown at their clean fair values totaling € -12.3 million as of December 31, 2021 (Dec. 31, 2020: € -29.6 million). The corresponding deferred interest amounted to € -2.0 million (Dec. 31, 2020: € -1.7 million).

At the same time, positive market values from cross currency swaps in the amount of € 35.2 million (Dec. 31, 2020: € 18.4 million), together with positive market values in a total amount of € 30.6 million (Dec. 31, 2020: € 4.0 million), were recognized from the Adler option and stand-alone interest rate derivatives of Hembla, Victoria Park and Deutsche Wohnen. The corresponding deferred interest amounted to € 0.6 million (Dec. 31, 2020: € 0.4 million).

Financial liabilities also included negative fair values from stand-alone interest rate derivatives in the amount of € -53.9 million (Dec. 31, 2020: € -47.1 million).

The impact of the cash flow hedges (after income taxes) on the development of other reserves is shown below:

		Changes in the period		Reclassification affecting net income		
in € million	As of Jan. 1	Changes in CCS	Other	Currency risk	Interest risk	As of Dec. 31
2021	**-32.9**	**12.1**	**6.1**	**-11.7**	**14.5**	**-11.9**
2020	**-52.2**	**-5.4**	**-1.4**	**12.7**	**13.4**	**-32.9**

The impact of the cash flow hedges (including income taxes) on total comprehensive income is shown below:

Cash Flow Hedges

in € million	2020	2021
Change in unrealized gains/losses	-10.1	26.5
Taxes on the change in unrealized gains/losses	3.3	-8.3
Net realized gains/losses	34.1	-0.4
Taxes due to net realized gains/losses	-8.0	3.2
Total	**19.3**	**21.0**

In the reporting year, after allowing for deferred taxes, negative cumulative ineffectiveness for cash flow hedges amounted to € -0.1 million (2020: € 1.0 million), improving net interest by € 1.1 million. On the basis of the valuation as of December 31, 2020, Vonovia used a sensitivity analysis to determine the change in equity given a parallel shift in the interest rate structure of 50 basis points in each case:

	Change in equity		
in € million	Other reserves not affecting net income	Income statement affecting net income	Total
2021			
+50 basis points	6.1	21.8	27.9
-50 basis points	-5.8	-19.7	-25.5
2020			
+50 basis points	9.1	16.3	25.4
-50 basis points	-6.4	-15.0	-21.4

A further sensitivity analysis showed that a change in the foreign currency level of -5% (+5%) would lead, after allowance for deferred taxes, to a change in the other reserves not affecting net income of € -1.1 million (or € -0.9 million), while ineffectiveness affecting net income in the amount of € +1.6 million (or € +0.5 million) would result at the same time. In the previous year, a change in the other reserves not affecting net income of € -0.2 million (or € +0.2 million) was recognized in connection with ineffectiveness affecting net income in the amount of € +0.8 million (or € -0.7 million).

57 Contingent Liabilities

Contingent liabilities exist for cases in which Vonovia SE and its subsidiaries give guarantees to various contractual counterparts. The terms are in many cases limited to an agreed time. In some cases, the term is unlimited.

Contingent liabilities of Vonovia are as follows:

in € million	Dec. 31, 2020	Dec. 31, 2021
Guarantees in connection with Development	120.3	104.5
Rent surety bonds	1.6	3.2
Other	–	1.6
	121.9	**109.3**

Vonovia is involved in a number of legal disputes resulting from normal business activities. In particular, these involve disputes under the law of tenancy and sales disputes and, in individual cases, company law disputes (mainly following squeeze-out processes). None of the legal disputes, taken in isolation, will have any material effects on the net assets, financial position or results of operations of Vonovia.

58 Other Financial Obligations

The other financial obligations are as follows:

in € million	Dec. 31, 2020	Dec. 31, 2021
Other financial obligations		
Investment obligations	–	921.9
Obligations resulting from acquisition	–	868.1
Commitments under purchase orders for modernization	–	800.1
Cable TV service contracts	251.3	220.5
IT service contracts	28.5	62.0
Surcharges under the German Condominium Act	0.2	1.6
Other	13.7	26.4
	293.7	**2,900.6**

The obligations under cable TV service contracts are set against future income from the marketing of the cable TV service.

Bochum, Germany, March 10, 2022

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