

# VONOVIA

## 9M 2023

### Earnings Call Presentation

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November 3, 2023



# Agenda

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# Business Update & 9M 2023 Results

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## 1. Disposals

- €3.7bn total sales volume signed 2023 year to date, of which €1.7bn since H1 reporting in August.
- Second JV signed: Apollo agreed to acquire ca. 30% equity stake in Vonovia's Northern Portfolio for €1.0bn.
- CBRE agreed to acquire 1,200 new constructions at ~4% discount to fair value.
- City of Dresden agreed to buy ca. 1,200 units for €88m (at fair value).
- Continued progress across all other sales channels including a series of smaller transactions in residential and commercial Non-core and MFH Sales clusters.

## 2. Financing, Cash Flow, and Leverage

- €2.0bn new bank loans signed year to date and €0.8bn loans rolled over.
- €3.0bn RCF/CP extended with unchanged terms.
- €3.8bn pro forma cash position (including undrawn loans and disposals signed but not closed yet).
- All unsecured maturities covered until end of Q1 2025.
- Baa1 rating and stable outlook confirmed by Moody's.
- Pro forma LTV 45.0%.<sup>1</sup>
- Focus remains on deleveraging through disposals.

## 3. 9M 2023 Results

- 3.8% organic rent growth, 2.1% vacancy rate, and 99.9% rent collection.
- Adj. EBITDA Rental €1,803.3m (+7.0% y-o-y).
- Total EBITDA €2,010.0m (-4.7% y-o-y).
- Group FFO €1,446.0m (-8.4% y-o-y).
- EPRA NTA €50.51 p.s. (-12.1% ytd).
- No Q3 portfolio valuation due to absence of triggering event.

### Final guidance 2023

- 3.7-3.8% organic rent growth.
- Lower end of Adj. EBITDA Total range and midpoint of Group FFO range in light of headwinds from lower investment volumes and challenging market conditions for disposals.

### Initial guidance 2024

- Rental revenue in line with 2023E in spite of negative volume impact from asset disposals.
- Adj. EBITDA Total in line with 2023E.
- Moderate decline in Group FFO, resulting from higher taxes due to sales and increased interest costs.
- >€3bn gross proceeds from further disposals (signed).

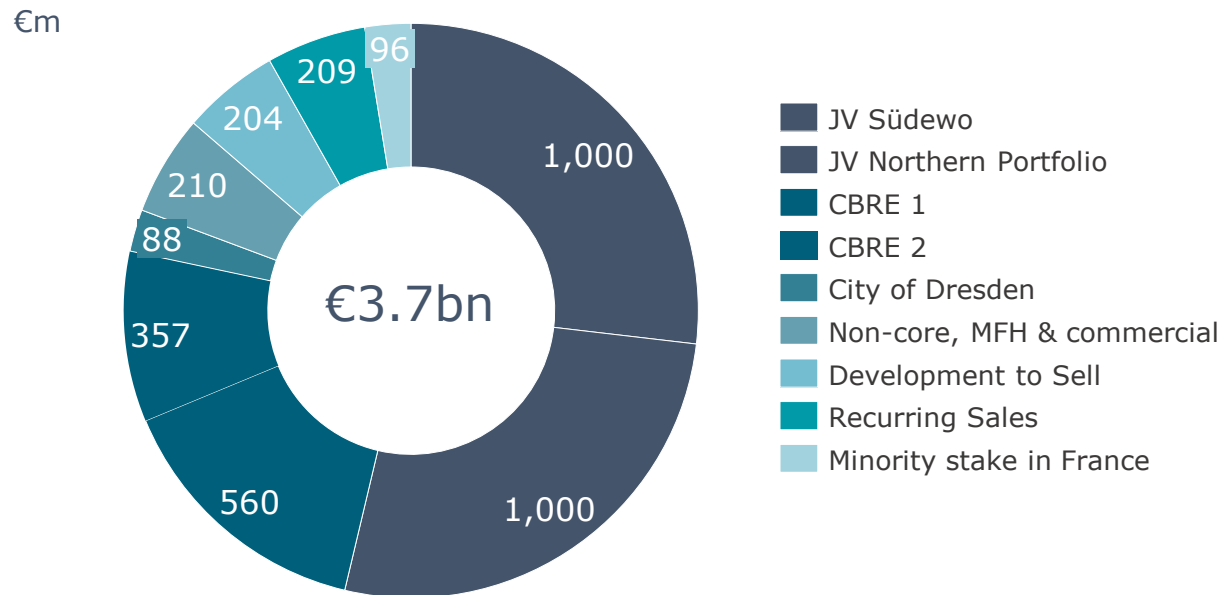
## 4. Guidance

<sup>1</sup> Sep 30, 2023, pro forma adjusted for €2.0bn disposal proceeds from transactions signed but not closed yet.

# Disposals Year to Date

Continuous Progress across All Sales Channels; Initial €2bn Disposal Target Overachieved

- €3.7bn total proceeds from disposals, of which €1.7bn are included in 9M 2023 accounts.
- Vonovia remains fully committed to pursue further disposals to repay upcoming bond maturities and to ensure that debt KPIs move back into their respective target ranges.



## Highlights

€1,000m	JV Südewo (common minority equity participation)
€560m	CBRE 1: Disposal of 1,350 apartments (new constructions) to CBRE (~7% discount to FV)
€96m	Minority stake in France sold in Q1 (above acquisition price)
€37m	Disposal of 361 apartments in Dresden to a family office (marginally above fair value)
€88m	Disposal of 1,200 apartments to the City of Dresden (at fair value)
€1,000m	JV Northern Portfolio (common minority equity participation)
€209m	958 apartments in Recurring Sales Segment (43% premium to fair value)
€377m	Other smaller disposals (Non-core, MFH and Dev. to Sell around fair value; commercial ~7% below fair value)
€357m	CBRE 2: Disposal of 1,200 apartments (new constructions) to CBRE (~4% discount to FV).
<b>€3,724m</b>	<b>Signed year-to-date 2023 (of which €1.7bn since H1 reporting)</b>

# Second Joint Venture Transaction

€1bn Additional Equity at Comparatively Low Cost of Equity

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## Transaction overview

- Following the successful Südewo partnership, Vonovia and Apollo have signed an agreement on the sale of a common minority equity participation in Vonovia's holding entity for the "Northern Portfolio."
- Apollo, on behalf of its affiliated and third-party insurance clients and other, long-term investors has agreed to pay €1.0bn to acquire a minority stake in the holding entity valued at ~€3.8bn (30% ownership of ~€3.3bn entity value excluding other minority participations).
- The holding entity of the Northern Portfolio is essentially debt-free and comprises ca. 31k units primarily located in Kiel, Bremen, and Lübeck. Closing of the transaction is expected on or around Dec. 31, 2023, and is subject to further conditions such as the absence of material adverse changes and regulatory clearances.

- Vonovia does not intend to pursue additional joint ventures of this kind.

## The key terms of the transaction are similar to the Südewo transaction

- Vonovia receives equity at a cost substantially lower than what is currently indicated by the share price and will deploy the full net proceeds towards deleveraging.
- Vonovia will continue to control, operate and consolidate the portfolio, given limited minority investor protection rights.
- Higher-than pro-rata share of the dividend distribution from free cash flow generated by the portfolio. Correspondingly, Vonovia retains a long-term call-option giving it the right to repurchase the participation at an IRR of 6.95%-8.30%.
- The range is purely related to the timing of a call option exercise by Vonovia starting at 6.95% and reaching a maximum of 8.30%. The IRR takes into account any dividends paid, reducing the call option price over time. The value of the call option is accounted for as a financial asset.
- The cost of capital to Vonovia is capped at the IRR range. Vonovia retains 100% of any additional upside or outperformance of the portfolio versus the business plan. There is no obligation for Vonovia to exercise the call option.
- Maintenance and operating expenses are paid from the cash flow generated by the portfolio.

# Segment Overview

Core Operating Business Continues to Grow. Headwinds in Other Segments Remain

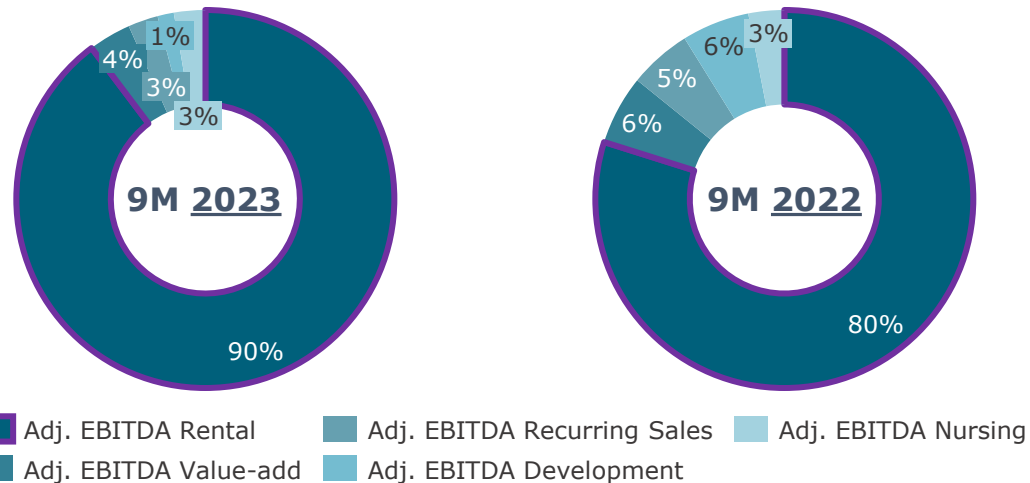
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- Rental business increased by 7%, driven by rent growth, continuously high occupancy and virtually full rent collection. Further support from lower cost base for both maintenance and operating expenses. Deutsche Wohnen synergies are being realized, as planned.
- Other segments still impacted by low transaction volume, reduced investment program and overall market environment.

€m (unless indicated otherwise)	9M 2023	9M 2022 <sup>2</sup>	Delta
<b>Total Segment Revenue</b>	<b>4,232.3</b>	<b>4,606.3</b>	<b>-8.1%</b>
Adj. EBITDA Rental	1,803.3	1,685.3	+7.0%
Adj. EBITDA Value-add	73.3	125.3	-41.5%
Adj. EBITDA Recurring Sales	51.6	112.8	-54.3%
Adj. EBITDA Development	28.0	122.1	-77.1%
Adj. EBITDA Nursing	53.8	64.6	-16.7%
<b>Adj. EBITDA Total</b>	<b>2,010.0</b>	<b>2,110.1</b>	<b>-4.7%</b>
FFO interest expenses	-460.8	-361.9	+27.3%
Current income taxes FFO	-96.7	-97.3	-0.6%
Consolidation <sup>1</sup>	-6.5	-73.1	-91.1%
<b>Group FFO</b>	<b>1,446.0</b>	<b>1,577.8</b>	<b>-8.4%</b>
of which non-controlling interests	69.6	62.0	+12.3%
<b>Group FFO after non-controlling interests</b>	<b>1,376.4</b>	<b>1,515.8</b>	<b>-9.2%</b>
Number of shares (eop)	814.6	795.8	+2.4%
<b>Group FFO p.s. (eop NOSH)</b>	<b>1.78</b>	<b>1.98</b>	<b>-10.1%</b>
<b>Group FFO p.s. (after non-controlling interests)</b>	<b>1.69</b>	<b>1.90</b>	<b>-11.3%</b>

Adj. EBITDA contribution by segments

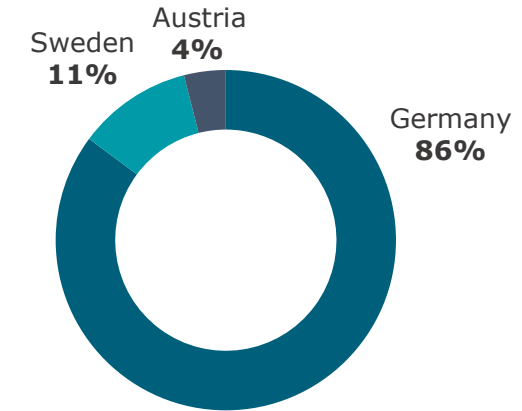


<sup>1</sup> Comprised of intragroup losses of €6.6m (9M 2022: intragroup profit of €-22.6m), gross profit of development to hold of €-13.1m (9M 2022: €-50.5m). <sup>2</sup> In Q4 2022 the segment Deutsche Wohnen was dissolved and integrated into the segments Rental, Value-add, Recurring Sales, Development and Nursing. Prior-year figures adjusted accordingly.

