

## VALUATION REPORT

in the form of a condensed valuation report ("Valuation Report") of the determination of Fair Value carried out by CBRE in accordance with the International Financial Reporting Standards (IFRS), the International Standards for the Valuation of Real Estate for Investment Purposes ("International Valuation Standards") and the RICS Valuation – Global Standards (July 2017) (Red Book) of the Royal Institution of Chartered Surveyors, for a purpose of a bond issue by **Vonovia SE** (the "Company"<sup>1</sup>) on a non-reliance basis. The Valuation Report covers 10,060 investment assets, thereof 9,927 assets in Germany, comprised of 333,314 residential units, thereof 331,270 units in Germany, 6,738 commercial units, thereof 6,207 in Germany and 88,383 miscellaneous rental units (internal and external parking units, antennas), thereof 86,979 units in Germany and Land consisting of undeveloped freehold land (143 assets) in Germany with an area of 1,151,805 sq m and 8 plots held on a ground lease in Germany with an area of 27,198 sq m (hereinafter referred to as "Land") as at 31 December 2018.

**Date of Valuation:** 31 December 2018

**Date of Valuation Report:** 28 February 2019

**Valuer:**

**CBRE**

CBRE GmbH  
Bockenheimer Landstraße 24  
60323 Frankfurt  
Germany  
"CBRE"

**Addressee:**

Vonovia SE  
Universitätsstraße 133  
44803 Bochum  
Germany

CBRE is a "Gesellschaft mit beschränkter Haftung" (limited liability company), registered under commercial law in Germany under the company registration number 13347. The German company CBRE GmbH was established on April 3, 1973 and has its registered office at Bockenheimer Landstraße 24, 60323 Frankfurt/Main, Germany.

CBRE is not a company that is regulated by any regulatory authority; however in its valuation department it employs amongst others members of the Royal Institution of Chartered Surveyors (RICS), and valuers certified by HypZert GmbH.

<sup>1</sup> The "Company" herein referred to as "Vonovia".

**SUMMARY OF THE VALUATION CONCLUSIONS**

Upon the assumption that, after reasonable inquiry of the Company, there are no onerous restrictions or unusual outgoings of which we have no knowledge and based on the specific comments and assumptions set out in this Valuation Report, we are of the opinion that the aggregate of the individual Fair Values (net) of the freehold / ground-leasehold interests in the assets in the portfolio, rounded at asset level, as at 31 December 2018 and held as at that date, is:

**36,928,671,300 €**

**(Thirty-six billion, nine hundred and twenty-eight million, six hundred and seventy-one thousand, three hundred Euros)**

net of purchasers' costs and VAT

of which the Fair Value of the undeveloped freehold Land and plots held on a ground lease is 84,505,000 € and

of which the Fair Value of the assets abroad is 579,410,400 € and

of which the value of owner occupied assets (proportion of owner-occupation above 50%, weighted by area), classified by the Company according to IAS 16, is 11,567,000 € (representing less than 0.1% of the Fair Value aggregated on portfolio level).

The assessment of the Fair Value was carried out at asset level. The aggregate of the individual Fair Values presented here takes account of the marketing period and the transaction costs of the individual assets and does not reflect any discounts or premiums on the sales of the whole portfolio or if part of the portfolio were to be marketed simultaneously or in lots.

CBRE has not been engaged to update the CBRE valuation for the purpose of the Prospectus, has no obligation to do so and has not updated the CBRE valuation after the date of valuation, 31 December 2018.

For detailed breakdowns of values between assets held for investment (freehold-equivalent and leasehold assets), for non-specialised development and land not held for development as well as assets held on a ground lease please refer to Part 5.1 "Fair Value".

There are no negative values to report.

The following table shows aggregated key asset data for the total Portfolio (excluding Land):

Fair Value excluding Land:	36,844,166,300 €
Total lettable area:	21,704,040 sq m
Average Fair Value per sq m lettable area:	1,698 €
Current annual rental income (gross) <sup>2</sup> :	1,673,068,130 €
Potential annual rental income (gross) <sup>2</sup> :	1,734,526,491 €
Annual market rent (gross) <sup>2</sup> :	1,989,578,364 €
Multiplier (based on current rent):	22.0 times
Multiplier (based on potential rent):	21.2 times
Multiplier (based on market rent):	18.5 times

Our opinion of "Fair Value" is based upon the scope of work and valuation assumptions as detailed in Part 4 "Explanation of Valuation" and Part 5 "Valuation Conclusions" of this Valuation Report, and has been derived mainly using recent comparable market evidence on arm's length terms.

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<sup>2</sup> Annual rental income (gross) includes income from antennas of 2,840,634 €.

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## **1 BASIS OF VALUATION**

### **1.1 Preamble**

CBRE has previously valued the Company's portfolio annually including acquisition properties (e.g. DeWAG portfolio, Vitus portfolio) since 2013 and has prepared various valuation reports in English.

Furthermore, CBRE has delivered several condensed valuation reports ("Prospectus") in English and German language.

Additionally, CBRE has valued the "Gagfah" portfolio on a quarterly basis from 2008 to 2014 for accounting purposes for Gagfah M Immobilien-Management GmbH, the "SÜDEWO" portfolio from 2009 to 2014 for the Süddeutsche Wohnen Management GmbH and the "Conwert" portfolio from 2011 to Q2/2017 for Conwert Management GmbH.

### **1.2 Valuation Instructions**

CBRE has been appointed to undertake a Fair Value valuation of the Company's assets held as at 31 December 2018 with drive-by inspections of 852 inspection clusters which include 1,405 valuation units (including modernized assets; please refer to 4.1.2 "Inspection Dates and Coverage").

The assets were valued on the basis of assets (valuation units).

We understand that the assets are held as investments and that the Company requires the value of the freehold or leasehold interest.

We confirm that regarding this instruction we are acting solely for the Company and that we have no conflicts of interests in relation to this instruction.

The valuation is based on the information provided for the previous valuations detailed in the preamble and the current data provided by the Company as at 31 August 2018 (rent roll, expiration dates of subsidies, modernized assets, waiver for mining subsidence) as well as the adjusted portfolio units as at 31 December 2018.

### **1.3 Purpose of Valuation**

We acknowledge that our Valuation Report will be used by the Company as one of many sources for the determination of the Fair Value of its properties as part of the prospectus that relates to a bond issue by **Vonovia SE**.

The Valuation Report complies with the legal requirements, in particular the European Commission Regulation (EC) No 809/2004 of 29 April 2004 (as amended) and paragraphs 128 to 130 of the European Securities and Market Authority (ESMA) update of the Committee of European Securities Regulators' (CESR) recommendations for the consistent implication of (EC) no. 809/2004.

### **1.4 Addressee**

The present Valuation Report is addressed to:

- Vonovia SE - Germany; Universitätsstraße 133, 44803 Bochum, Germany.

## 1.5 Publication

CBRE acknowledges and agrees that the Valuation Report will be published in an unabbreviated form in the Prospectus and will be referred to in marketing and other materials prepared in the context of a bond issue by Vonovia SE. The Prospectus will be accessible to potential Investors on the Company's website. Apart from that, neither the whole nor any part of our Valuation Report nor any references thereto may be included in any published document, circular statement nor published in any way without our prior written approval of the form and context in which it will appear.

## 1.6 Date of Valuation

The effective valuation date is 31 December 2018.

## 1.7 Subject Assets

In accordance with the valuation instructions, the subject of the valuation is Vonovia's assets held as at 31 December 2018, comprised of 333,314 residential units, thereof 331,270 residential units in Germany, of which 38,273 are calculated under public rent control, 6,738 commercial units, thereof 6,207 units in Germany and 88,383 miscellaneous rented units (internal and external parking units, antennas), thereof 86,979 in Germany and Land consisting of undeveloped freehold land (143 assets) with an area of 1,151,805 sq m and 8 plots held on a ground lease with an area of 27,198 sq m.

The following table shows the transition of the different classification into the type of use between Vonovia and CBRE of the German assets:

Transition Vonovia vs. CBRE	Vonovia	Transition	CBRE
Number of residential units	333,734	-2,464	331,270
Number of commercial units	3,759	2,448	6,207
Number of external parking units	35,891	-198	35,693
Number of internal parking units	50,719	198	50,917
Number of other units (without area)	353	16	369
<b>Total Number of units</b>	<b>424,456</b>	<b>-</b>	<b>424,456</b>
Residential Area (sq m)	20,850,760	-100,256	20,750,505
Commercial Area (sq m)	621,160	84,667	705,827
<b>Total Area (sq m)</b>	<b>21,471,920</b>	<b>-15,589</b>	<b>21,456,331</b>

The majority of the rearrangements was made for units that are rented under a general lease contract („Generalmietvertrag“). Although the majority of these units are residential units, the contractual terms of the general lease contracts are more comparable to commercial lease contracts and therefore calculated as commercial units in our valuation. Further, CBRE has calculated commercial units with a lettable area of 0 sq m as Other (per unit) according to a different calculation model.

## 1.8 Tenure (except Land)

9,226 assets are freehold-equivalent and 834 assets are ground leasehold-equivalent with Vonovia as ground leaseholder. The average, unweighted leasehold term ends on 21 October 2059. The 834 ground leasehold assets account for 8.0% of the aggregate Fair Value of the portfolio.

## 1.9 Concept of Value

The assessment of Fair Value has been carried out by CBRE in accordance with the guidelines of the International Financial Reporting Standards (IFRS), the International Standards for the Valuation of Real Estate for Investment Purposes (International Valuation Standards), the RICS Valuation – Global Standards (July 2017) (Red Book) of the Royal Institution of Chartered Surveyors and in accordance with the relevant prospectus regulations applicable in Germany and abroad, including the European Securities and Market Authority (ESMA) update of the Committee of European Securities Regulators' (CESR) recommendations for the consistent implication of (EC) no. 809/2004.

The assets have been valued to "Fair Value" in accordance with IAS 40 in connection with IFRS 13.9 of the International Financial Reporting Standards (IFRS) published by the International Accounting Standards Board (IASB), which is defined as:

*"Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."*

"Fair Value", for the purpose of financial reporting under International Financial Reporting Standards is effectively the same as "Market Value", which is defined as:

*"The estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's-length transaction after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion."*

We have valued the assets individually and no account has been taken of any discounts or premiums that may be negotiated in the market if all or part of the portfolio was to be marketed simultaneously, either in lots or as a whole.

We confirm that we have sufficient current local and national knowledge of the particular asset market involved and have the skills and understanding to undertake the valuation competently.

The assets have been valued by valuers who are qualified for the purpose of the valuation in accordance with the RICS Valuation – Global Standards (July 2017). Where the knowledge and skill requirements of the Red Book have been met in aggregate by more than one valuer within CBRE, we confirm that a list of those valuers has been retained within the working papers, together with confirmation that each named valuer complies with the requirements of the Red Book.