# Rental Segment

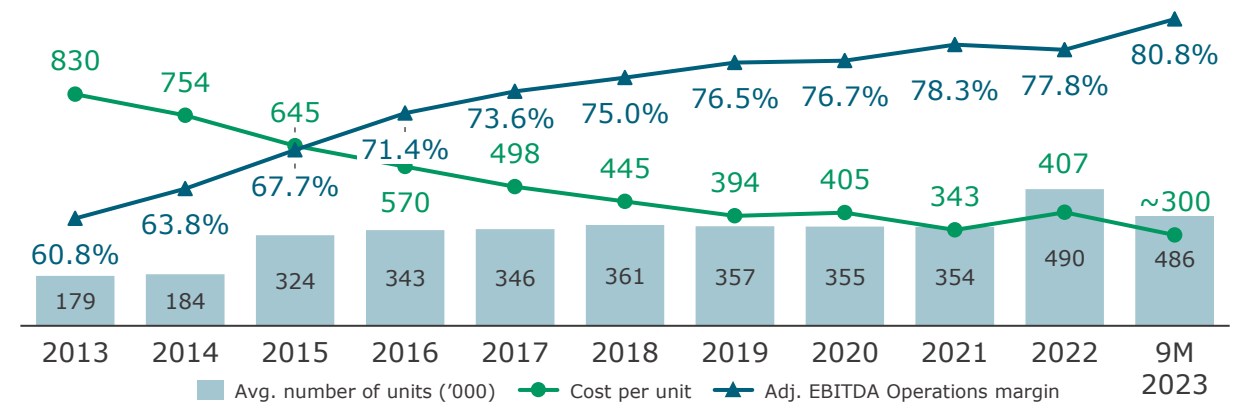
- Increased revenue driven by rental growth on a marginally smaller portfolio.
- Reduction in operating expenses mainly driven by successful realization of Deutsche Wohnen synergies.
- Adj. EBITDA up 7.0% as a result of top line growth combined with efficient cost control on maintenance and operating expenses.

Rental revenue by geography



Rental Segment (€m)	9M 2023	9M 2022 <sup>2</sup>	Delta
Rental revenue	2,411.6	2,363.7	+2.0%
Maintenance expenses	-311.2	-326.5	-4.7%
Operating expenses	-297.1	-351.9	-15.6%
<b>Adj. EBITDA Rental</b>	<b>1,803.3</b>	1,685.3	<b>+7.0%</b>

Scale and efficiency gains in Germany<sup>1</sup>

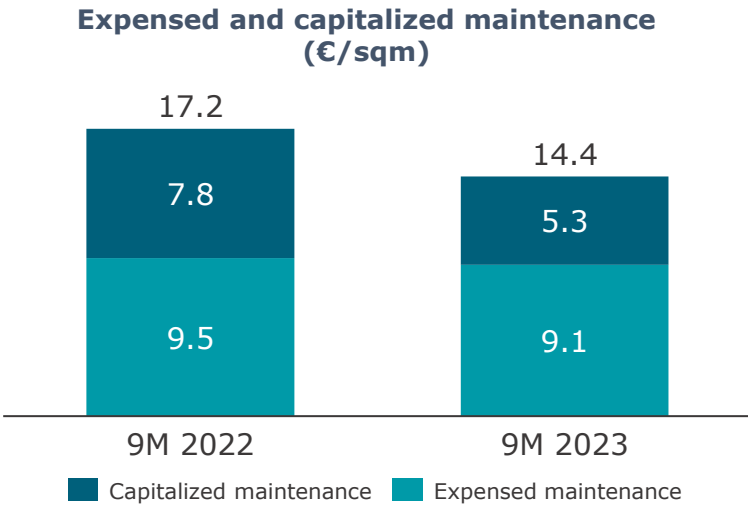
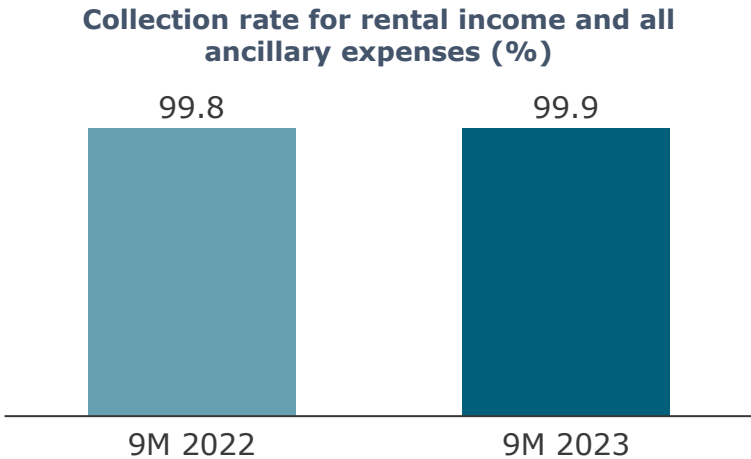
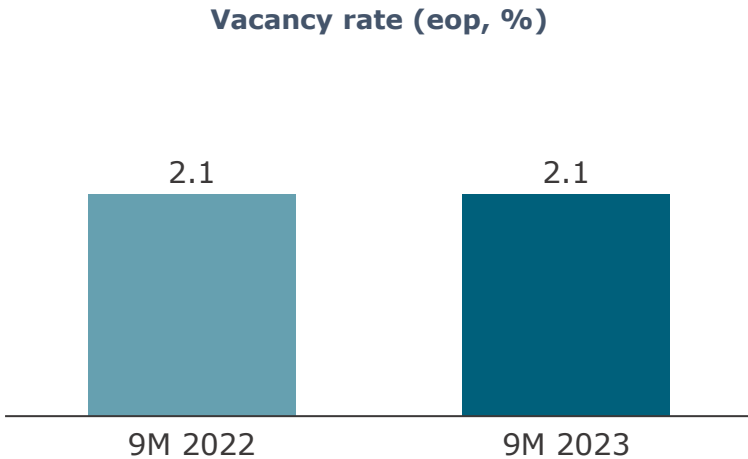
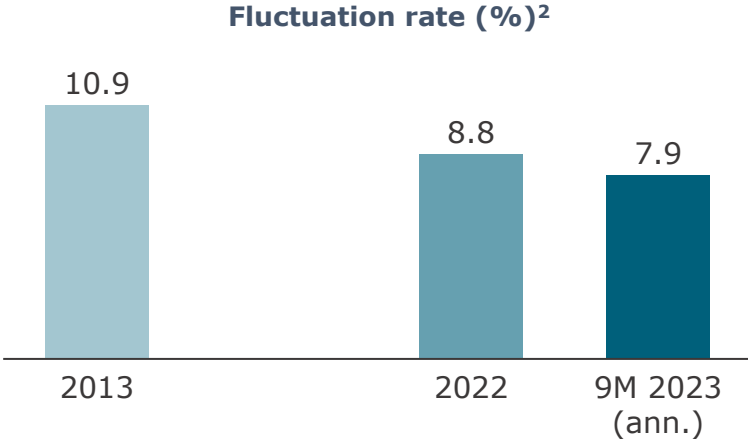
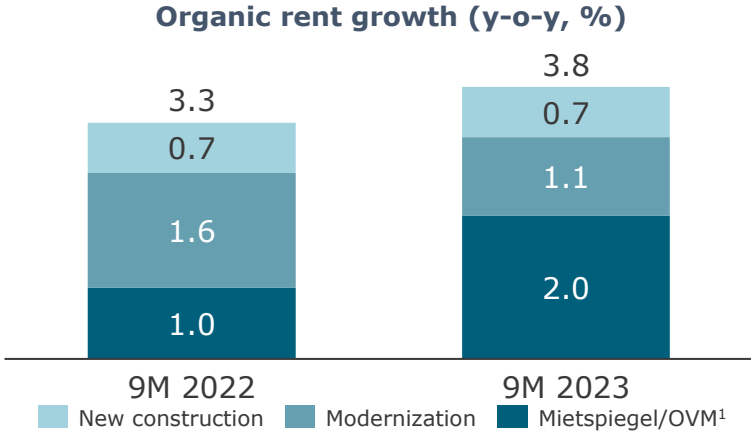


<sup>1</sup> Adj. EBITDA Operations margin (Adj. EBITDA Rental + Adj. EBITDA Value-add - intragroup profits) / Rental revenue. Margin 2019 and beyond includes positive impact from IFRS 16. Cost per unit is defined as (Rental revenue - EBITDA Operations + Maintenance) / average no. of units. 2022 and onwards incl. Deutsche Wohnen. 9M 2023 CPU annualized. <sup>2</sup> In Q4 2022 the segment Deutsche Wohnen was dissolved and integrated into the segments Rental, Value-add, Recurring Sales, Development and Nursing. Prior-year figures adjusted accordingly.



# Rental Segment

- Accelerating market rent growth but fluctuation remains low.
- Vacancy rate only a function of turnaround time in case of fluctuation.
- Virtually full rent collection.
- Capitalized maintenance reduced y-o-y.



<sup>1</sup> OVM = local comparable rent. % value refers to Mietspiegel/OVM adjustments already implemented. <sup>2</sup> German portfolio only.



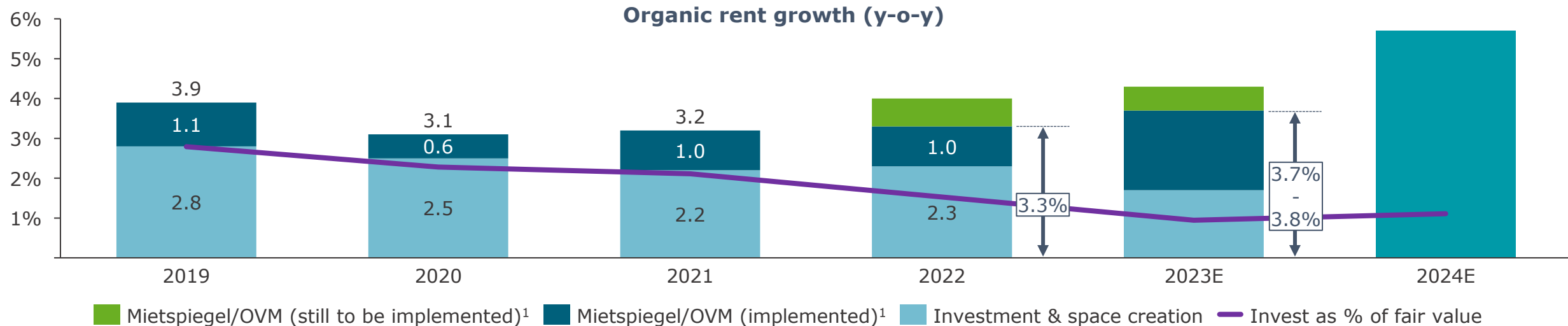
# Additional Information on Mietspiegel/OVM Growth

In 2022, the acceleration in Mietspiegel/OVM<sup>1</sup> growth started creating a bow wave of rent growth that comes with delayed implementation because the rules-based rental system does not always allow for the immediate implementation of the full rent growth; a portion of the Mietspiegel/OVM rent growth implementation is often delayed, particularly because of

- the local maximum over three years (“Kappungsgrenze”: 11% in Berlin, 15% in markets defined as tight and 20% elsewhere);
- the 15-months hiatus between two rent increases.

This additional rent growth is irrevocably linked to each specific apartment but it can only be implemented with a time lag.

The maximum Mietspiegel/OVM level is marked in our SAP operating system apartment by apartment, and the remaining step-up will be automatically implemented immediately after the restriction period has lapsed.



<sup>1</sup> OVM = local comparable rent. % value refers to Mietspiegel/OVM adjustments already implemented. The amount shown for “Mietspiegel/OVM (still to be implemented)” refers to the amount accumulated in a given year; the implementation is not necessarily in the same year.

# Value-add Segment

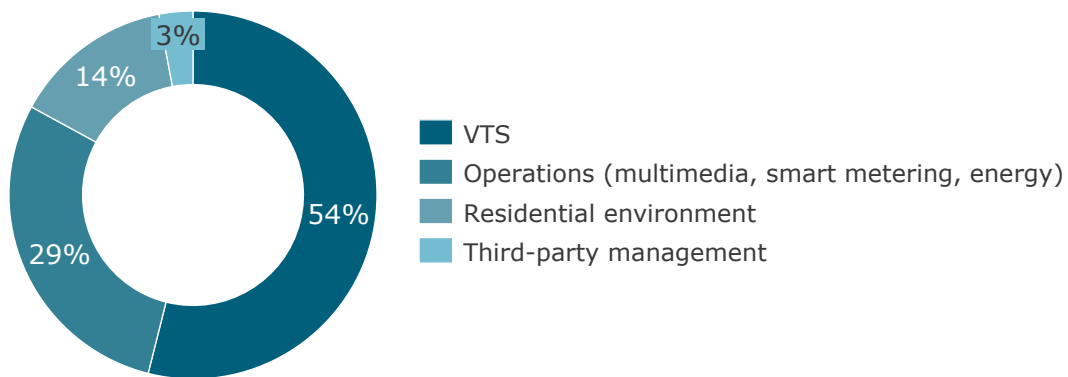
EBITDA reduction driven by challenges in craftsmen organization

- reduced investment volume weighed on profitability;
- increased cost base;
- reorganization process underway.

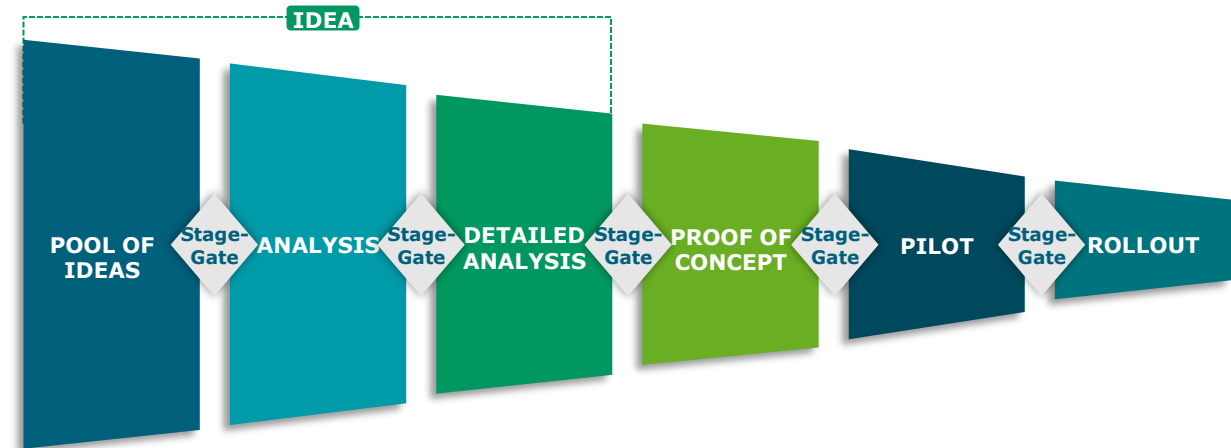
External revenue growth mostly driven by energy and PV installations.

Value-add Segment (€m)	9M 2023	9M 2022 <sup>1</sup>	Delta
Revenue Value-add	904.7	947.9	-4.6%
of which external	94.9	91.2	+4.1%
of which internal	809.8	856.7	-5.5%
Operating expenses Value-add	-831.4	-822.6	+1.1%
<b>Adj. EBITDA Value-add</b>	<b>73.3</b>	<b>125.3</b>	<b>-41.5%</b>

Revenues in Value-add Segment



Extensive testing and measured rollout of value-add initiatives to minimize risk

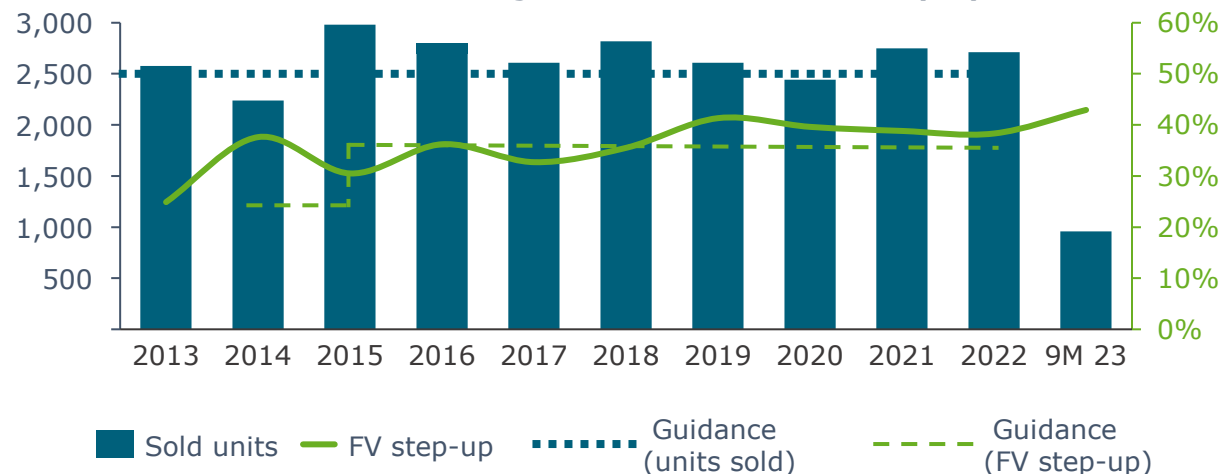


<sup>1</sup> In Q4 2022 the segment Deutsche Wohnen was dissolved and integrated into the segments Rental, Value-add, Recurring Sales, Development and Nursing. Prior-year figures adjusted accordingly.

# Recurring Sales Segment

- Disposal volumes still below prior years.
- Fair-value step-up remained very high with almost 43% in 9M 2023; partly driven by relatively high share of volume in Austria.
- Focus remains on liquidity generation over price optimization.

Historical Recurring Sales volumes and FV step-up<sup>4</sup>



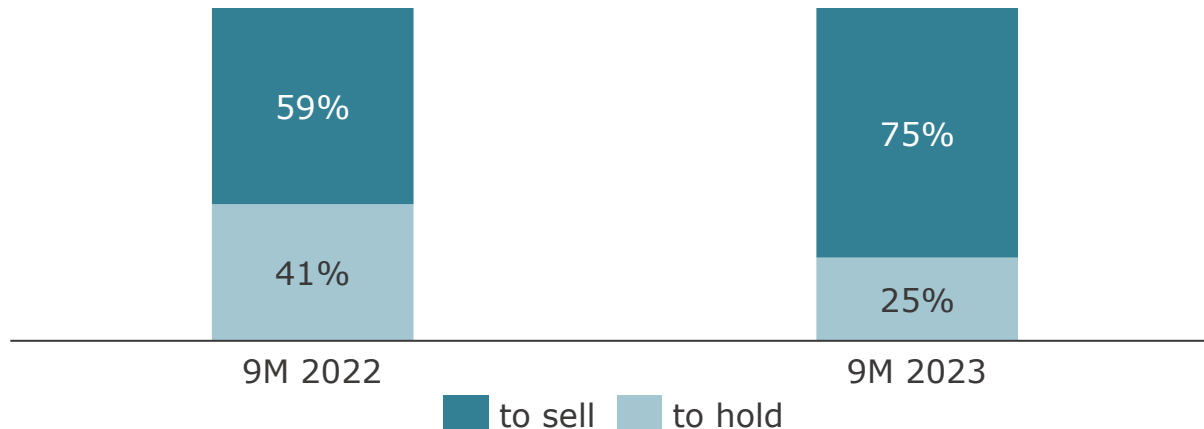
Recurring Sales Segment (€m)	9M 2023	9M 2022 <sup>1</sup>	Delta
Units sold	958	1,853	-48.3%
Revenue from recurring sales	209.1	413.5	-49.4%
Fair value	-146.3	-286.2	-48.9%
Adjusted result	62.8	127.3	-50.7%
<b>Fair value step-up</b>	<b>42.9%</b>	<b>44.5%</b>	<b>-1.6pp</b>
Selling costs	-11.2	-14.5	-22.8%
<b>Adj. EBITDA Recurring Sales</b>	<b>51.6</b>	<b>112.8</b>	<b>-54.3%</b>
<b>Free Cash<sup>2</sup></b>	<b>170.3</b>	<b>358.3</b>	<b>-52.0%</b>
<b>Cash conversion<sup>3</sup></b>	<b>81%</b>	<b>87%</b>	<b>-6pp</b>

<sup>1</sup> In Q4 2022 the segment Deutsche Wohnen was dissolved and integrated into the segments Rental, Value-add, Recurring Sales, Development and Nursing. Prior-year figures adjusted accordingly. <sup>2</sup> Revenue minus selling costs minus taxes. <sup>3</sup> Free cash in relation to revenue. <sup>4</sup> 2018 onwards also including Recurring Sales in Austria.

# Development Segment

- Project-driven nature of development business and overall market conditions resulted in substantially lower volume in 9M 2023, as prior-year period was also positively impacted by a large global exit.
- Lower gross margin in the context of overall market environment.
- Focus remains on liquidity generation over price optimization.

Assets under construction: ratio to hold vs. to sell



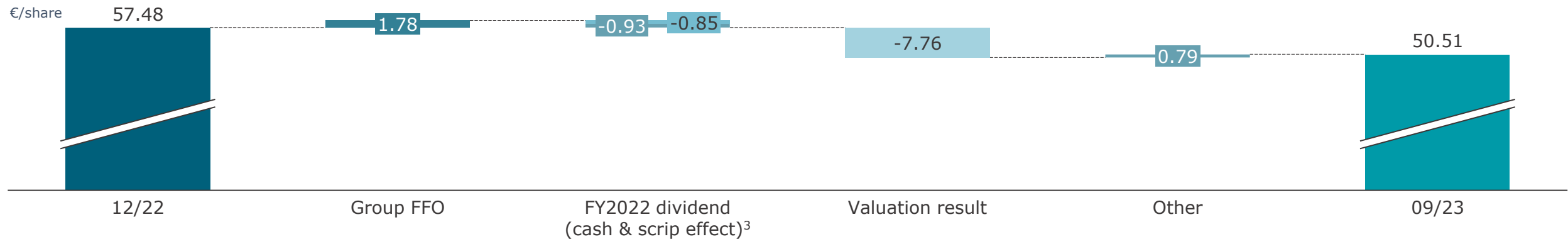
Development Segment (€m)	9M 2023	9M 2022 <sup>1</sup>	Delta
Revenue from disposal of to-sell properties	267.9	466.0	-42.5%
Cost of Development to sell	-233.4	-372.0	-37.3%
Gross profit Development to sell	34.5	94.0	-63.3%
<b>Gross margin Development to Sell (DtS)</b>	<b>12.9%</b>	<b>20.2%</b>	<b>-7.3pp</b>
Fair value Development to hold	218.3	204.7	+6.6%
Cost of Development to hold <sup>2</sup>	-205.2	-154.2	+33.1%
Gross profit Development to hold	13.1	50.5	-74.1%
<b>Gross margin Development to Hold (DtH)</b>	<b>6.0%</b>	<b>24.7%</b>	<b>-18.7pp</b>
Rental revenue Development	3.5	2.5	+40.0%
Operating expenses Development	-23.1	-24.9	-7.2%
<b>Adj. EBITDA Development</b>	<b>28.0</b>	<b>122.1</b>	<b>-77.1%</b>

<sup>1</sup> In Q4 2022 the segment Deutsche Wohnen was dissolved and integrated into the segments Rental, Value-add, Recurring Sales, Development and Nursing. Prior-year figures adjusted accordingly. <sup>2</sup> Excluding €0.5m (9M 2022: €0.0m) capitalized interest.

## EPRA NTA (€m)

(unless indicated otherwise)

	Sep. 30, 2023	Dec. 31, 2022	Delta
Total equity attributable to Vonovia shareholders	27,854.5	31,331.5	-11.1%
Deferred tax in relation to FV gains of investment properties <sup>1</sup>	14,880.6	16,190.0	-8.1%
FV of financial instruments <sup>2</sup>	-139,4	-117.5	+18.6%
Goodwill as per IFRS balance sheet	-1,391,7	-1,529.9	-9.0%
Intangibles as per IFRS balance sheet	-55,7	-129.6	-57.0%
<b>EPRA NTA</b>	<b>41,148.3</b>	<b>45,744.5</b>	<b>-10.0%</b>
NOSH (million)	814.6	795.8	+2.4%
<b>EPRA NTA (€/share)</b>	<b>50.51</b>	<b>57.48</b>	<b>-12.1%</b>



<sup>1</sup> Hold portfolio only. <sup>2</sup> Adjusted for effects from cross currency swaps. <sup>3</sup> Per-share impact based on new number of shares (814.6m) was -€0.83 for cash dividend and -€0.95 for scrip element.

# Investment Program – Addressing the Megatrends

## Investment Program

### Optimize Apartment

Apartment renovation after turnover.

NIY of ~10%.