Note:

The valuation represents the figures that would appear in a hypothetical contract of sale at the valuation date. No allowances have been made for any expenses of realisation nor for taxation which might arise in the event of a disposal. Our valuations are net of purchasers' statutory and other normal acquisition costs. No account has been taken of any inter-company leases or arrangements, nor of any mortgages, debentures or other charge. No account has been taken of the availability or otherwise of capital-based Government or European Community grants. All rents and capital values stated in this report are exclusive of VAT.

The values stated in this report represent our objective and independent opinion of Fair Value in accordance with the definition set out above as at the valuation date. Amongst other things, this assumes that the assets had been properly marketed and that exchange of contracts took place on this date.

## 1.10 Currency

The currency used in the Valuation Report is Euro.



### **1.11 Sources of Information**

We have carried out our work based upon information supplied to us by the Company and their asset managers, which we have assumed to be correct and comprehensive.

The figures in this Report are based on the rent roll provided by the Company, dated 31 August 2018. The portfolio has been adjusted by the sold units delivered by the Company as at 31 December 2018.

A sample of documents provided, were checked for plausibility.

### **1.12 Place of Performance and Jurisdiction**

German law applies. The place of performance and jurisdiction is Frankfurt am Main.

### **1.13 Assignment of Rights**

The Addressee of the Valuation Report is not entitled to assign its rights - either in whole or in part - to third parties.

### **1.14 Declaration of Independence**

We hereby confirm that to the best of our knowledge and belief CBRE GmbH has carried out the assessment of Fair Value in its capacity as an external valuer. We further confirm that CBRE is not aware of any actual or potential conflict of interest that might have influenced its independent status. This declaration also includes all other departments of CBRE GmbH, including the investment and agency departments.

The total fees, including the fee for this assignment, earned by CBRE GmbH from the Company are less than 2% of the total German revenues earned by CBRE GmbH in 2018. It is not anticipated that this situation will change in the financial year to 31 December 2019. We confirm that we do not have any material interest in Vonovia or the assets.

## 2 Asset Holdings – Germany

### 2.1 Description of the Portfolio Structure

The description and structure of the following parts of the portfolio as well as the structure of the tables and charts have been provided by the Company.

Vonovia has divided the portfolio into three parts:

#### **Strategic**

This portfolio will include locations which the Company considers to have development potential that is well above-average in general, where Vonovia intends to pursue a value-enhancing property management strategy. The strategic portfolio includes the “Operate”, and “Investment” portfolio clusters:

#### *Operate*

Vonovia aims to achieve value generation in this part of the portfolio through rental growth, vacancy reduction, effective and sustainable maintenance spending and cost efficiencies through scale.

#### *Investment*

Vonovia aims to achieve a significant improvement in value with an extensive investment program, mainly in energy-efficiency of the buildings and by modernising apartments for senior living and completing high-standard refurbishments in markets where fully refurbished apartments deliver a rental premium.

#### **Recurring Sales**

Vonovia privatises apartments by offering them to tenants, owner-occupiers and investors. Vonovia aims to generate further value through the sale (privatisation) of owner-occupier units and single-family houses at a significant premium compared with their Fair Value.

#### **Non-core Disposals**

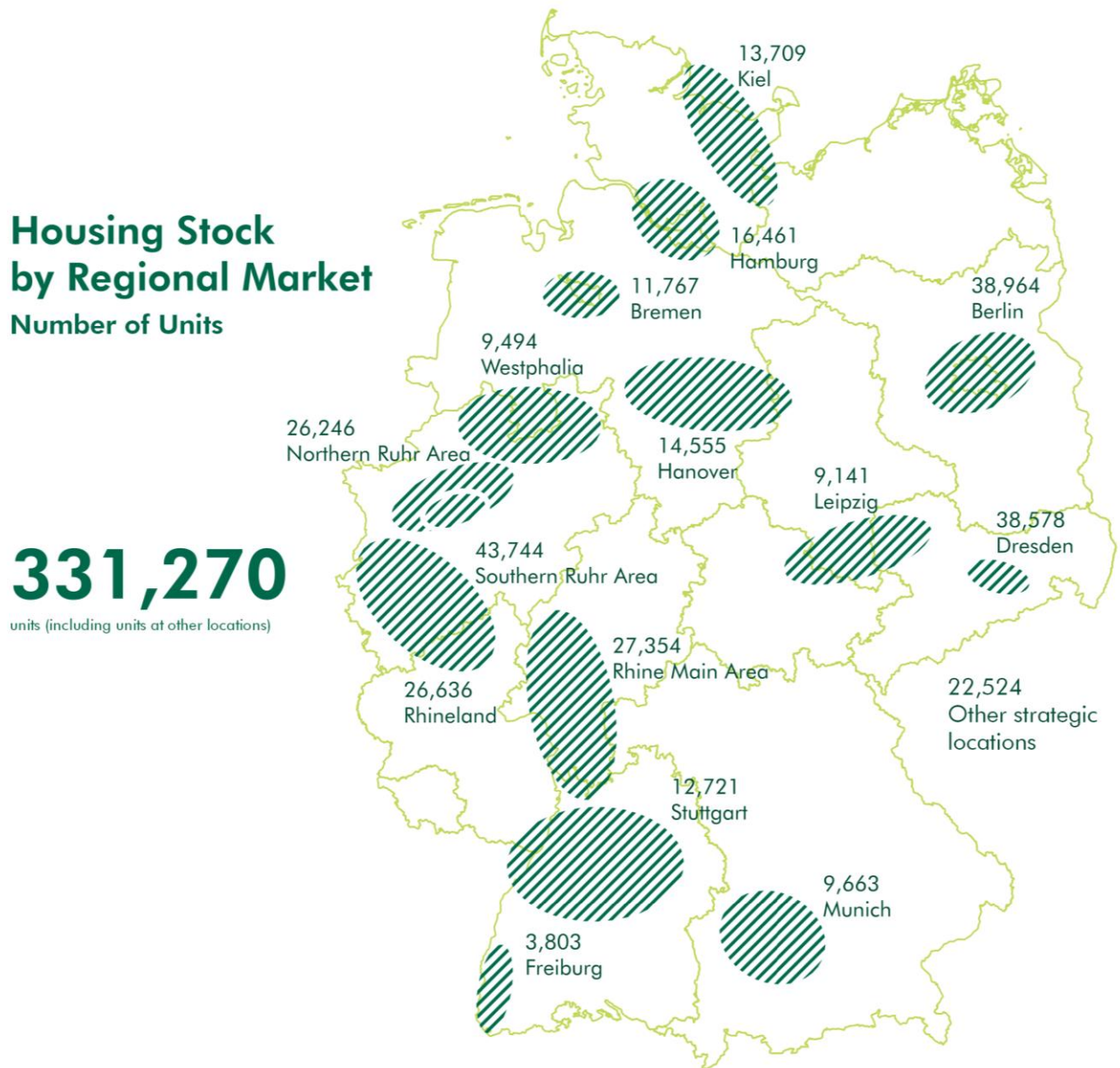
This portfolio focuses on properties for sale, which are not suited for privatisation. The buildings are sold to private and institutional investors. This portfolio includes properties, which do not fit (in the opinion of Vonovia) in terms of macro and micro location or development potential. Limited potential is defined, in particular, by below-average property condition combined with a location that is of similarly below-average quality.

### 2.2 Description of Regional Markets

Vonovia has divided the portfolio into 15 regional markets. The regional market classification is orientated toward the residential real estate market regions in Germany. These markets are core towns/cities and their surrounding metropolitan areas that are largely similar in terms of the supply of real estate and the real estate market, both at present and in the forecasts. They are also the markets that especially benefit from domestic migration. This definition of the real estate market regions is based on the definition developed by the German Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR). Where local real estate markets show overlaps, we have grouped them together.

### 2.3 Geographic Allocation

The following map shows the geographical allocation of residential units based on regional markets, as described in Part 2.2 above.



## 2.4 Portfolio Breakdown

The German portfolio of Vonovia consists of 331,270 residential units, 6,207 commercial units and 86,979 miscellaneous rented units (internal and external parking units, antennas) with a total lettable area of 21,456,331 sq m.

The following table shows the breakdown of the residential part of the portfolio by strategic portfolio, as described in Part 2.1 above.

	Residential						
	Units	Area	Vacancy		Current Annual Rental Income (gross)		Market Rent
		in sq m	% of Units	% of Area	Total in EUR	EUR per sq m per month	EUR per sq m per month
Operate	99,610	6,248,694	2.9%	2.7%	487,862,238	6.68	7.49
Invest	217,215	13,504,844	2.7%	2.7%	1,009,699,545	6.40	7.53
Strategic	316,825	19,753,538	2.8%	2.7%	1,497,561,784	6.49	7.52
Recurring Sales	12,440	861,601	3.0%	2.9%	62,840,443	6.26	7.24
Non-core Disposals	2,005	135,366	6.1%	6.1%	7,762,208	5.09	5.72
Total	331,270	20,750,505	2.8%	2.7%	1,568,164,435	6.47	7.50

\*The Market Rent only includes the rented residential units.

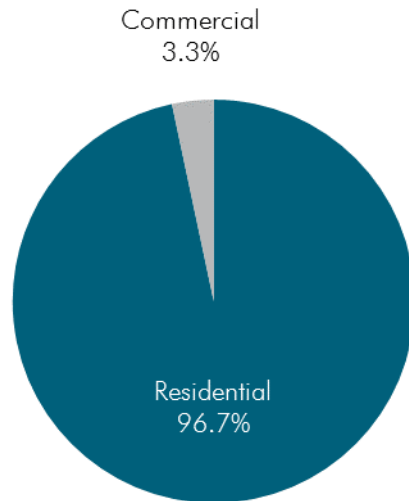
The following table shows the breakdown of the residential part of the portfolio per regional market.