### Upgrade Building

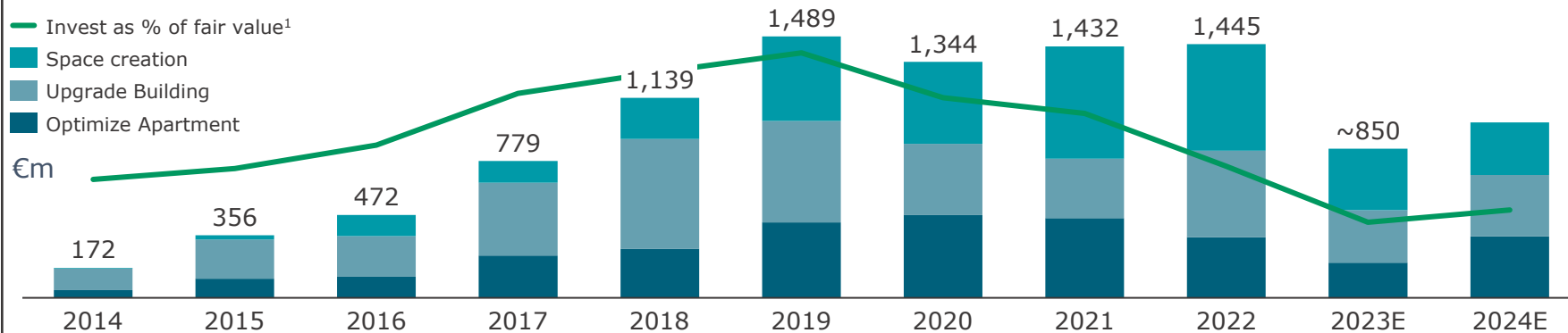
Investments in decarbonization and building modernization.

- High single / low double digit IRR.
- Heat pump installations with ~10% NIY.

### Space Creation

New construction for our own portfolio.

- Legacy only and on hold for now with ~€300m to be invested in 2024 to finish projects currently underway.



Investment hurdles have been increased to reflect higher cost of capital. 2023E and 2024E volumes below prior years as a result of revised capital allocation.

## Development to sell

New construction to be sold to third parties

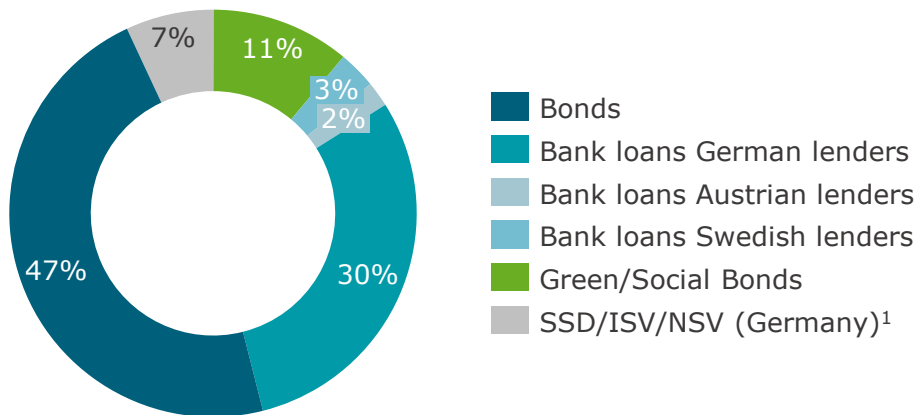
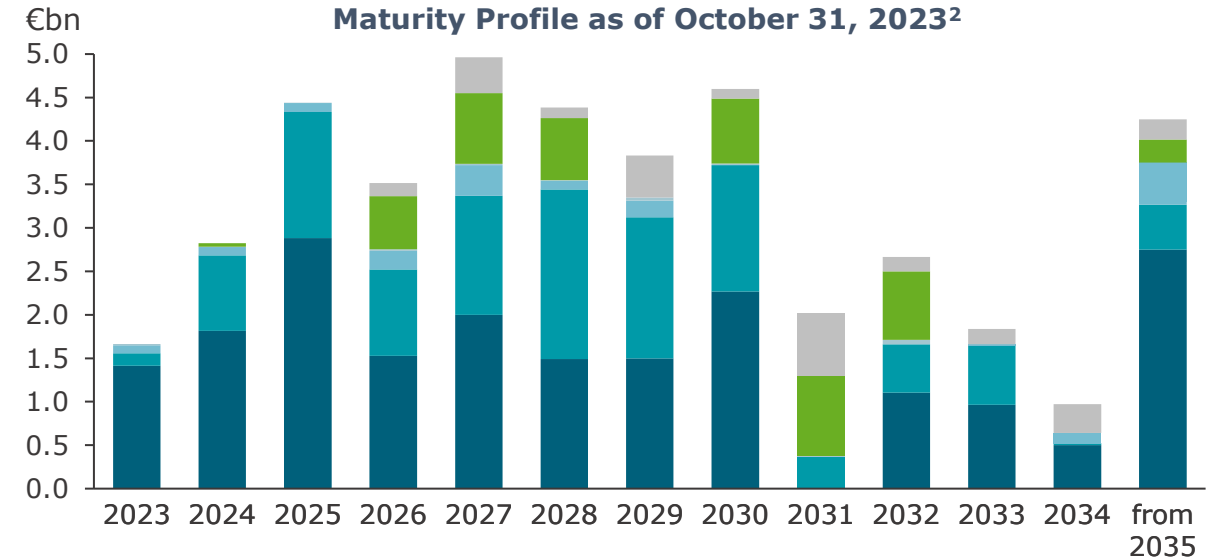
- Ca. 4% of balance sheet total committed to DtS.
- Self-financing entity, i.e. new projects to be financed through disposals of finished projects.
- Legacy only and on hold for now with ~€700m to be invested in 2024 to finish projects currently underway.
- Most new constructions sold to retail investors / owner occupiers but projects also made ready for global exits.
- Remains an attractive business in light of growing supply/demand imbalance.
- Capital discipline is key.

<sup>1</sup> Calculated as investment amount over fair value; 2023E and 2024E based on 9M 2023 fair value.

# Debt Structure

Well-balanced and Long-term Maturity Profile with Diverse Funding Mix

- Diverse funding mix with no more than 12% of debt maturing annually.
- Combination of debt KPIs, fixed/hedged debt ratio and maturity profile remains key in overall funding strategy.
- Well-balanced maturity profile and the heterogeneous funding mix safeguard sufficient flexibility for future refinancings.
- All unsecured maturities covered until end of Q1 2025.
- General strategy of rolling over secured debt and repaying unsecured bonds with disposal proceeds to continue.



KPI / criteria	Oct. 31, 2023	Dec. 31, 2022
Corporate rating (Scope) <i>Outlook: <u>negative</u></i>	<b>A-</b>	<b>A-</b>
Corporate rating (S&P) <i>Outlook: <u>stable</u></i>	<b>BBB+</b>	<b>BBB+</b>
Corporate rating (Moody's) <i>Outlook: <u>stable</u></i>	<b>Baa1</b>	<b>Baa1</b>
Fixed/hedged debt ratio	<b>98%</b>	<b>96%</b>
Average cost of debt	<b>1.7%</b>	<b>1.5%</b>
Weighted average maturity (years)	<b>6.7</b>	<b>7.4</b>
Average fair market value of debt	<b>85%</b>	<b>83%</b>

<sup>1</sup> SSD = Schuldscheindarlehen (promissory notes), ISV = Inhaberschuldverschreibungen (bearer bonds), NSV = Namensschuldverschreibungen (registered bonds) <sup>2</sup> Sep. 30, 2023, adjusted for repayment of USD250m bond.



# Debt KPIs and Bond Covenants

€m (unless indicated otherwise)	Sep. 30, 2023	Dec. 31, 2022	Delta
<b>LTV (target: 40-45%)</b>			
Adj. net debt	42,149.2	43,320.1	-2.7%
Adj. fair value of real estate portfolio	90,035.1	96,051.7	-6.3%
<b>LTV</b>	<b>46.8%</b>	<b>45.1%</b>	<b>+1.7 pp</b>
<b>Pro forma LTV<sup>1</sup></b>	<b>45.0%</b>	<b>45.1%</b>	<b>-0.1 pp</b>
<b>ND/EBITDA multiple (target: 14-15x)</b>			
Net debt (end of period)	42,149.2	43,320.1	-2.7%
Adj. EBITDA (LTM)	2,662.9	2,763.1	-3.6%
<b>ND/EBITDA multiple</b>	<b>15.8x</b>	<b>15.7x</b>	<b>+0.1x</b>
<b>Pro forma ND/EBITDA multiple<sup>1</sup></b>	<b>15.2x</b>	<b>15.7x</b>	<b>-0.5x</b>
<b>ICR (target: at least 3.5x)</b>			
Adj. EBITDA (LTM)	2,662.9	2,763.1	-3.6%
Net Cash Interest (LTM)	608.9	502.6	+21.2%
<b>ICR</b>	<b>4.4x</b>	<b>5.5x</b>	<b>-1.1x</b>

Bond covenant	Required level	Current level	Headroom
<b>LTV</b> (Total financial debt / total assets)	<60%	45.9%	Fair values would have to drop ~26% for the LTV to cross 60%. <sup>2</sup>
<b>Secured LTV</b> (Secured debt / total assets)	<45%	13.7%	Fair values would have to drop ~77% for the secured LTV to cross 45%. <sup>2</sup>
<b>ICR</b> (LTM Adj. EBITDA / LTM net cash interest)	>1.8x	4.4x	Interest expenses would have to increase 143% to ca. €1.5bn for the ICR to fall below 1.8x. <sup>3</sup>
<b>Unencumbered assets</b> (Unencumbered assets / unsecured debt)	>125%	153%	Fair values would have to drop 22% for the unencumbered assets ratio to fall below 125%. <sup>2</sup>

<sup>1</sup> Pro forma Sep. 30, 2023, Adj. net debt, Adj. fair value of real estate portfolio, Net debt (end of period), and Adj. EBITDA (LTM) adjusted for disposals signed after Q3. <sup>2</sup> Headroom calculations are based on sensitivities regarding changes in investment properties, not total assets, while all other variables are kept unchanged. <sup>3</sup> Headroom calculations are based on sensitivities regarding changes in net cash interest in relation to Adj. EBITDA, while all other variables are kept unchanged. Calculation of current levels in the appendix.

# Financing Update 2023 YTD

## €0.8bn secured loans rolled over

- 9 loans
- 10-year maturities
- Weighted average interest rate of 4.03% (3.5% - 4.3% range<sup>1</sup>)

## €0.6bn new secured loans

- €125m Nord LB
- €130m UniCredit
- €175m Berliner Sparkasse
- Four additional loans with an aggregate volume of €160m
- 8-10 year maturities
- Weighted average interest rate of 3.75% (3.7% - 4.3% range<sup>1</sup>)

## €1.4bn new unsecured loans

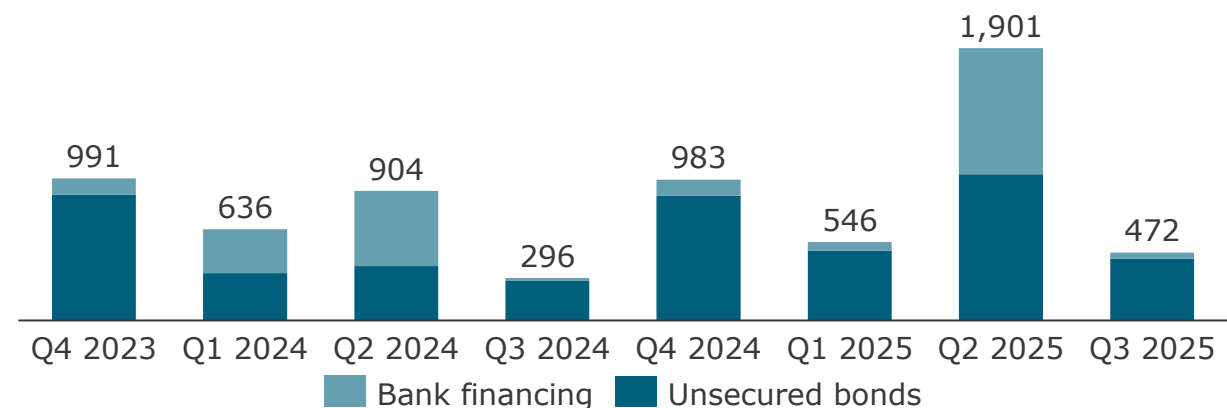
- €600m EIB (of which €150m undrawn)<sup>2</sup>
- €150m CaixaBank
- €30m other
- 5-8 year maturities
- Weighted average interest rate of 3.5%
- €600m bridge-to-capital markets facility 2+1 years (undrawn)

## €3.0bn RCF/CP extended by two years with unchanged terms (150m drawn).

→ Work on additional (un)secured debt is well underway.

- General strategy of rolling over secured debt and repaying unsecured bonds with disposal proceeds to continue.
- Additional bank financing as back-up, capitalizing on the spread between unsecured debt and (less expensive) bank debt.
- €3.8bn pro forma cash position:
  - €1.1bn cash on hand (Sep 30, 2023).
  - €0.75bn loans signed but undrawn.
  - €2.0bn disposals signed but not closed yet.
- All unsecured maturities covered until end of Q1 2025.

Maturity profile for the next 24 months (€m)



<sup>1</sup> Interest rate range excl. subsidized loans from public institutions at interest rates well below market rates. <sup>2</sup> Signed end of 2022.

# Final 2023 Guidance

- Final outcome for 2023E organic rent growth largely dependent on fluctuation rate.
- Revenue, EBITDA, and Group FFO impacted by headwinds from lower investment volumes and challenging market conditions for Recurring Sales and Development to Sell.
- Focus remains on cash generation. Sales proceeds to delever to come predominantly from sales outside the EBITDA segments.

	<b>Guidance <u>2023</u> (Aug. 2023)</b>	<b>Final Guidance <u>2023</u> (Nov. 2023)</b>
Total Segment Revenue	€6.4bn - €7.2bn	Moderately below prior year, driven by lower investment volumes and challenging market conditions for Recurring Sales and Development to Sell
Rental Revenue	€3.15bn – €3.25bn	Upper end of €3.15bn – €3.25bn range
Organic rent growth (eop)	3.6% - 3.9%	3.7%-3.8%
Recurring Sales (# of units)	Suspended	Suspended
FV step-up Recurring Sales	Suspended	Suspended
Adj. EBITDA Total	€2.6bn - €2.85bn	Lower end of €2.6bn - €2.85bn range
Group FFO	€1.75bn - €1.95bn	Midpoint of €1.75bn - €1.95bn range
Group FFO p.s. (eop shares)	€2.15 – €2.39	Midpoint of €2.15 – €2.39 range
Dividend	~70% of Group FFO after non-controlling interests.	Policy unchanged; finalization pending visibility on relevant factors (e.g. leverage, property valuations, and disposals) and to be made at the latest in March 2024.
Investments	Portfolio Investments: ~€500m Space creation: ~€350m	Portfolio Investments: ~€500m Space creation: ~€350m
SPI	~100%	105%-110%

We expect the general direction of our business along these lines:

- **Rental Revenue** in line with 2023E in spite of the negative volume impact from asset disposals.
- **Adj. EBITDA Total** in line with 2023E.
- Moderate decline in **Group FFO and Group FFO p.s.** compared to 2023E, resulting from higher taxes due to sales and increased interest costs.
- Moderate increase of **invest volume** compared to 2023E.
- **SPI** of ~100%.
- Organic rent growth 2024E to be quantified with FY2023 reporting.
- >€3bn gross proceeds from further disposals (signed).

## Background

- In March 2023, investigators searched the company headquarters and another Vonovia site in Bochum; the authorities were acting on the suspicion of potentially problematic activities in the awarding of contracts to subcontractors in the context of heating systems.
- Vonovia is an injured party, not the defendant.
- We have the greatest interest in a swift and comprehensive clarification of the allegations. To this end, we are not only cooperating fully with the investigating authorities, but also instructed Hengeler Mueller and Deloitte to carry out an internal investigation.

## Status Update

- The internal investigation supported by Hengeler Mueller and Deloitte is almost concluded.
- The investigation is thorough and comprehensive: As part of the forensic analysis, a large set of data, including several million emails and hundreds of individual business processes have been evaluated.
- This data analysis has been followed by individual interviews to further support the analysis.
- Before Vonovia submits a final assessment, we would first like to exchange our state of knowledge and discuss our findings with the respective public prosecutor's office.
- We expect this to take place in the coming months.



Core rental business with continuously strong performance and sustainable growth.

Transactions are possible in spite of the challenging market environment but they need time and careful preparation and execution.

All unsecured maturities covered until the end of Q1 2025 from successful cash generation through disposals and continued roll-over of secured debt as well as new secured and unsecured bank debt.

We remain fully committed to our disposal efforts to further strengthen the balance sheet and bring the debt KPIs back into the target ranges.

Fair value headroom allows us to continue to act from a position of strength, and we are not forced to take drastic measures that would be detrimental to the long-term nature of our business and/or destroy long-term shareholder value.

# Agenda

1. Business Update & 9M 2023 Results pages 3-22
2. Appendix pages 23-56

# Appendix

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<b>25</b>	Megatrends
<b>26</b>	Vonovia's Growth Drivers
<b>27-28</b>	Regional Markets & Portfolio Clusters
<b>29</b>	Fluctuation
<b>30</b>	Vonovia's PV Program
<b>31-36</b>	ESG
<b>37-39</b>	Lenders Outside Bond Market, Bond Overview & Covenants
<b>40</b>	LTV evolution in German Resi
<b>41</b>	Inflation & Rent Growth
<b>42-51</b>	Residential Market Data
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<b>54</b>	IR Contact & Financial Calendar
<b>55</b>	Disclaimer



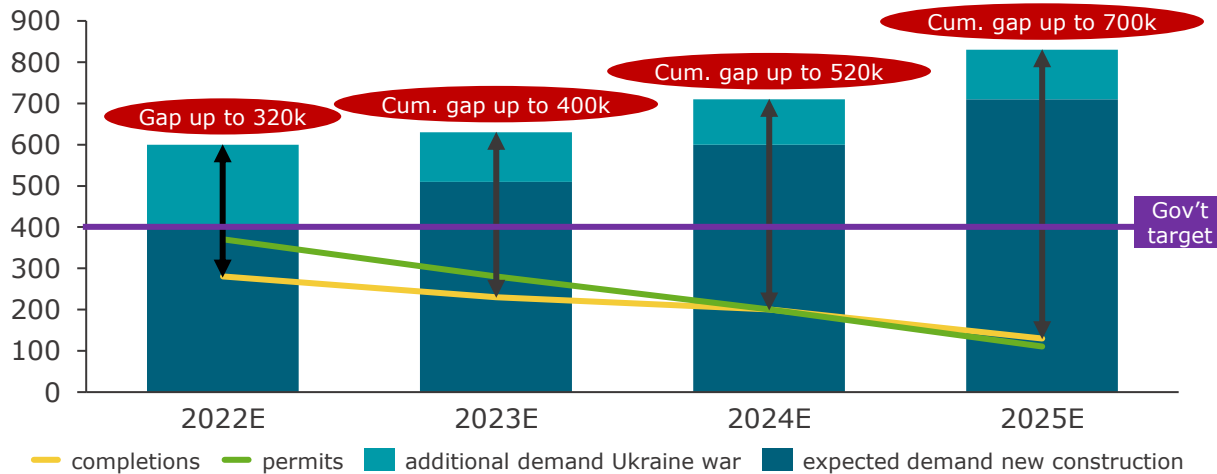
# Our Business Is Supported by Two Dominant Megatrends...

...But the Current Environment is a Short-term Challenge

- In addressing the consequences of the Russian war on Ukraine, central banks around the world have been increasing interest rates at an unprecedented speed.
- The drawback of Vonovia's stable business model in a regulated market is that it reacts only slowly to the new environment, and the initial impact on our KPIs is negative.
- However, the new environment also accelerates the relevant megatrends around which we have built our business, leading to even stronger fundamentals in the medium- and long-term.

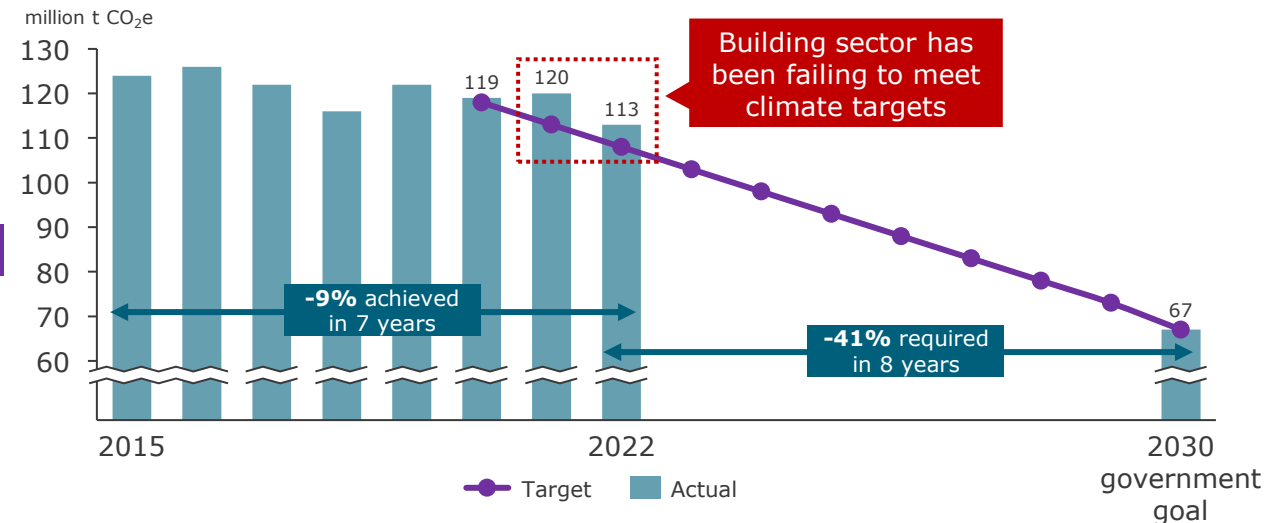
## Urbanization & Supply/Demand Imbalance

Expected demand, permits, completions ('000 units)<sup>1</sup>



## Climate Change

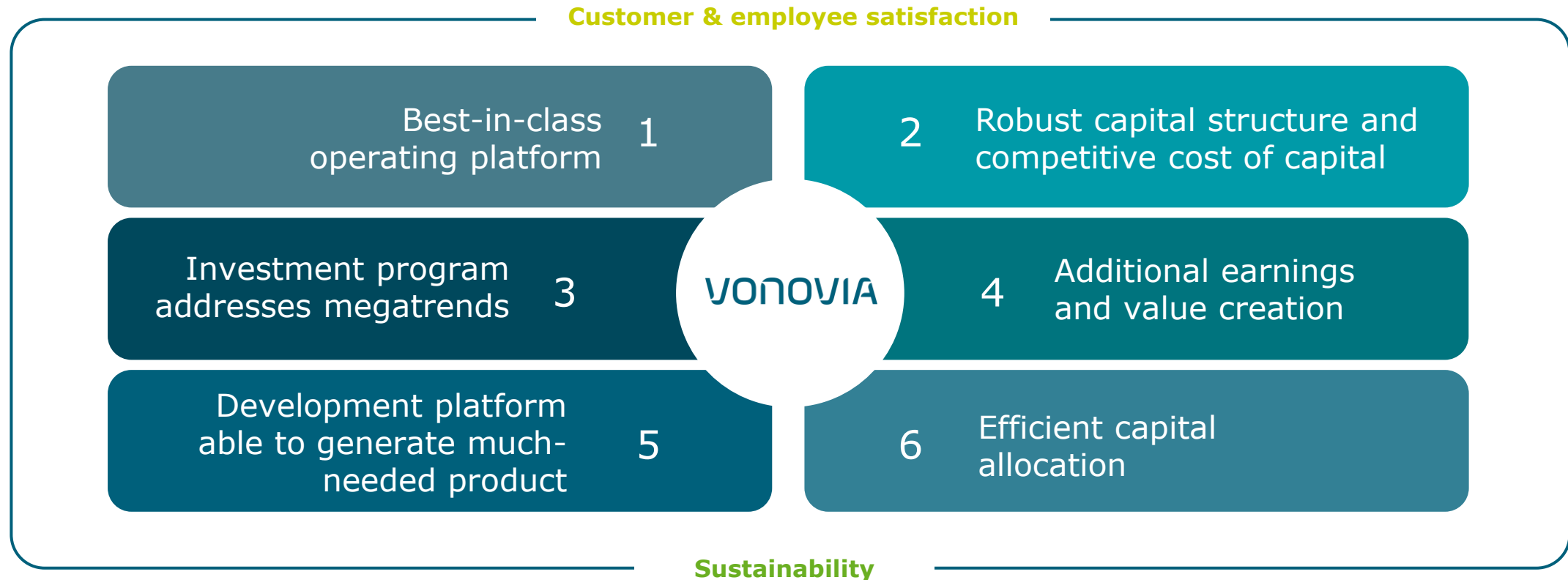
Development of green house gas emissions in the building sector (Germany)<sup>2</sup>



<sup>1</sup> Adapted from ZIA forecast based on Empirica and Pestel Institute. <sup>2</sup> Agora Energiewende (2023): "Die Energiewende in Deutschland: Stand der Dinge 2022. Rückblick auf die wesentlichen Entwicklungen sowie Ausblick auf 2023." 2022 is an estimate.