Regional Market	Residential						Market Rent*
	Units	Area	Vacancy		Current Annual Rental Income	Market Rent*	
		in sq m	% of Units	% of Area	Total in EUR	EUR per sq m per month	
Berlin	38,964	2,473,066	1.8%	1.7%	189,917,309	6.51	7.71
Rhine Main Area	27,354	1,756,918	2.4%	1.8%	163,388,493	7.89	9.04
Rhineland	29,636	1,984,359	2.8%	2.8%	161,232,154	6.97	7.84
Southern Ruhr Area	43,744	2,675,095	3.6%	3.6%	179,773,359	5.81	6.69
Dresden	38,578	2,193,993	3.0%	3.1%	151,085,335	5.92	6.94
Hamburg	16,461	1,042,894	2.5%	1.8%	86,255,799	7.02	8.33
Munich	9,663	635,414	1.1%	1.1%	59,783,372	7.92	11.00
Stuttgart	12,721	828,459	2.0%	2.0%	75,946,903	7.79	9.03
Northern Ruhr Area	26,246	1,620,908	3.5%	3.5%	104,019,553	5.54	6.12
Hanover	14,555	924,174	3.1%	3.0%	68,397,060	6.36	7.18
Kiel	13,709	796,564	2.0%	1.9%	56,174,670	5.99	6.76
Bremen	11,767	716,732	3.5%	3.4%	45,949,974	5.53	6.33
Leipzig	9,141	586,072	4.4%	4.2%	39,605,889	5.88	6.51
Westphalia	9,494	615,501	2.9%	3.0%	41,825,915	5.84	6.74
Freiburg	3,803	265,635	2.0%	1.9%	22,515,858	7.20	8.39
Other Strategic Locations	22,524	1,433,615	3.2%	2.9%	109,829,570	6.58	7.48
Total strategic locations	328,360	20,549,397	2.8%	2.7%	1,555,701,213	6.48	7.51
Non-Strategic Locations	2,910	201,107	5.4%	5.3%	12,463,222	5.45	6.13
Total	331.270	20.750.505	2.8%	2.7%	1.568.164.435	6.47	7.50

\*The Market Rent only includes the rented residential units.

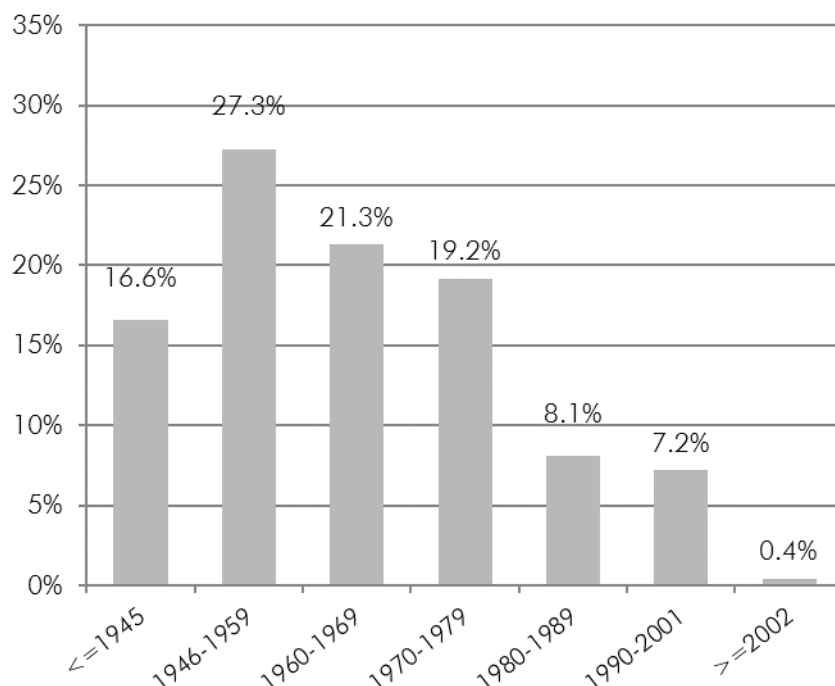
## 2.5 Breakdown of Rental Units and Lettable Area by Type of Use

In total, as at 31 December 2018 the portfolio of Vonovia included 52,202 buildings within 9,927 assets with a total of 424,456 rental units (thereof 331,270 residential and 6,207 commercial units). The total lettable area is 21,456,331 sq m, of which 20,750,505 sq m is residential (96.7%) and 705,827 sq m commercial (3.3%).



## 2.6 Breakdown of Lettable Area (Residential) by Age of Building

The portfolio assets have a wide range of dates of construction.



## 2.7 Vacancy Rate

The total vacancy rate at portfolio level weighted by area is 2.9%.

The residential vacancy rate at portfolio level weighted by area is 2.7%.

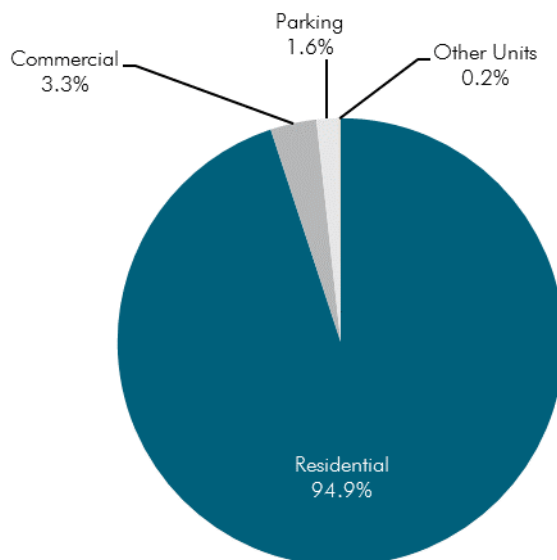
The residential vacancy rate at portfolio level weighted by units is 2.8%.

The EPRA residential vacancy rate at portfolio level is 2.6%.

## 2.8 Breakdown of Current Annual Rental Income (Gross) by Type of Use

At the date of the rent roll of 31 August 2018 (adjusted by units sold as at 31 December 2018), the current annual rental income (gross) was 1,652,135,672 €. Approximately 94.9% of the current annual rental income (gross) is generated from the residential units in the portfolio; residential units subject to public subsidy account for 10.2% of the portfolio's total current annual rental income (gross).

Commercial uses (retail, office and other commercial) account for about 3.3% of the current annual rental income (gross). The 86,610 internal and external parking units generate approximately 1.6%. Income from other units (e.g. antennas) has only relatively low significance of 0.2% at portfolio level.



## 2.9 Land

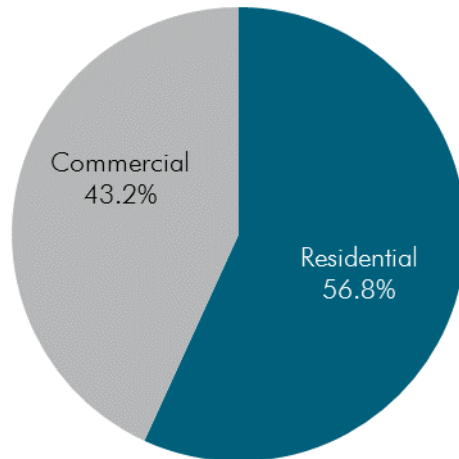
The Land portfolio of Vonovia consists of 143 freehold assets with a total area of 1,151,805 sq m and 8 plots held on a ground lease with an area of 27,198 sq m.

Please refer to Part 4.2.2 “Land Approach” for the explanation of the valuation methods.

### 3 Asset Holdings – Abroad

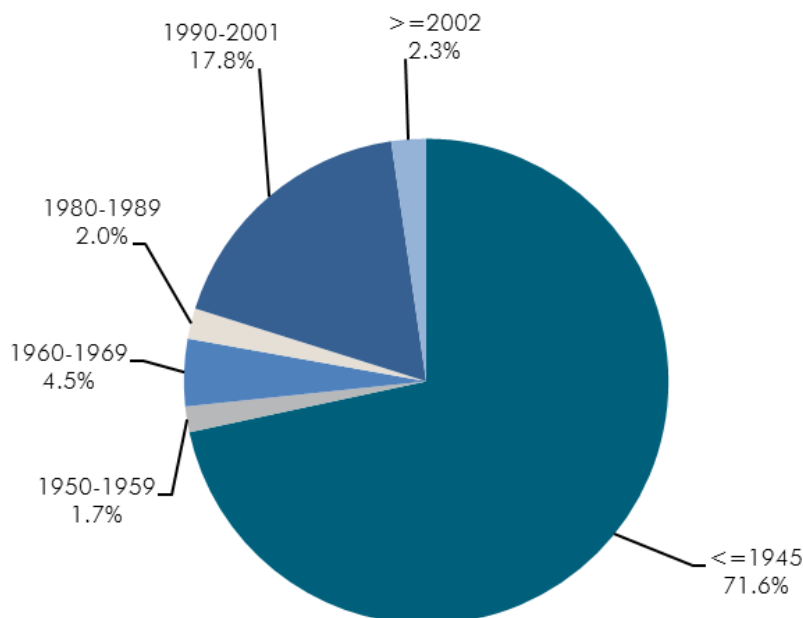
#### 3.1 Breakdown of Rental Units and Lettable Area by Type of Use

In total, as at 31 December 2018 the portfolio of Vonovia included 129 assets in Austria and 4 assets in Hungary with a total of 3,979 rental units (thereof 2,044 residential and 531 commercial units). 97.1% of all residential units are in Vienna (1,985 units). The total lettable area is 247,709 sq m, of which 140,772 sq m is residential (56.8%) and 106,937 sq m commercial (43.2%).



#### 3.2 Breakdown of Lettable Area (Residential) by Age of Building

The portfolio assets have a wide range of dates of construction with a focus on the years 1945 and older.



### 3.3 Vacancy Rate

The total vacancy rate at portfolio level weighted by area is 8.8%.

The residential vacancy rate at portfolio level weighted by area is 2.8%.

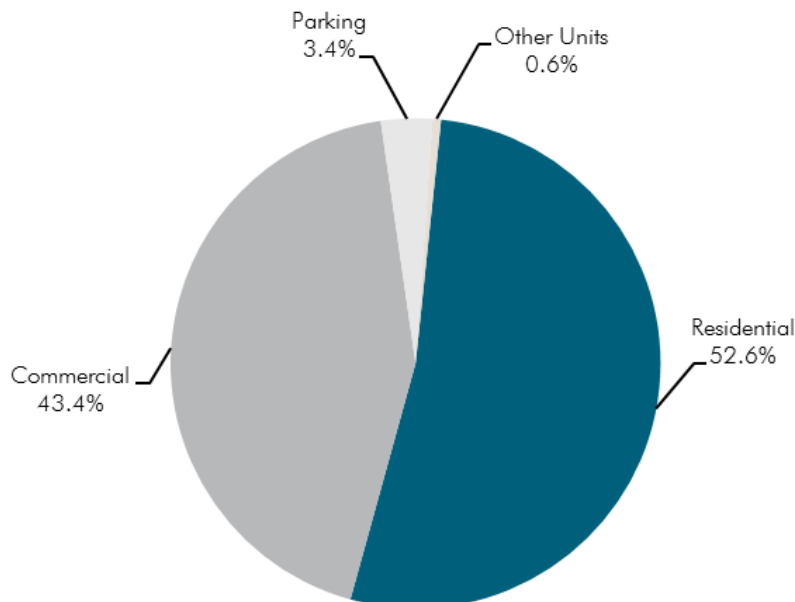
The residential vacancy rate at portfolio level weighted by units is 2.8%.