# Vonovia's Growth Drivers

Vonovia is uniquely positioned as the best-in-class operator and sustainability leader in a structurally undersupplied asset class.



# Regional Markets

## Balanced Exposure to Relevant Growth Regions

Business Update &  
9M 2023 Results

Appendix

Regional Markets (Sep. 30, 2023)	Fair value <sup>1</sup>		In-place rent									
	(€bn)	(€/sqm)	Residential units	Vacancy (%)	Total (p.a., €m)	Residential (p.a., €m) <sup>3</sup>	Residential (€/sqm/month) <sup>3</sup>	Organic rent growth (y-o-y, %)	Multiple (in-place rent)	Purchase power index (market data) <sup>2</sup>	Market rent increase forecast Valuation (% p.a.)	Average rent growth (LTM, %) from Optimize Apartment
Berlin	25.6	2,879	143,942	1.0	813	774	7.57	3.3	31.5	84.0	2.3	39.2
Rhine Main Area (Frankfurt, Darmstadt, Wiesbaden)	7.0	2,934	36,575	2.8	261	251	9.28	3.2	26.6	103.3	2.2	34.4
Dresden	5.4	1,955	45,017	2.4	222	208	6.79	2.8	24.2	85.8	2.1	24.0
Southern Ruhr Area (Dortmund, Essen, Bochum)	5.3	1,969	43,018	2.6	225	219	7.05	4.4	23.7	89.0	1.9	32.8
Rhineland (Cologne, Düsseldorf, Bonn)	5.2	2,455	31,659	1.9	210	199	8.14	2.8	25.0	100.4	2.1	34.4
Hamburg	3.4	2,665	20,117	1.0	125	120	8.02	3.4	27.5	97.5	2.0	39.2
Munich	3.1	4,241	10,856	1.5	83	79	9.67	9.5	37.2	119.2	2.3	51.4
Hanover	3.0	2,109	22,087	2.1	128	121	7.40	3.7	23.7	89.8	2.0	33.8
Kiel	2.9	1,925	25,323	2.1	131	125	7.34	4.4	22.1	75.7	2.0	37.9
Stuttgart	2.4	2,805	13,335	1.6	90	87	8.84	3.7	26.6	102.6	2.2	28.0
Northern Ruhr Area (Duisburg, Gelsenkirchen)	2.1	1,399	24,443	2.6	117	113	6.41	2.7	18.3	80.4	1.6	26.6
Leipzig	2.0	1,994	14,267	3.0	79	72	6.56	2.1	25.6	77.6	2.0	24.1
Bremen	1.5	2,046	11,732	1.5	58	56	6.64	3.2	25.7	83.1	2.1	31.5
Westphalia (Münster, Osnabrück)	1.1	1,826	9,438	2.1	52	51	7.05	3.0	21.8	89.6	2.0	27.7
Freiburg	0.8	2,702	4,033	1.1	28	27	8.39	2.8	26.6	86.3	2.0	36.0
Other Strategic Locations	3.5	1,991	27,568	3.1	156	150	7.43	2.6	22.8		2.0	33.9
<b>Total Strategic Locations</b>	<b>74.4</b>	<b>2,431</b>	<b>483,410</b>	<b>1.9</b>	<b>2777</b>	<b>2652</b>	<b>7.59</b>	<b>3.4</b>	<b>26.8</b>		<b>2.1</b>	<b>34.2</b>
Non-Strategic Locations	0.4	1,714	3,543	3.7	23	19	6.96	1.9	19.1		1.9	40.1
<b>Total Germany</b>	<b>74.9</b>	<b>2,425</b>	<b>486,953</b>	<b>1.9</b>	<b>2800</b>	<b>2670</b>	<b>7.58</b>	<b>3.4</b>	<b>26.7</b>		<b>2.1</b>	<b>34.2</b>
Vonovia Sweden	6.4	2,071	39,628	3.5	344	319	9.78	5.1	18.4		2.1	-
Vonovia Austria	2.9	1,686	21,417	4.7	123	97	5.42	10.7	23.8		1.7	-
<b>Total</b>	<b>84.2</b>	<b>2,359</b>	<b>547,998</b>	<b>2.1</b>	<b>3267</b>	<b>3087</b>	<b>7.67</b>	<b>3.8</b>	<b>25.8</b>	<b>2.1</b>	<b>2.1</b>	<b>n/a</b>

<sup>1</sup> Fair value of the developed land excluding €4.5bn, of which €0.5bn for undeveloped land and inheritable building rights granted, €0.2bn for assets under construction, €2.3bn for development, €1.1bn for nursing portfolio and €0.4bn for other.

<sup>2</sup> Source: GfK (2023). Data refers to the specific cities indicated in the table, weighted by the number of households where applicable. <sup>3</sup> Based on the country-specific definition. In-place rents in Austria and Sweden are not fully comparable to Germany, as Sweden includes ancillary costs and Austria includes maintenance and property improvement contributions from tenants. The table above shows the rental level unadjusted to the German definition.

# Portfolio Clustering

	Sep. 30, 2023	Resi units	In-place rent (€m p.a.) <sup>3</sup>	In-place rent (€/sqm) <sup>3</sup>	Vacancy rate	Fair value (€bn)	Fair value (€/sqm)	Gross yield	
Included in Segment Results and FFO	Strategic	Urban quarters & clusters (Germany)	421,896	2,362	7.51	1.8	63.2	2,401	3.8%
		Sweden	39,628	344	9.78	3.5	6.4	2,071	5.7%
	Recurring Sales	Germany	27,929	173	7.47	2.7	4.7	2,419	3.8%
		Austria	21,417	123	5.42	4.7	2.9	1,686	4.4%
Disposals not included in Segment Results and FFO	Additional Disposals	MFH Sales	23,143	175	9.45	1.4	5.4	3,489	3.3%
		Non Core	13,985	90	6.61	4.1	1.6	1,500	6.0%
		DW Nursing	72 properties				1.1	n/a	6.6% <sup>1</sup>
	<b>Total<sup>2</sup></b>	<b>547,998</b>	<b>3,267</b>	<b>7.67</b>	<b>2.1</b>	<b>84.2</b>	<b>2,359</b>	<b>4.0%</b>	

- German portfolio comprises of strategic assets in 15 urban growth regions that are held in larger urban quarters (~ 3/4) and smaller urban clusters (~ 1/4).
- Swedish Properties are located in Sweden’s three large urban areas Stockholm, Gothenburg, and Malmö.

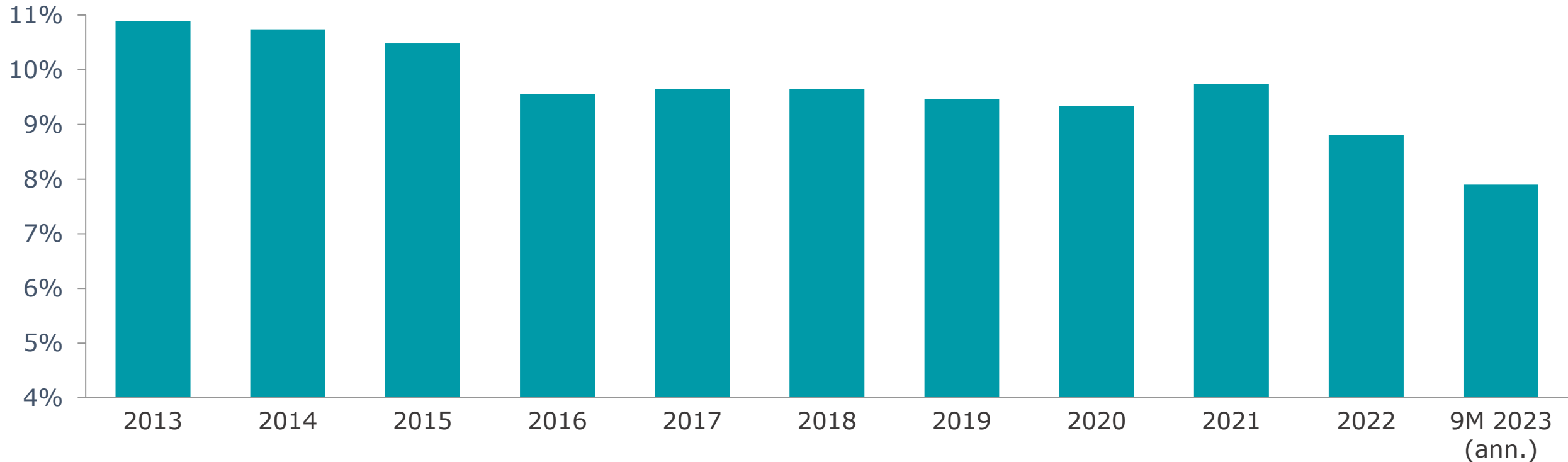
- EBITDA contribution is shown in Recurring Sales Segment.
- Single-unit disposals to owner-occupiers and retail investors.

- Outside of Core Business Segments and included in Other Income.
- Focus on cash generation.
- MFH: low yielding assets outside urban quarters.
- Non-core: non-strategic residential and commercial properties.
- DW Nursing: Vonovia is supportive of disposal efforts at acceptable terms.

<sup>1</sup> Calculated as 9M 2023 Segment EBITDA annualized / fair value (Sep. 30, 2023). <sup>2</sup> Excl. DW Nursing. <sup>3</sup> Based on the country-specific definition. In-place rents in Austria and Sweden are not fully comparable to Germany, as Sweden includes ancillary costs and Austria includes maintenance and property improvement contributions from tenants. The table above shows the rental level unadjusted to the German definition.

# Evolution of Tenant Fluctuation

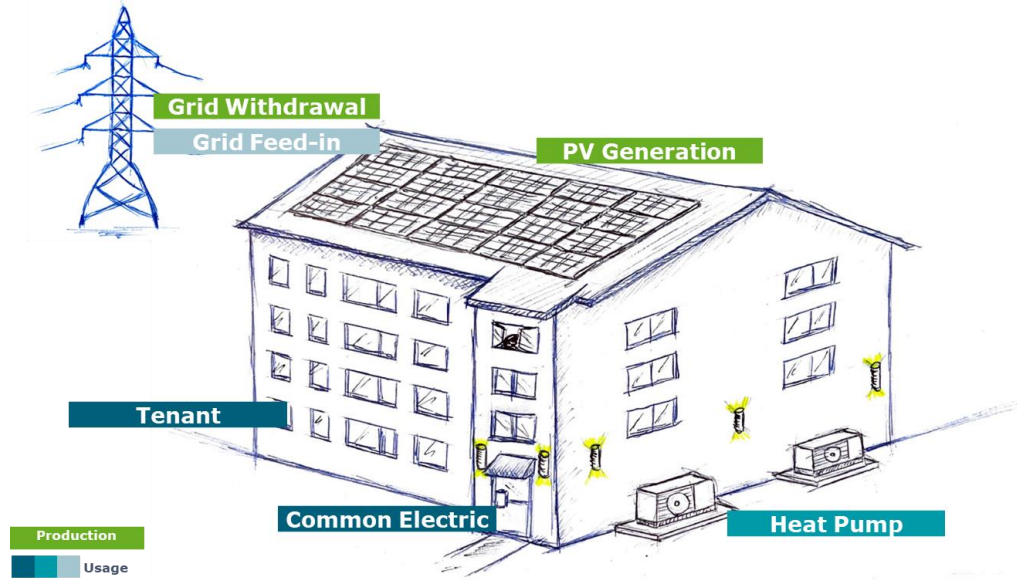
- The fluctuation rate has been steadily declining since the IPO and is currently <8%.
- The fluctuation rate level impacts the overall rent growth as the contribution from new lettings is usually comparatively high (rent growth of ca. 10% without investments and ca. 30% with investments).



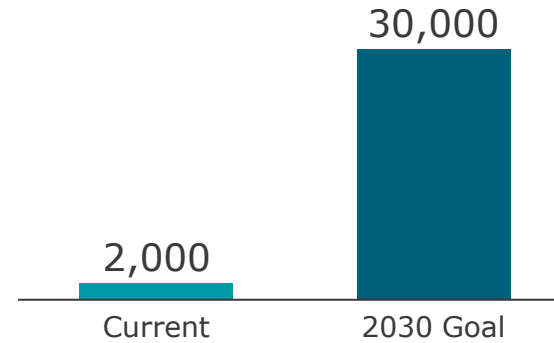
2023 onwards including Deutsche Wohnen.