The EPRA residential vacancy rate at portfolio level is 2.5%.

### 3.4 Breakdown of Current Annual Rental Income (Gross) by Type of Use

At the date of the rent roll of 31 August 2018 (adjusted by units sold as at 31 December 2018), the current annual rental income (gross) was 20,932,457 €. Approximately 52.6% of the current annual rental income (gross) is generated from the residential units in the portfolio.

Commercial uses (retail, office and other commercial) account for about 43.4% of the current annual rental income (gross). The 1,334 internal and external parking units generate approximately 3.4%. Income from other units (e.g. antennas) has only relatively low significance of 0.6% at portfolio level.





## 4 EXPLANATION OF VALUATION

### 4.1 Inspections

#### 4.1.1 Basis for Inspections

In accordance with the Company's instruction, the valuation of the assets has been carried out individually on an asset level. For the purpose of the inspections we amalgamated the assets into homogeneous clusters. The cluster criteria were location and situation, type of assets and date of construction.

- **LOCATION/SITUATION:** all assets in a single inspection cluster must be part of one housing estate or – if they are individual buildings – must be situated in the same neighbourhood,
- **TYPE OF ASSETS:** These were mainly differentiated into
  - A) Detached/Semi-detached houses
  - B) Apartment buildings
  - C) Commercial assets, such as office buildings, business and retail assets, mixed-use assets with a proportion of commercial value greater than 20%
- **DATE OF CONSTRUCTION:** The categories of construction date were defined as follows:
  - 1945 and earlier
  - 1946 to 1959
  - 1960 to 1969
  - 1970 to 1979
  - 1980 to 1989
  - 1990 to 2001
  - 2002 onwards

For the inspections, a reference asset was selected from each cluster, on the basis of the desktop analysis and the information available.

During our inspections, we verified that each of the buildings of the valuation clusters were internally consistent and checked whether adjoining buildings had homogeneous characteristics that could enable them to be amalgamated.

Internal and external parking units and other rent-earning units such as antennas are part of a building unit, except if they are economically independent units.

At cluster level, we made an assessment of the situation ("micro location"), the quality level according to the local rental table, the condition of the buildings (asset score) and the typical condition of the apartments, as a basis of our allowances for regular maintenance and tenant improvement costs.

At asset level, the basis of valuation calculations, we took individual account of asset-specific parameters such as administration costs, structural vacancy, current rent, market rent, public subsidy (if any), ground leases (where appropriate) and relevant entries in section II of the land register.

#### 4.1.2 Inspection Dates and Coverage

CBRE has inspected all assets in the course of previous valuation instructions. In 2018, CBRE inspected 852 inspection clusters, which include 1,405 valuation units. The assets were inspected between April and September 2018. The Company has confirmed that they are not aware of any material changes to the physical attributes of the assets, or the nature of their location, since the last inspection, except for the assets that were (partly) modernized between 2012 and 2018 and not re-inspected. For these assets, we have been provided with detailed information regarding measures and costs. For the assets which have been modernized and not yet inspected and for which we have been provided with detailed information regarding measures and costs, we have adjusted the property scores. We have assumed this advice to be correct.

**Inspection clusters:** the following table shows the breakdown of the inspection clusters which were components of the portfolio as at the dates of the rent roll (31 August 2018):

Total					
Cluster					
Year of Inspection	Total	External Inspection	Percentage of Current Annual Rental Income (gross)	Internal Inspection	Percentage of Current Annual Rental Income (gross)
2011-2015	4,543	4,383	30.9%	160	2.7%
2016	1,042	856	20.4%	186	2.5%
2017	936	936	22.2%	0	0.0%
2018	852	852	21.2%	0	0.0%
<b>Total</b>	<b>7,373</b>	<b>7,027</b>	<b>94.7%</b>	<b>346</b>	<b>5.3%</b>

The table above shows the current proportional distribution of external (94.7%) and internal (5.3%) inspections. Within previous valuations a significant higher share of the inspection clusters was inspected internally by CBRE. Several of these internal inspections have been replaced by external re-inspections within subsequent valuations.

Approximately 33.8% (weighted by Fair Value) of the undeveloped land was inspected in 2011 and 2018.

During the inspections, the homogeneity of the defined clusters was checked for plausibility, if necessary, the clustering was amended and a re-inspection was carried out.

## 4.2 Method of Valuation

### 4.2.1 Discounted Cash Flow (DCF) - Germany

The determination of the Fair Value of the individual assets has been carried out using the internationally recognised Discounted Cash Flow (DCF) method. This method, which is based on dynamic investment calculations, allows valuation parameters to be reflected explicitly and, therefore, provides a transparent arithmetical determination of Fair Value. In the DCF method, the future income and expenditure flows associated with the subject asset are explicitly forecasted over a 10-year period of detailed consideration, assuming a letting scenario which is not taking into account any potential privatisations of individual apartments. The cash flows calculated for the period of detailed consideration are discounted, monthly in advance, to the date of valuation, allowing the effect on the current Fair Value of the receipts and payments at varying dates during the 10-year period to be properly reflected.

The discount rate chosen reflects not only the market situation, location, condition and letting situation of the asset and the yield expectations of a potential investor but also the level of security of the forecast future cash flows. As the discounting process means that the effect of future cash flows reduces in importance while at the same time the uncertainty of forecasting tends to increase over time, it is usual in real estate investment considerations for the sustainable net rental income after a ten-year time horizon (the period of detailed consideration) to be capitalised, using a growth-implicit yield, and then discounted to the date of valuation.

The assumptions adopted in the valuation model reflect the average estimates that would be made at the respective date of valuation by investors active in the market. The result of the DCF method is, therefore, the price that a relevant investor in the market would be prepared to pay for the asset at the respective date of valuation, in order to achieve a return from the proposed investment that is in line with present asset market expectations.

#### 4.2.2 Land Approach

For the purpose of the valuation, the assets have been assigned to one of the following categories, based on the information provided by the Company or gained during discussions with the local authorities:

##### A) Future Development

- land capable of development (“*Baureifes Land*”); zoned for development, with public roads and utilities infrastructure
- unserviced land zoned for development (“*Rohbauland*”)
- land with hope value for development (“*Bauerwartungsland*”)

##### B) Other

- Woodland, agricultural land (*Forst- und Agrarland*) and gardens

The land assets in the portfolio were valued on the basis of their status as at the valuation date using two different valuation methods:

##### Comparison method (“*Vergleichswertverfahren*”)

Land capable of development (“*Baureifes Land*”) as well as woodland, agricultural land (“*Forst- und Agrarland*”) and gardens was valued using the comparison method.

The official “*Bodenrichtwert*” (guideline land value) was used for each asset or, if it was not available, the valuation was based on local comparables. Using our professional judgement, we have applied adjustment factors in accordance with individual asset characteristics in determining the site value. If infrastructure costs were outstanding or could be expected to be payable on individual sites, these were deducted.

##### Deductive valuation approach for potential building land by Walter Seele<sup>3</sup>

Land with hope value for development (“*Bauerwartungsland*”) and unserviced land zoned for development (“*Rohbauland*”) was valued using the deductive valuation approach according to *Seele*.

According to the *Seele* approach, the prices for potential building land are determined not only by prices of comparable land capable of development (“*Baureifes Land*”) and the waiting period. They are also dependent on the proportion of land that needs to be developed (“*Erschließungsflächenanteil*”) and the development costs.

The approach has been recommended for application by the “GIF” (society for real estate economic research) in Germany.

We would draw your attention to the fact that the market for the above-mentioned types of Land (Type A) is relatively small and the development of this type of Land often depends on decisions made by local or municipal authorities such as planning authorities (“*Bauplanungsämter*”), which leads to a lack of comparable evidence and in a greater uncertainty of our valuation assumptions. It should be noted that the price which can be achieved for development land (in any of the above categories) is extremely sensitive to minor changes to any of a number of factors, including statutory consents, timing, availability and cost of development finance, construction costs and market movements and therefore may differ from the Fair Value. We would therefore recommend that the situation and the valuations are kept under regular review.

<sup>3</sup> Source: Seele, 1998, Bodenwertermittlung durch deduktiven Preisvergleich, Zeitschrift Vermessungswesen und Raumordnung

**Financial mathematics method (“Finanzmathematische Methode”)**

The value of the Company’s leasehold land was calculated by using the following method:

The value of the leasehold land consists of:

- present value of the unencumbered land (discounted over the running-time)
- present value of the received ground lease earnings (discounted over the running-time)

Using our professional judgement, we have applied adjustment factors in accordance with individual asset characteristics in determining the unencumbered land value.

If applicable, adjustment factors are applied on the value of the leasehold land to take the individual market situation and special elements of the contract into account.

**4.2.3 Discounted Cash Flow (DCF) - Austria**

In order to reflect the specific requirements for the valuation of the former Conwert-Portfolio properly, including for instance the long-term subsidies, changes in interest rates and the proceeds of privatisation achievable in the long term, for the purposes of the present valuation of the residential properties we have adopted an 80-year period of detailed consideration (time horizon).

The cash flows calculated for each year of the period of detailed consideration are discounted, annually in arrears, to the date of valuation, allowing the effect of the receipts and payments at varying dates during the period to be properly reflected in the Fair Value at the date of valuation.

The discount rate chosen reflects not only the market situation and/or the yield expectations of a potential investor but also the uncertainty involved in the forecasting of future cash flows.

**4.3 General Valuation Assumptions**

We have made various assumptions as to tenure, letting, town planning, and the condition and repair of buildings and sites – including ground and groundwater contamination – as set out below.

If any of the information or assumptions on which the valuation is based are subsequently found to be incorrect, the valuation figures should be reconsidered.

No special assumptions (as defined by RICS)<sup>4</sup> have been made.

**4.3.1 Constituents of the Subject Assets**

Fixtures in the subject assets, such as passenger and goods lifts, other conveyor installations, central heating installations and other technical installations have been regarded as integral parts of the subject asset and are included within our valuation. Tenant's fixtures and fittings that would normally be the asset of the tenant have not been reflected in our valuation.

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<sup>4</sup> An assumption that either assumes facts that differ from the actual facts existing at the valuation date, or that would not be made by a typical market participant in a transaction on the valuation date (e.g. fully let)

#### 4.3.2 Structural investigations

We have not carried out building surveys, tested services, made independent site investigations, inspected woodwork, exposed parts of the structure which were covered, unexposed or inaccessible, nor arranged for any investigations to be carried out to determine whether or not any deleterious or hazardous materials or techniques have been used, or are present, in any part of the assets. We are unable, therefore, to give any assurance that the assets are free from defect. We were provided with the information, that building parts (e.g. façade, roofing) of the following assets may be contaminated with asbestos:

Assets	ZIP	City	Address
44025	73079	Süßen	Rechbergstr. 20
44027	71732	Tamm	Ludwigsburger Str. 28, 30, 32/1, 34/1
44038	70435	Stuttgart	Bauerweg 2, 4, 12, 16, 20, 24; Stammheimer Str. 107
44059	72072	Tübingen	Eisenbahnstr. 18, 20
44078	70565	Stuttgart	Wegaweg 6
44080	70327	Stuttgart	Augsburger Str. 171-189 odd
44096	70437	Stuttgart	Wallensteinstr. 37, 37a
44103	70197	Stuttgart	Rotenwaldstr. 118
81012a	70825	Kornal-Münchingen	Weilimdorfer Str. 13-19 odd, 13/1, 15/1, 17/1, 19/1
81012b	70825	Kornal-Münchingen	Bahnhofweg 12, 14
44720	70806	Kornwestheim	Bolzstr. 36-40 even
44721	70806	Kornwestheim	Bolzstr. 39-43 odd
44767	72072	Tübingen	Hegelstr. 21, 25-31 odd
44768	72072	Tübingen	Hegelstr. 38-48 even
44769	72072	Tübingen	Hegelstr. 23/1, 23/2
63013	10777	Berlin	Fuggerstr. 47
63020	13055	Berlin	Konrad-Wolf-Str. 113
63021	13409	Berlin	Herbststr. 30, 32
63023	12169	Berlin	Südendstr. 32, 33
63027	13407	Berlin	Roedermallee 166-168; Thyssenstr. 4-12 even
63071	04159	Leipzig	Blücherstr. 31
63091	15831	Jühnsdorf	Dorfstr. 15a-d, 20, 20a, b, 21, 21a
63092	16515	Oranienburg	Albert-Buchmann-Str. 2-10 even
63099	13629	Berlin	Rohrdamm 33, 33a-d
63105	10715	Berlin	Berliner Str. 9
63112	13591	Berlin	Südekumzeile 26, 26a-e, 27, 27a, 28, 28a-c, 29, 29a, 30, 31, 31a, b
63115	14513	Teltow	Potsdamer Str. 25-29 odd, 31a, b
63116	14542	Werder	Marktstr. 1a-f, 2a-e; Aprikosenweg 1-7; Marktstr. 1, 2; Obstzüchterstr. 5; Auf dem Strengfeld 3, 3a, d-f
63117	14974	Ludwigsfelde	Hirschweg 14-22 even; 34-42 even

To reflect this, we have increased the discount and capitalisation rate by 25 bps.

According to the information we were provided with, 2,694 assets are contaminated with asbestos (Floor-Flex). Within our valuation we considered the provided lump sum of 76,211,412 EUR for renovation and disposal.

In the absence of any information to the contrary, we have assumed that:

- there are no abnormal ground conditions, nor archaeological remains, present which might adversely affect the current or future occupation, development or value of the assets;
- the assets are free from rot, infestation, structural or latent defect;
- no currently known deleterious or hazardous materials or suspect techniques, including but not limited to composite panelling, have been used in the construction of, or subsequent alterations or additions to, the assets and
- the services, and any associated controls or software, are in working order and free from defect.

We have otherwise had regard to the age and apparent general condition of the assets. Comments made in the property details do not purport to express an opinion about, or advises upon, the condition of uninspected parts and should not be taken as making an implied representation or statement about such parts.

#### 4.3.3 Accommodation

We have not measured the assets but have relied upon the floor areas provided. We have not checked these on site.

We have verified a random sample and relied upon the other areas shown in the tenancy schedules and the additional information provided by the Company for the valuation for the IPO in 2013 and the additional valuations mentioned in the preamble.

Unless advised specifically to the contrary, we have made the assumption that the floor areas supplied to us have been calculated mainly in accordance with *II. Berechnungsverordnung*. All areas quoted in this Valuation Report are approximate.

#### 4.3.4 Environmental contamination and soil conditions

We have not undertaken, nor are we aware of the content of, any environmental audit or other environmental investigation or soil survey which may have been carried out on the assets and which may draw attention to any contamination or the possibility of any such contamination, other than as detailed below.

We have not carried out any investigation into the past or present uses of the assets, nor of any neighbouring land, in order to establish whether there is any potential for contamination and have therefore assumed that none exists.

##### Soil contamination:

We were provided with information concerning soil contamination by the Company.

For six assets, the Company provided us with cost estimations as follows:

Assets	ZIP	City	Address	Amount in EUR
18197a	14193	Berlin	Elgersburger Str. 20-23; Ilmenauer Str. 7, 7a, 8, 8a	155,395
18197b	14193	Berlin	Franzensbader Str. 7-9	58,270
42007	14471	Potsdam	Forststr. 73-78	6,253
42144	60311	Frankfurt	Mainkai 15-21	122,344
80034	44623	Herne	Behrensstr. 51-59 odd	95,756
80217	60311	Frankfurt	Battonnstr. 50, 52, 62-66 even; Fahrgasse 80-92 even	121,478

For eight further assets, we have assumed there is an impact on value and have increased the capitalisation rate by 25 bps to reflect this, as we were not provided with any specific amount:

Assets	ZIP	City	Address
70003	40599	Düsseldorf	Hasselsstr. 103
43039	80687	Munich	Agnes-Bernauer-Str. 30, 30a-g, 32, 34, 34a-g, 36-40 even; Friedenheimer Str. 13-27 odd; Schäufeleinstr. 33, 35
43044	28199	Bremen	Westerstr. 130, 132
43046	28207	Bremen	Hastedter Heerstr. 189
43052	38108	Brunswick	Dortmunder Str. 1-3; Duisburger Str. 23
80034	44623	Herne	Behrensstr. 51-59 odd
80035	44623	Herne	Behrensstr. 54
43064	40472	Düsseldorf	Selbecker Str. 26

Based on the information we were provided with we have assumed that for the remaining assets there is no material influence on value of single assets due to the suspicion of soil contamination.

Mining subsidence:

In accordance with our instructions and scope of work, for the purposes of this valuation, we have not conducted or given instructions for any more detailed investigations concerning mining subsidence.

We have been provided with information by the Company concerning potential costs which may arise from mining for 227 assets with a total amount of 31,432,000 €. We have deducted this sum at individual asset level.

General:

In the absence of any further information to the contrary, we have assumed that:

- the assets are not contaminated and are not adversely affected by any existing or proposed environmental law,
- any processes which are carried out on the assets which are regulated by environmental legislation are properly licensed by the appropriate authorities.

We have assumed that either the assets possess current Energy Performance Certificates as required under Government Directives or Vonovia can present the documents if required.

**4.3.5 Title and Tenancies**

Details of title/tenure under which the assets are held and of lettings to which it is subject are as supplied to us. We have not generally examined nor had access to all the deeds, leases or other documents relating thereto. Where information from deeds, leases or other documents is recorded in this report, it represents our understanding of the relevant documents without obtaining separate legal advice.

Unless stated otherwise within this report and in the absence of any information to the contrary, we have assumed that:

- the assets possess a good and marketable title free from any onerous or hampering restrictions or conditions;
- only minor or inconsequential costs will be incurred if any modifications or alterations are necessary in order for occupiers of each assets to comply with the provisions of the relevant disability discrimination legislation;
- there are no tenant's improvements, others than those mentioned in 4.4.4, that will materially affect our opinion of the rent that would be obtained on review or renewal;
- where appropriate, permission to assign the interest being valued herein would not be withheld by the landlord where required and
- vacant possession can be given of all accommodation which is unlet or is let on a service occupancy (except structural vacancy).

We have not been provided with Legal Due Diligence Reports by the Company.

In accordance with our valuation instructions, our determination of Fair Value is based on the information provided to us, which also applies to rented accommodation, tenancies, current rental income, remaining lease terms and other lease conditions.

We were provided by the Company with a table including all land register entries for the IPO in 2013. CBRE verified a random sample of the addresses as well as the entries in section I and II of 54 assets. In the course of previous valuations of the DeWAG and Vitus sub-portfolio assets CBRE verified entries in section I and II of further 378 assets. During the course of loan security valuations of approximately 60% of the Fair Value of the former Gagfah Portfolio in 2013, CBRE was provided with a sample of land register extracts for plausibility checks. CBRE verified addresses and entries in section I and II of those assets. Based on the information provided, we have assumed that:

- I. all the subject assets are either held freehold-equivalent (complete or partial) by the subsidiaries of the Company or, in the case of a ground lease (*Erbbaurecht*), are held for a limited term;
- II. all the subject assets together with encumbrances and restrictions in section II of the land register have been correctly registered in the land register.

Mortgages or other liabilities that currently exist or that in the future might affect one or more of the subject assets have not been taken into account.

#### Redevelopment areas:

We have been provided with the information that following assets are located in redevelopment areas. As compensation payments may occur for these assets we have increased the discount rate by 25 bps to reflect this. The assets are shown in the table below.

Assets	ZIP	City	Address
60095	73733	Esslingen	Weinstr. 1-5 odd
60171	71634	Ludwigsburg	Rosenackerweg 40-44
60172	71638	Ludwigsburg	Bietigheimer Str. 29
63112	13591	Berlin	Südekumzeile 26, 26a-e, 27, 27a, 28, 28a-c, 29, 29a, 30, 31, 31a, b
63037	01067	Dresden	Behringstr. 16a, b; Berliner Str. 21-27 odd, 27a
63094	40210	Düsseldorf	Oststr. 78
63043	01099	Dresden	Prießnitzstr. 42, 42a
63118	16515	Oranienburg	Bernauer Str. 41
63113	13595	Berlin	Weißener Str. 18
63040	01159	Dresden	Gröbelstr. 11
63049	01159	Dresden	Eichendorffstr. 8
63026	12459	Berlin	Wilhelminenhofstr. 19
63056	01159	Dresden	Gröbelstr. 14
63120	01127	Dresden	Rehefelder Str. 41
63057	01159	Dresden	Poststr. 6
63087	07749	Jena	Beutnitzer Str. 2, 4
63062	99085	Erfurt	Theo-Neubauer-Str. 12
63042	01099	Dresden	Förstereistr. 35
63060	99084	Erfurt	Müllersgasse 15
63044	01099	Dresden	Sebnitzer Str. 10

#### **4.3.6 Pending Litigation, Legal Restrictions (Easements on Real Estate, Rent Regulations etc.)**

In accordance with the information provided by the Company, we have assumed, without verification, that the assets are free from any pending litigation, that the ownership is unencumbered and that there are no other legal restrictions such as easements on real estate, rent regulations, restrictive covenants in leases or other outgoings that might adversely affect value.