# Roll-out of PV Generation Capacity

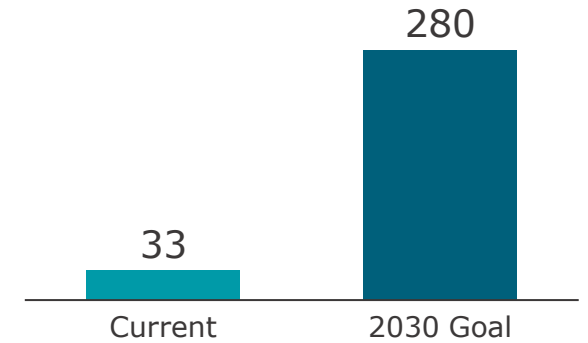
PV Generates an Attractive IRR of ~10%



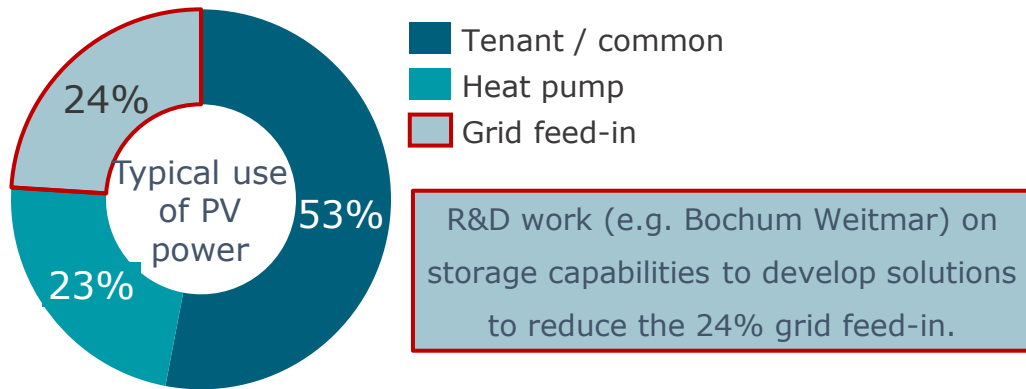
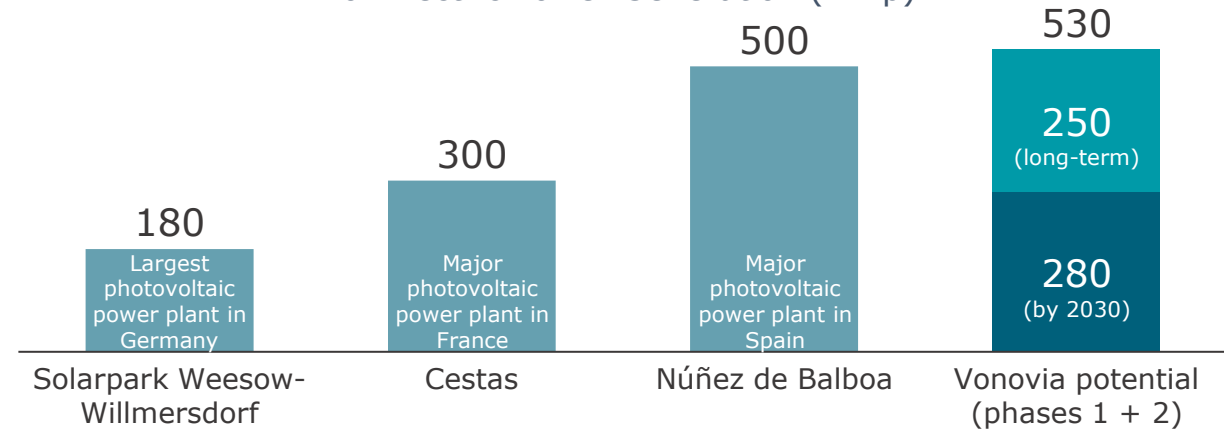
Photovoltaic installations (no. of roofs)



Energy generation capacity (MWp)



Vonovia's Portfolio Offers Substantial Potential for Electric Power Generation (MWp)



# Serving a Fundamental Need in a Highly Relevant Market

Our Business Is Deeply Rooted in ESG

Business Update &  
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Appendix



All of our actions have more than just an economic dimension and require adequate stakeholder reconciliation.

- We provide a home to almost 1.5 million people from ca. 150 nations.
- CO<sub>2</sub> emissions related to housing are one of the largest sources of greenhouse gas emissions.
- As a listed, blue-chip company we are rightfully held to a high standard.



Commitment to  
climate protection  
and CO<sub>2</sub> reduction



Responsibility  
for customers, society  
and employees



Reliable and transparent  
corporate governance  
built on trust

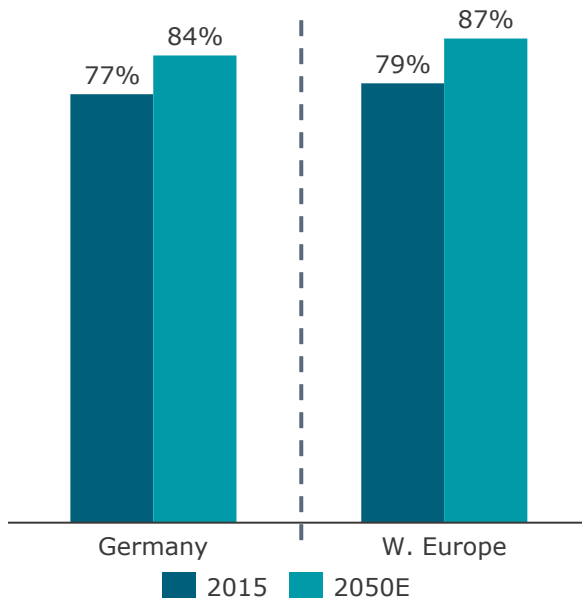
# Megatrends

## Three Dominant Megatrends in Residential Real Estate

### Urbanization



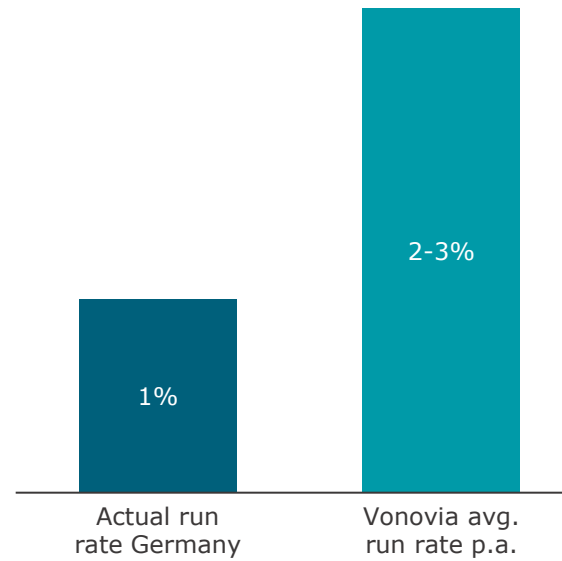
% of population living in cities



### Climate Change



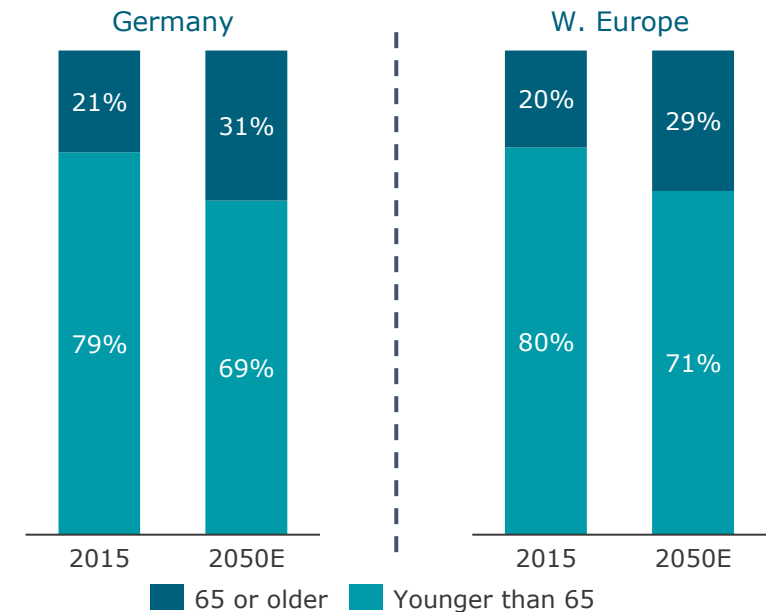
% of modernized housing units



### Demographic Change



% of population above/below 65 years



Sources: United Nations, European Union.

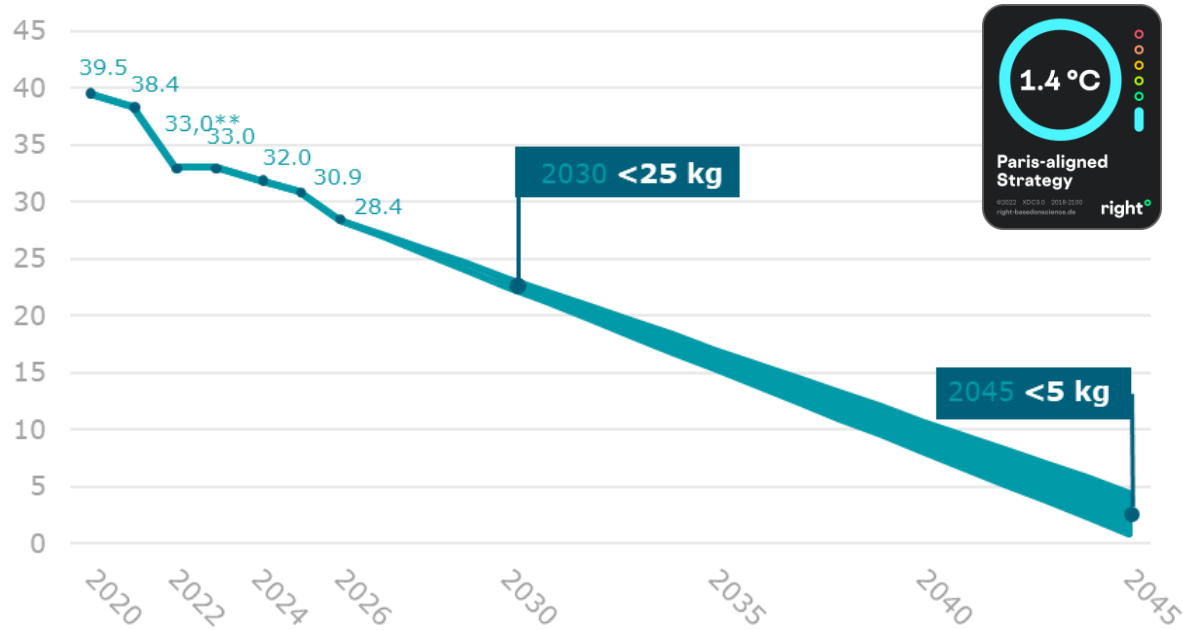


# Commitment to Sustainability

## Science-based Decarbonization Roadmap with Measurable Interim Targets

- Accelerated decarbonization with near CO<sub>2</sub> neutrality by 2045.
- Following CRREM MFH 1.5 degree pathway.
- Including Scope 1, 2 and 3.3.

CO<sub>2</sub> intensity in kg CO<sub>2</sub>e/sqm per year<sup>1</sup>



The 3 levers of our climate path

- 1 Continue **deep renovation**.
- 2 **Replace conventional heating** with hybrid systems and heat pumps.  
**PV** on all suitable roofs.  
Own local **heating networks in Urban Quarters** powered with renewable energy.
- 3 **Transformation of the energy sector** towards carbon-free district heating and green electricity.

<sup>1</sup> Includes scopes 1 & 2 as well as scope 3.3 "Fuel- and energy-related activities upstream;" referring to German building stock (incl. Deutsche Wohnen). Development of energy sector according to Scenario Agora Energiewende KNDE 20245; For comparison: CRREM pathway MFH 1.5° DE 2045=5.4kg CO<sub>2</sub>e/sqm per year (07/2021); Climate pathway development supported by Fraunhofer ISE. Per-sqm values based on rental area, not total floor space. Data refers to year end. \*\* CO<sub>2</sub> intensity for 2022 better than expected at the time of planning.

# United Nations Sustainability Development Goals

Vonovia Has a Meaningful Impact on 8 SDGs

We consider 8 of the 17 United Nations Sustainability Development Goals (SDG) to be material to our business activities and aligned with our sustainability strategy. We expect to have positive impacts particularly on these important goals.