**4.3.7 Monument Protection**

Based on the information provided to us by the Company, 8.3% (by number of assets) of the assets (representing 8.5% of the Fair Value aggregated on portfolio level excluding the Land) are listed monuments.

**4.3.8 Tenants**

We have not conducted credit enquiries on the financial status of any tenants. We have, however, reflected our general understanding of purchasers' likely perceptions of the financial status of tenants.

In the absence of information to the contrary, we have assumed that there are no significant rent arrears.

**4.3.9 Taxes, Contributions, Charges**

We have assumed that all public taxes, contributions, charges etc. which could have an effect on value will have been levied and, as far as they are due, paid as at the date of valuation.

**4.3.10 Insurance Policy**

We have assumed that the subject assets are covered by a valid insurance policy that is adequate both in terms of the sum assured and the types of potential loss covered.

**4.3.11 Legal Requirements / Authorisation for the Existence and Use of the Subject Assets**

No investigations of the compliance of the individual subject assets with legal requirements (including (permanent) planning consent, building permit, acceptance, restrictions, building-, fire-, health- and safety regulations etc.) or with any existing private-law provisions or agreements relating to the existence and use of the site and building have been carried out.

In carrying out our valuations, we have assumed that all necessary consents and authorisations for the use of the assets and the processes carried out at the assets are in existence, will continue to subsist and that they are not subject to any onerous conditions.

**4.3.12 Town Planning and Road Proposals**

We have not undertaken planning enquiries but have relied upon the information provided where appropriate. For the purposes of our valuation we assume that there are no adverse town planning, highways or other schemes or proposals that will have a detrimental effect on our valuations.

**4.3.13 Assumptions Regarding the Future**

For the purpose of determining the Fair Value of the subject assets, we have assumed that the assets will continue in their existing use.

#### 4.3.14 Asset to be demolished

The following three assets have been identified by CBRE for potential demolition<sup>5</sup>:

Assets	ZIP	City	Address
64612	45279	Essen	Minnesängerstr. 72-76
80980a	45141	Essen	Katzenbruchstr. 27
80983a	45141	Essen	Katzenbruchstr. 27a-c

In our valuation, we have allowed for obtaining vacant possession of the units that are still let prior to demolition, while repair and maintenance costs have been included at only 20% of the initial costs. The individual Net capital value of the net income still receivable, the site value and the demolition costs of the property have been assessed and discounted to the date of valuation.

#### 4.3.15 Owner Occupied Assets

Normally, owner occupied assets were valued on the basis of vacant possession. We have checked the existing lease contracts in comparison to the current market rental level. If the current contract is rack-rented, we have assumed remaining lease contracts in average of approximately 3.5 years. Otherwise we assumed a termination of the existing contract within the next four months.

### 4.4 Valuation Parameters - Germany

The assessment of Fair Value is based on future cash flows, which reflect normal market expectations taking into account past figures from the subject assets or comparable investments. The valuation parameters have been assessed by CBRE, using its best judgement, based on the information provided by the Company.

#### 4.4.1 Non-Recoverable Management Costs

Residential leases generally involve non-recoverable management costs. For the purposes of this valuation and on the basis of experience of CBRE and an analysis of costs of public and private housing associations, non-recoverable management costs have been allowed for at between 200 € and 285 € per unit p.a. (depending on the number of residential units in the individual building). We have allowed 350 € p.a. for each residential unit in buildings that are undergoing privatisation, according to the Condominium Act (*Wohneigentumsgesetz - WEG*).

For the asset in Dieburg (VU 22169) we have allowed 450 € per residential unit p.a.

The weighted average non-recoverable management costs amount to 249 € per residential unit p.a.

For the commercial units, we have allowed non-recoverable management costs of 3% of the gross rental income on potential rent.

<sup>5</sup> CBRE valued the subject asset on the basis of its demolition, due to its negative cashflow.

#### 4.4.2 Non-Recoverable Repair and Maintenance Costs

The annual costs per square metre of lettable area adopted for the purposes of this valuation are average figures for the types of use concerned, arrived at on the basis of experience by CBRE and the analysis of costs of similar buildings by third-party firms. They take into account the necessary cost inputs for long-term operation of the assets. The maintenance and repair costs allowed for in the valuation are between 6.00 € per sq m p.a. and 17.50 € per sq m p.a. (in exceptional cases below 6.00 € per sq m p.a. for commercial units or demolition assets), with a weighted average of 9.53 € per sq m p.a. depending on the age and condition of the building concerned. The existence of a lift system is taken into account with an additional 1.25 € per sq m p.a. For listed monuments, we assumed an increase of ongoing maintenance costs of 10%.

#### 4.4.3 Capital Expenditure and other Factors affecting Value

In addition to the non-recoverable ancillary costs, which are deducted monthly from the gross rental income during the period of detailed consideration, capital expenditure on repair and maintenance work already planned at the date of valuation has also been reflected. CBRE has not undertaken technical surveys.

For this present valuation, we were provided with Capital Expenditure (CapEx) Costs by the Company for 1,716 assets (excluding fire prevention works in properties in Dresden). We have deducted the running maintenance costs from year 1 from the CapEx Costs provided and have taken the resultant amount into account in our valuation. For the purposes of our valuation we have assumed total costs of rectifying the current maintenance backlog of 207,414,985 EUR for 722 assets. For all other assets, the running maintenance costs of year 1 cover the CapEx Costs provided. The CapEx Costs are distributed as follows over the strategic portfolios: Operate (17%), Invest (77%), Recurring Sales (5%) and Non-Core Disposals (1%).

Additionally, we were provided with the information, that costs will be incurred for fire prevention works to 22 properties in Dresden. We have deducted this amount from 2019 until 2024:

Assets	ZIP	City	Address	2019-2024
67680	01159	Dresden	Braunsdorfer Str. 125	4,177,427
80482	01169	Dresden	Amalie-Dietrich-Platz 7	3,155,101
80483	01169	Dresden	Amalie-Dietrich-Platz 8	3,151,200
80484	01169	Dresden	Amalie-Dietrich-Platz 9	3,249,754
80489	01069	Dresden	St. Petersburger Str. 10, 10a, 12, 12a, 14, 18, 18a, b, 20, 22	1,578,763
80493	01257	Dresden	Rottwemdorfer Str. 3	2,269,119
80494	01257	Dresden	Rottwemdorfer Str. 5	2,269,119
80499	01069	Dresden	Hochschulstr. 20, 22	1,570,646
80500	01069	Dresden	Hochschulstr. 24-28 even	2,828,954
80501	01069	Dresden	Hochschulstr. 30, 32	1,617,766
80502	01069	Dresden	Hochschulstr. 34, 36	1,942,548
80503	01069	Dresden	Hochschulstr. 38, 40	1,942,548
80504	01069	Dresden	Hochschulstr. 42, 44	1,802,272
80506	01217	Dresden	Michelangelostr. 2	2,762,706
80508	01217	Dresden	Michelangelostr. 7	2,812,480
80510	01239	Dresden	Jacob-Winter-Platz 1	2,812,480
80511	01239	Dresden	Prohliser Allee 33	2,896,854
80512	01237	Dresden	Am Anger 22	2,420,145
80513	01239	Dresden	Garnigstr. 20	2,420,145
80514	01239	Dresden	Garnigstr. 22	3,073,273
81039a	01307	Dresden	Pfotenhauerstr. 18-28 even	5,174,128
81039b	01307	Dresden	Pfotenhauerstr. 32-36 even	2,326,174
<b>Total</b>				<b>58,253,604</b>

#### 4.4.4 Tenant Improvements

Under German law, it is frequently the tenant's responsibility to carry out decorative and minor repairs. Upon a change in tenants, however, additional expenses for basic repairs and renovation of the interior of the individual rental units must be incurred, e.g. in the bathrooms of residential units, to facilitate renewed letting. For each of the buildings, based on current market experience and the average condition of the apartments, we have allowed amounts for initial refurbishments and/or on tenant fluctuation ranging from 15 to 200 € per sq m with an overall weighted average of 65 € per sq m for residential accommodation.

Maintenance costs and costs for tenant improvement for residential area sum up to 15.36 € per sq m p.a.

#### 4.4.5 Non-Recoverable Operating Costs (Vacancy)

Based on an analysis by the German Tenants' Association for apartment housing in Western German locations we have reflected non-recoverable operating costs on vacant space at a flat rate of 16.80 € per sq m p.a. (Eastern German locations incl. Berlin: 12.00 € per sq m p.a.). This includes, for example, heating costs for a minimal level of heating, costs for caretaker or security services and electricity and cleaning costs.

#### 4.4.6 Inflation

The DCF method used includes an explicit reflection of inflation forecast at 1.9% in year 1 and 2.0% in the following years. Full allowance for inflation has been made for maintenance and repair costs, management and operating costs and ground rents (*Erbbauzinsen*). Inflation rates forecasts were provided by CBRE Research, as at November 2018. The sources are Consensus Forecast and ECB.

#### 4.4.7 Discount Rate and Capitalisation Rate

The Capitalisation Rate is derived from the average Net Initial Yield ("NIY") achieved in transactions involving residential properties that were observed by CBRE and reflects the market situation as well as the yield expectations of a potential investor. It includes rental growth assumptions implicitly. The Discount Rate, which explicitly reflects rental growth in the cash flows, is derived from the Capitalisation Rate plus the average rental growth.

The Discount Rate and Capitalisation Rate are adjusted individually for each local market to be valued, in accordance with the following criteria:

- quality of the location
- demand and levels of value in the relevant local real estate market
- the prospects for the local market
- development of rents and prices (yield compression)
- the current letting situation in the property as regards vacancy, over-rented or under-rented status, the quality of the tenancy structure, the remaining lease term(s) and (for commercial leases) the indexation provisions and extension options
- the nature of the asset, its age, size and condition
- additional risk adjustments to take into account uncertainties in the forecasting of future cash flows

The Capitalisation Rate is used to capitalise the net rental income after the cashflow period ("Exit Value"). This net rental income comprises the assumed rental income at that time less the non-recoverable operating costs.

The cash flows and the Exit Value are discounted using the selected Discount Rate, monthly in advance.

The resulting net present values were checked against our analysis of comparable transactions (if available) from the sale price data collected by the relevant local valuation committee (“*Gutachterausschuss*”) and an analysis of the internal lease and sale database of the CBRE Valuation Department. If necessary in the absence of transaction data, asking prices for comparable assets on offer at empirica systeme were also considered. If, in particular instances, results of our DCF calculations were found not to reflect the Fair Value of an individual building, the calculation was adjusted by means of a change in the discount rate and Capitalisation Rate using expert and experienced judgement.

For the subject properties, we have adopted a weighted average Discount Rate of 5.0% and an average Capitalisation Rate of 3.5%.

#### 4.4.8 Market Rent

For the purposes of this valuation, CBRE has estimated market rents at the valuation date for the lettable accommodation and asset units. These are based on an analysis of the local asset market, using data available to CBRE and accessible third-party sources. This includes:

- recent leases and tenancies agreed by Vonovia in the years 2017 and 2018
- analysis of the internal rental database of the CBRE Valuation Department
- publications by, and chargeable database queries of, market research institutes and real estate companies

At the date of valuation, the aggregated current annual rental income (gross) was 1,652,135,672 € p.a. and the aggregated annual market rent (gross) in comparison was 1,962,111,985 € p.a. The following table shows the breakdown of the different uses in € per sq m:

Type of Use		
	Current Rent	Market Rent
	in EUR per sq m per Month	
Residential non-subsidised	6.62	7.49
Residential subsidised	5.47	
Retail	8.80	8.71
Office	7.38	7.41
Other	5.60	5.82
	in EUR per unit per Month	
Internal Parking	39.75	40.43
External Parking	19.23	20.18

#### 4.4.9 Market Rental Trends during the Period of Detailed Consideration

During the 10-year period of detailed consideration of the forecast cash flows, explicit modelling of changes in market rents has been included, estimated by CBRE at administrative district (*Landkreis/Kreisfreie Stadt*) level for all assets. The estimates are mainly based on data from the state statistics offices, BulwienGesa AG's RIWIS database and the Prognos AG Zukunftsatlas. Depending on location, the resulting trends of market rent range between annual increases of 0.3% to 3.3% for year 1 to 5 and 0.2% to 2.2% for year 6 to 10, with a weighted average of 1.6%, adjusted for the quality of situation and condition of the building.

#### 4.4.10 Rent Control and Public Subsidies

A number of the residential units were subject to rent control as at the valuation date. Instead of the rent increase method of the BGB (*Bürgerliches Gesetzbuch*) the subsidised residential units are subject to an economic rent (*Kostenmiete*). Contrary to Part 4.4.9 we have calculated with a rental growth of 0.5%, based on our experience. Except for subsidised properties in Schleswig-Holstein, for which rents are allowed to be increased by 9% in 3 years (according to the law for public subsidised properties in Schleswig-Holstein – SHWoFG).

According to the information provided by the Company, 11.6% of the residential units are subject to rent control.

Expiry of Restriction in Years	Residential	
	Units	
	Total	in % of Total Residential Units
<=10 years	21,019	6.3%
11-25 years	4,230	1.3%
26-40 years	2,345	0.7%
41-55 years	2,070	0.6%
56-70 years	5,424	1.6%
> 70 years	3,185	1.0%
<b>Restricted Units</b>	<b>38,273</b>	<b>11.6%</b>
Not Restricted	292,997	88.4%
<b>Total</b>	<b>331,270</b>	<b>100%</b>

At the valuation date, there is 27,427,874 € of direct public subsidies payable to Vonovia during the next 10 years.

#### Local Statute Rent (“Satzungsmiete”)

In January 2009, the regulation of the economic rent was repealed in Baden-Wuerttemberg. Since that date subsidized apartments (“*1. Förderweg*”) must not be let for a higher rent, than the rent which the municipality sets out in the local statute.

For the determination of the respective market rent (local statute rent) of the concerned properties, we have chosen the following approach:

We have analysed the provided local statutes and rental tables. To derive the market rent we have made plausibility checks with the information provided to us by the Principal (internal rent approach).

#### 4.4.11 Structural and Turnover Vacancy

As at the valuation date, the portfolio has an average vacancy rate of 2.9% (weighted by area). We are assuming in our valuation that the weighted average structural vacancy rate of the portfolio is 1.2% with a range of 0% to 40% (100% for liquidation asset) at asset level.

In addition to the structural vacancy rate we have calculated a turnover vacancy between 1 to 6 months which corresponds to 0.0% to 5.9%, with an average of 0.9%. Together with the structural vacancy the average stabilized vacancy rate of the portfolio is 2.1%.

#### 4.4.12 Purchaser's costs

For the purposes of the valuation and in line with normal practice, no allowance has been made for any personal costs or taxes that would be incurred by the purchaser in the course of the transaction. Mortgages and any other existing charges on the assets have not been taken into consideration in this valuation. Normal costs payable by the purchaser on transfer have been reflected as follows:

Agent's fees	1.0% - 3.0%
Notary's fees	0.3% - 1.1%

The transfer tax as at the date of valuation, 31 December 2018, for each federal state as is shown in the table below.

Federal State	Land Transfer Tax Rate
Baden-Wuerttemberg	5.00%
Bavaria	3.50%
Berlin	6.00%
Brandenburg	6.50%
Bremen	5.00%
Hamburg	4.50%
Hesse	6.00%
Lower Saxony	5.00%
Mecklenburg-Western Pomerania	5.00%
North Rhine-Westphalia	6.50%
Rhineland-Palatinate	5.00%
Saarland	6.50%
Saxony	3.50%
Saxony-Anhalt	5.00%
Schleswig-Holstein	6.50%
Thuringia	6.50%

The net capital value is derived by deducting the purchaser's costs as shown from the calculated gross capital value. It is therefore equivalent to the net proceeds that the vendor would receive on a notional sale, not allowing for any personal costs or taxes to which the vendor would become liable as a result of the sale. The amount of the deduction depends on the investment volume of the asset concerned.

#### 4.5 Valuation Parameters - Abroad

The assessment of Fair Value is based on future cash flows, which reflect normal market expectations taking into account past figures from the subject assets or comparable investments. The valuation parameters have been assessed by CBRE, using its best judgement, based on the information provided by the Company.

Due to the different valuation approach, not all Parameters can be shown.

##### 4.5.1 Non-Recoverable Repair and Maintenance Costs

The annual costs per sq m of lettable area adopted for the purposes of this valuation are average figures for the types of use concerned, arrived at on the basis of experience by CBRE and the analysis of costs of similar buildings by third-party firms. They take into account the necessary cost inputs for long-term operation of the assets. The maintenance and repair costs allowed for in the valuation are between 7.20 € per sq m p.a. and 12.00 € per sq m p.a. (in exceptional cases below 7.20 € per sq m), with a weighted average of 10.37 € per sq m p.a. depending on the age and condition of the building concerned.

In addition to the above mentioned costs we have allowed an amount for initial refurbishments and/or on tenant fluctuation of 35 EUR per sq m for residential accommodation in Austria and 100 EUR per sq m for office accommodation in Hungary. Maintenance costs and costs for tenant improvement sum up to 11.62 EUR per sq m p.a.

In addition to above mentioned costs we have assumed maintenance and repair costs for residential units in Austria currently occupied by long-term tenants ("Altmietet"). These costs range between 0 EUR per sq m p.a. and 150 EUR per sq m p.a. Altogether, the weighted average maintenance and repair costs of the Austrian assets including the long-term tenants sum up to 12.82 EUR per sq m p.a.

#### 4.5.2 Capital Expenditure and other Factors affecting Value

In addition to the non-recoverable ancillary costs, which are deducted monthly from the gross rental income during the period of detailed consideration, capital expenditure on repair and maintenance work already planned at the date of valuation has also been reflected. CBRE has not undertaken technical surveys.

For this present valuation, we were provided by the Company with Capital Expenditure (CapEx) Costs of 4,673,306 EUR for 73 assets.

#### 4.5.3 Discount Rate - Austria

Among others, the Discount Rate considers the nature, the condition and the size of the property, the demand and levels of value in the relevant local real estate market, the prospects for the local market, the current letting situation in the property (vacancy, over-rented or under-rented status, the quality of the tenancy structure, the remaining lease terms and the indexation provisions and extension options), the location of the property as well as the development of rents and prices.

For the subject properties, we have adopted a weighted average Discount Rate of 4.8%.

#### 4.5.4 Discount Rate and Capitalisation Rate – Hungary

The Capitalisation Rate is derived from the average Net Initial Yield (“NIY”) achieved in transactions that were observed by CBRE and reflects the market situation as well as the yield expectations of a potential investor. It includes rental growth assumptions implicitly. The Discount Rate, which explicitly reflects rental growth in the cash flows, is derived from the Capitalisation Rate plus the average rental growth.

The Discount Rate and Capitalisation Rate are adjusted individually for each local market to be valued, in accordance with the following criteria:

- quality of the location
- demand and levels of value in the relevant local real estate market
- the prospects for the local market
- development of rents and prices (yield compression)
- the current letting situation in the property as regards vacancy, over-rented or under-rented status, the quality of the tenancy structure, the remaining lease term(s) and (for commercial leases) the indexation provisions and extension options
- the nature of the asset, its age, size and condition
- additional risk adjustments to take into account uncertainties in the forecasting of future cash flows

The Capitalisation Rate is used to capitalise the net rental income after the cashflow period (“Exit Value”). This net rental income comprises the assumed rental income at that time less the non-recoverable operating costs.

The cash flows and the Exit Value are discounted using the selected Discount Rate, monthly in advance.

The resulting net present values were checked against our analysis of comparable transactions (if available) and an analysis of the internal lease and sale database of the CBRE Valuation Department. If, in particular instances, results of our DCF calculations were found not to reflect the Fair Value of an individual building, the calculation was adjusted by means of a change in the discount rate and Capitalisation Rate using expert and experienced judgement.

For the subject properties, we have adopted a weighted average Discount Rate of 9.0%.



#### 4.5.5 Market Rent

For the purposes of this valuation, CBRE has estimated market rents at the valuation date for the lettable accommodation and asset units. These are based on an analysis of the local asset market, using data available to CBRE and accessible third-party sources. This includes:

- recent leases and tenancies agreed by Vonovia in the years 2017 and 2018
- analysis of the internal rental database of the CBRE Valuation Department
- publications by, and chargeable database queries of, market research institutes and real estate companies

At the date of valuation, the aggregated current gross rental income on portfolio level in Austria was 20,500,377 EUR p.a. and the aggregated annual market rent (gross) in comparison was 26,987,791 EUR p.a. The following table shows the breakdown of the different uses in EUR per sq m:

Type of Use		
	Current Rent	Market Rent
	in EUR per sq m per Month	
Residential non-subsidised	6.71	9.19
Commercial	8.74	8.78
	in EUR per unit per Month	
Motorcycle Parking	18.73	0.00
Internal Parking	62.96	64.69
External Parking	23.71	6.20

At date of valuation the aggregated current gross rental income on portfolio level in Hungary was 432,080 EUR p.a. (excluding vacant space) and the aggregated annual market rent (gross) in comparison was 478,588 EUR p.a. The following table shows the breakdown of the different uses in EUR per sq m:

Type of Use		
	Current Rent	Market Rent
	in EUR per sq m per Month	
Retail	4.74	5.00-10.00
Office	4.36	6.00
Other	3.00	2.50

#### 4.5.6 Risk of rental loss/ Structural Vacancy

As at the valuation date, the portfolio has an average vacancy rate of 8.8% (weighted by area). We are assuming in our valuation that the weighted average structural vacancy rate of the portfolio is 0.0%.

## 5 VALUATION CONCLUSIONS

### 5.1 Fair Value

Upon the assumption that, after reasonable inquiry of the Company, there are no onerous restrictions or unusual outgoings of which we have no knowledge and based on the specific comments and assumptions set out in this Valuation Report, we are of the opinion that the aggregate of the individual Fair Values (net) of the freehold / ground-leasehold interests in the assets in the portfolio, rounded at asset level, as at 31 December 2018 and held as at that date, is:

**36,928,671,300 €**

**(Thirty-six billion, nine hundred and twenty-eight million, six hundred and seventy-one thousand, three hundred Euros)**

net of purchasers' costs and VAT

of which the Fair Value of the undeveloped freehold Land and plots held on a ground lease is 84,505,000 € and

of which the Fair Value of the assets abroad is 579,410,400 € and

of which the value of owner occupied assets (proportion of owner-occupation above 50%, weighted by area), classified by the Company according to IAS 16, is 11,567,000 € (representing less than 0.1% of the Fair Value aggregated on portfolio level).

The assessment of the Fair Value was carried out at asset level. The aggregate of the individual Fair Values presented here takes account of the marketing period and the transaction costs of the individual assets and does not reflect any discounts or premiums on the sale of the whole portfolio or if part of the portfolio were to be marketed simultaneously or in lots.

CBRE has not been engaged to update the CBRE valuation for the purpose of the Prospectus, has no obligation to do so and has not updated the CBRE valuation after the date of valuation, 31 December 2018.

The table below shows the split of values between assets held for investment (freehold-equivalent and leasehold assets), owner occupied assets (freehold-equivalent and leasehold assets) and separately Land with undeveloped sites (held for non-specialised development and not held for development) and assets held on a ground lease.

	<b>Total Fair Value in EUR</b>
Freehold-Equivalent	33,884,267,000
*Short Leasehold	2,375,317,300
**Long Leasehold	573,015,000
<b>Subtotal Assets held as an Investment</b>	<b>36,832,599,300</b>
Freehold-Equivalent	11,217,000
*Short Leasehold	350,000
**Long Leasehold	0
<b>Subtotal Owner-Occupied Assets</b>	<b>11,567,000</b>
<b>Freehold-Equivalent</b>	<b>82,605,000</b>
Land capable of development ( <i>Baureifes Land</i> )	52,510,000
Unserviced land zone for development ( <i>Rohbauland</i> )	4,070,000
Land with hope value for development ( <i>Bauwartungsland</i> )	26,025,000
<b>Leasehold-Equivalent</b>	<b>0</b>
<b>Subtotal Assets held for Non-Specialised Development</b>	<b>82,605,000</b>
<b>Freehold-Equivalent</b>	<b>570,000</b>
Other Land	570,000
<b>Leasehold-Equivalent</b>	<b>0</b>
<b>Subtotal Land not held for Development</b>	<b>570,000</b>
<b>Assets held on a ground lease (<i>Erbbaurechtsgeber</i>)</b>	
*Short Leasehold	1,330,000
**Long Leasehold	0
<b>Subtotal Assets held on a ground lease</b>	<b>1,330,000</b>
<b>Total</b>	<b>36,928,671,300</b>

\* 50 years or less unexpired

\*\* Over 50 years unexpired

There are no negative values to report.

The following table shows aggregated key asset data for the total portfolio (excluding Land):

Fair Value excluding Land	36,844,166,300 €
Total lettable area:	21,704,040 sq m
Average Fair Value per sq m lettable area:	1,698 €
Current annual rental income (gross) <sup>6</sup> :	1,673,068,130 €
Potential annual rental income (gross) <sup>6</sup> :	1,734,526,491 €
Annual market rent (gross) <sup>6</sup> :	1,989,578,364 €
Multiplier (based on current rent):	22.0 times
Multiplier (based on potential rent):	21.2 times
Multiplier (based on market rent):	18.5 times

The following table shows aggregated key asset data for the German portfolio (excluding Land):

Fair Value excluding Land	36,264,755,900 €
Total lettable area:	21,456,331 sq m
Average Fair Value per sq m lettable area:	1,690 €
Current annual rental income (gross) <sup>7</sup> :	1,652,135,672 €
Potential annual rental income (gross) <sup>7</sup> :	1,711,290,682 €
Annual market rent (gross) <sup>7</sup> :	1,962,111,985 €
Multiplier (based on current rent):	22.0 times
Multiplier (based on potential rent):	21.2 times
Multiplier (based on market rent):	18.5 times
Net initial yield (based on current rent):	3.4%
Net initial yield (based on potential rent):	3.6%
Net initial yield (based on market rent):	4.2%

<sup>6</sup> Annual rental income (gross) includes income from antennas of 2,840,634 €.

<sup>7</sup> Annual rental income (gross) includes income from antennas of 2,840,634 €.

For information purposes only the following table shows the breakdowns of the Fair Value of the German Assets (excluding Land) by type of use. The figures have been calculated by breaking down the overall Fair Value on unit level and allocating the individual unit results to the different type of uses.

Type of Use	Total		
	Current Annual Rental Income (gross)	Fair Value breakdown	
	Total in EUR	in EUR	x Current Annual Rental Income (gross)
Residential	1,568,164,435	34,639,640,317	22.1
Commercial*	58,149,376**	1,013,881,109	17.4
Parking	25,821,861	611,234,474	23.7
<b>Total</b>	<b>1,652,135,672</b>	<b>36,264,755,900</b>	<b>22.0</b>

\* The Commercial Units include the light industry property in Falkensee.

\*\* The Current Annual Rental Income (gross) of the commercial units includes the income of the antennas.

The following table shows aggregated key asset data for the assets abroad:

Fair Value	579,410,400 €
Total lettable area:	247,709 sq m
Average Fair Value per sq m lettable area:	2,339 €
Current annual rental income (gross):	20,932,457 €
Potential annual rental income (gross):	23,235,809 €
Annual market rent (gross):	27,466,379 €
Multiplier (based on current rent):	27.7 times
Multiplier (based on potential rent):	24.9 times
Multiplier (based on market rent):	21.1 times
Gross initial yield (based on current rent):	3.6%
Gross initial yield (based on potential rent):	4.0%
Gross initial yield (based on market rent):	4.7%

Our opinion of Fair Value is based upon the scope of work and valuation assumptions as detailed in Part 4 “Explanation of Valuation” of this Valuation Report, and has been derived mainly using comparable recent market evidence on arm’s length terms.

For further information please refer to Part 6 “Valuation Key Definitions”.

## 5.2 Breakdowns of the Fair Value by Portfolio Structure

	Total			
	Fair Value			
	Total in EUR	in % of Total	per sq m	x NCR
Operate	11,624,433,023	31.6%	1,694	20.7
Invest	22,998,978,016	62.4%	1,694	22.6
<b>Strategic</b>	<b>34,623,411,039</b>	<b>94.0%</b>	<b>1,694</b>	<b>21.9</b>
Recurring Sales	1,513,494,151	4.1%	1,728	23.3
Non-Core Disposals	127,850,711	0.3%	901	15.7
<b>Vonovia Germany</b>	<b>36,264,755,900</b>	<b>98.4%</b>	<b>1,690</b>	<b>22.0</b>
Assets Abroad	579,410,400	1.6%	2,339	27.7
<b>Total</b>	<b>36,844,166,300</b>	<b>100.0%</b>	<b>1,698</b>	<b>22.0</b>

## 6 VALUATION KEY DEFINITIONS

### **Lettable area**

The lettable area in this valuation is defined by the entry in the Company's rent roll provided.

### **Total lettable area**

Total lettable area in square metres – sum of residential and commercial floor area – and excluding land; as at 31 December 2018

### **Residential units**

Residential units - number of residential premises excluding internal and external parking units and other units; as at 31 December 2018

### **Commercial units**

Commercial units - number of commercial and special premises; excluding internal and external parking units and other units; as at 31 December 2018

### **Internal Parking units**

Internal Parking units (units) - number of internal parking spaces; as at 31 December 2018

### **External Parking units**

External Parking units (units) - number of external parking spaces; as at 31 December 2018

### **Other units**

Other units – e.g. number of antennas; as at 31 December 2018

### **Land (Land Bank):**

The Land consists of land for future development (land capable of development, unserviced land zoned for development and land with hope value for development) and other land (woodland, agricultural land). It further consists of assets held on a ground lease.

### **EPRA residential vacancy rate**

Residential annual market rent (gross) of vacant space divided by residential annual market rent (gross) of the whole portfolio

### **Current annual rental income (gross):**

The current gross rental income represents the rent paid for the units let on contractual agreements as at 31 August 2018 (adjusted for units sold as at 31 December 2018), before deducting non-recoverable operating costs and VAT, multiplied by 12. Rent-free periods have been taken into account.

### **Potential annual rental income (gross):**

The potential rent is the sum of the current monthly gross rental income and the market rent of vacant units – irrespective of any vacancy – as at 31 August 2018 (adjusted for units sold as at 31 December 2018), multiplied by 12.

### **Annual market rent (gross):**

The (monthly) market rent of all units as at 31 August 2018 (adjusted for units sold as at 31 December 2018; irrespective of any vacancy) multiplied by 12.

**Multiplier (based on current rent):**

Net capital value divided by current rental income (gross)

**Multiplier (based on potential rent):**

Net capital value divided by potential rental income (gross)

**Multiplier (based on market rent):**

Net capital value divided by market rent (gross)

**Net initial yield (based on current rent):**

Current rental income (net) divided by gross capital value

Current rental income (gross) minus non-recoverable operating costs / net capital value plus purchaser's costs

**Net initial yield (based on potential rent):**

Potential rental income (net) divided by gross capital value

**Net initial yield (based on market rent):**

Market rental income (net) divided by gross capital value

**Gross initial yield (based on current rent):**

Current rental income (gross) divided by net capital value

**Gross initial yield (based on market rent):**

Market rental income (gross) divided by net capital value

Note: the valuation keys above are defined in accordance with the gif Gesellschaft für Immobilienwirtschaftliche Forschung e.V. Arbeitskreis Real Estate Investment Management.

Freehold or freehold-equivalent refers to *Eigentum* title.

Ground lease/leasehold refers to *Erbbaurecht* title.



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