**5 GENDER EQUALITY**

**7 AFFORDABLE AND CLEAN ENERGY**

**8 DECENT WORK AND ECONOMIC GROWTH**

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

**11 SUSTAINABLE CITIES AND COMMUNITIES**

**13 CLIMATE ACTION**

**15 LIFE ON LAND**

**17 PARTNERSHIPS FOR THE GOALS**

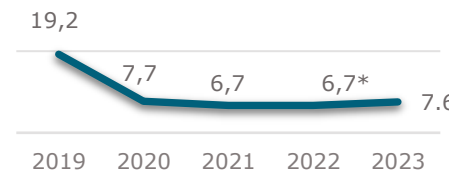
# Recognition of ESG Performance

## ESG Ratings and Indices

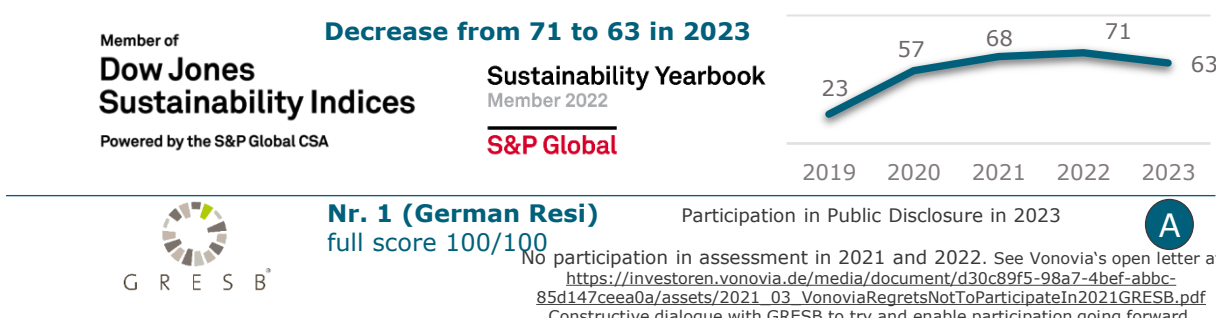
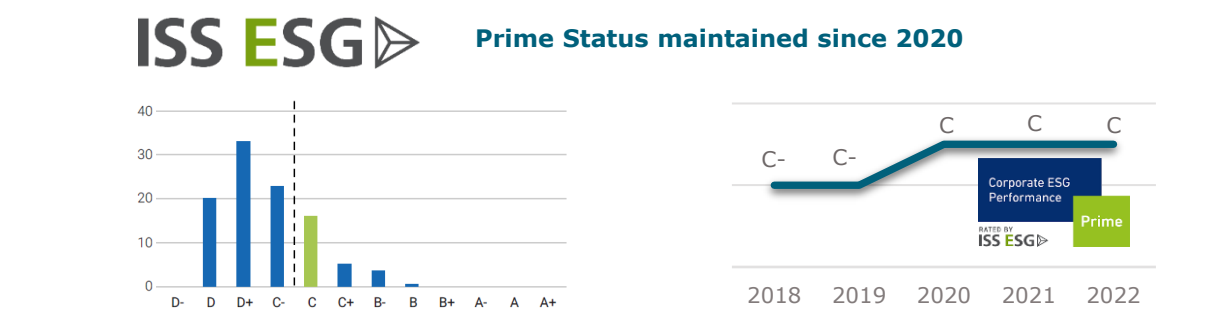
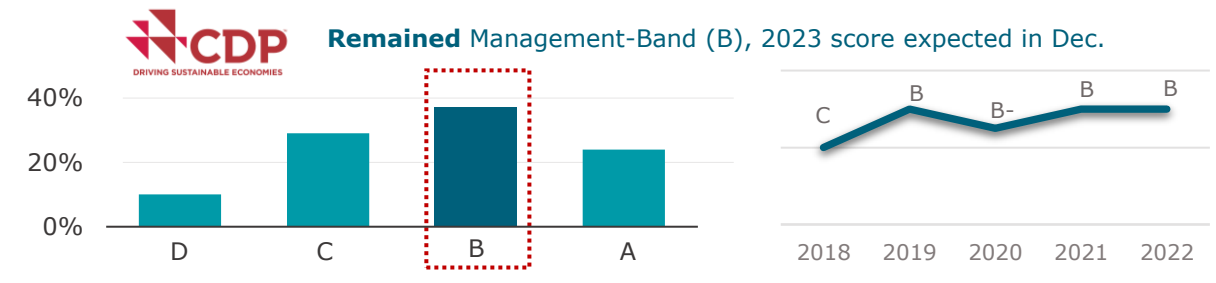
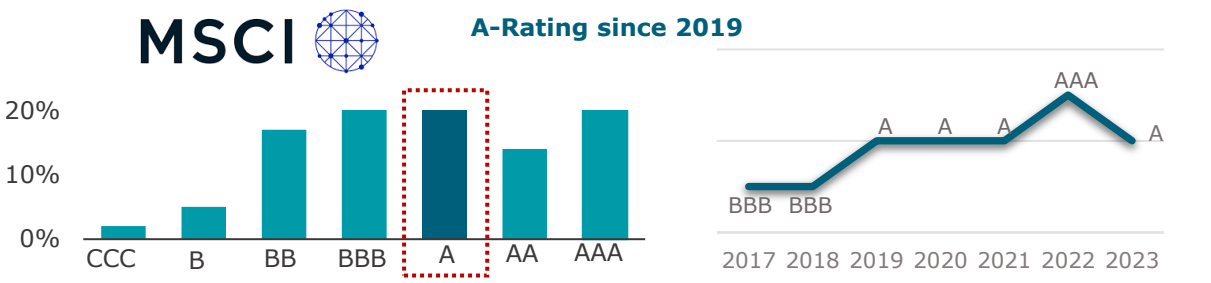
### ESG Ratings



Slight increase by 0.8 in 2023, still negligible risk



\*rating results from 2021, remain valid for 2022



Nr. 1 (German Resi) full score 100/100

Participation in Public Disclosure in 2023 **A**  
No participation in assessment in 2021 and 2022. See Vonovia's open letter at [https://investoren.vonovia.de/media/document/d30c89f5-98a7-4bef-abbc-85d147ceea0a/assets/2021\\_03\\_VonoviaRegretsNotToParticipateIn2021GRESB.pdf](https://investoren.vonovia.de/media/document/d30c89f5-98a7-4bef-abbc-85d147ceea0a/assets/2021_03_VonoviaRegretsNotToParticipateIn2021GRESB.pdf)  
Constructive dialogue with GRESB to try and enable participation going forward.

### ESG Indices

Vonovia is a constituent of various ESG indices, including the following: DAX 50 ESG, STOXX Global ESG Leaders, EURO STOXX ESG Leaders 50, Dow Jones Sustainability Index Europe.



# Corporate Governance

## AGM, Supervisory Board, Management Board

Business Update &  
9M 2023 Results

Appendix

- The duties and authorities of the three governing bodies derive from the SE Regulation, the German Stock Corporation Act and the Articles of Association. In addition, Vonovia is **fully in compliance** with the German Corporate Governance Code.
- In the **two-tier governance system**, the management and monitoring of the business are strictly separated from each other.

### Annual General Meeting (AGM)

- Shareholders can exercise their voting rights (One Share, One Vote).
- Decision making includes the appropriation of profit, discharge of members of the SVB and MB, and capital authorization.

## Two-tier Governance System

### Supervisory Board (SVB)

- Appoints, supervises and advises MB and approves decisions of fundamental importance to the company
- Examines and adopts the annual financial statements
- Forms Supervisory Board Committees
- Fully independent
- Board profile with all required skills and experience



Clara C. Streit  
(Chairwoman)



Vitus  
Eckert



Jürgen  
Fenk



Dr. Florian  
Funck



Dr. Ute Geipel-  
Faber



Dr. Daniela Gerd  
tom Markotten



Matthias  
Hünlein



Hildegard  
Müller



Dr. Ariane  
Reinhart



Christian  
Ulbrich

### Management Board (MB)

- Jointly accountable for independently managing the business in the best interest of the company and its stakeholders
- Informs the SVB regularly and comprehensively
- Develops the company's strategy, coordinates it with the SVB and executes that strategy



**CEO**  
Rolf Buch



**CFO**  
Philip Grosse



**CRO**  
Arnd Fittkau

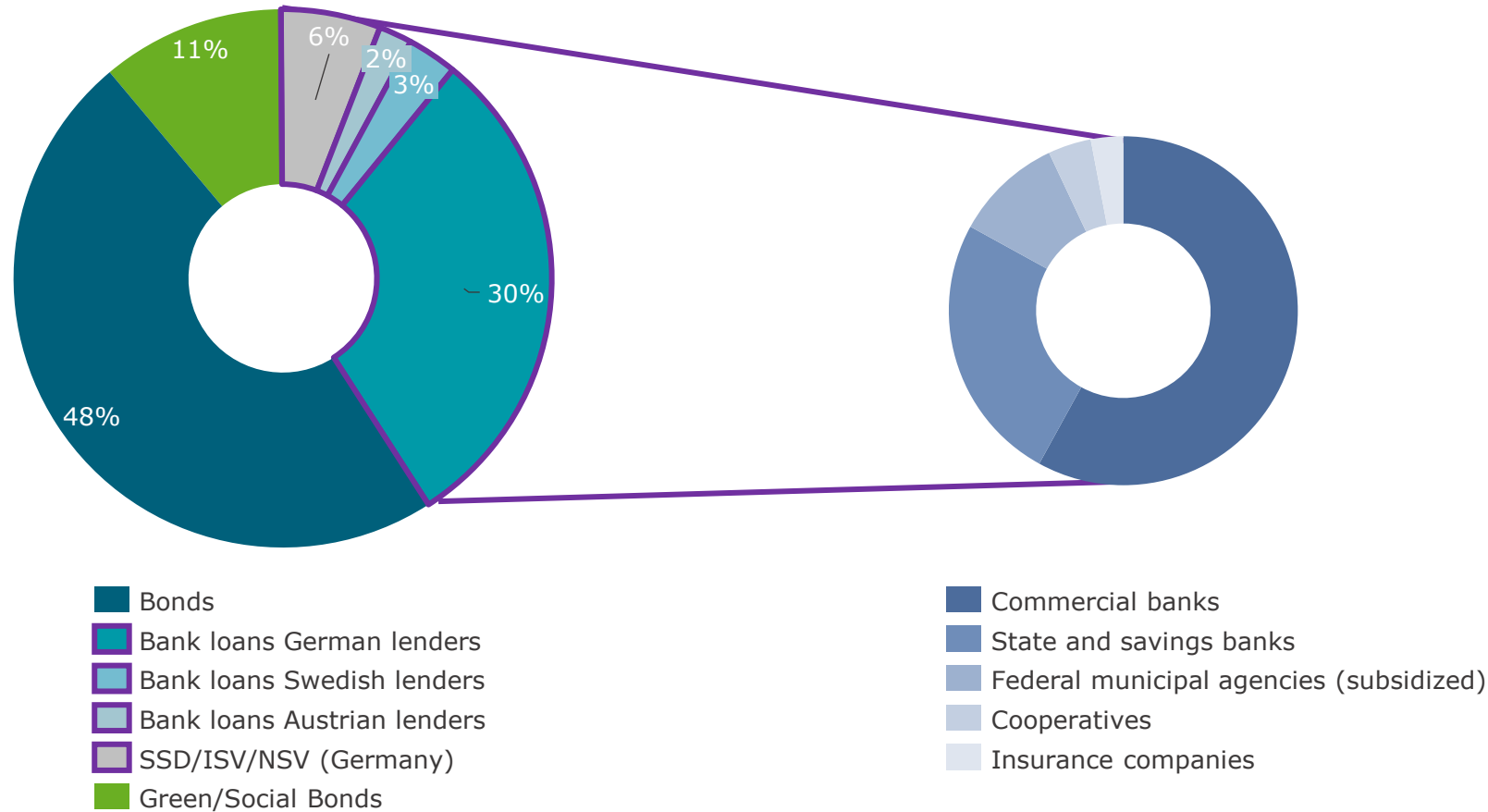


**CDO**  
Daniel Riedl



**CHRO**  
Ruth Werhahn

# Who Are Vonovia's Lenders Outside the Bond Market?



## Top Five Lenders:

- Berlin Hyp AG
- Bayerische Landesbank
- Deutsche Pfandbriefbank AG
- HVB/UniCredit
- Berliner Sparkasse

# Bonds & Ratings

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Appendix

Name	Tenor & Coupon	ISIN	Amount	Issue price	Price <sup>2</sup>	Yield <sup>2</sup>	Coupon	Final Maturity Date	Moody's	Scope	S&P
Bond 010C (EMTN)	8 years 2.250%	DE000A18V146	EUR 876,8m	99,085%	99,55%	4,51%	2,250%	15-Dez-2023	Baa1	A-	BBB+
Bond 017A (EMTN)	6 years 0.750%	DE000A19UR61	EUR 328,6m	99,330%	98,94%	4,53%	0,750%	15-Jan-2024	Baa1	A-	BBB+
Bond 023A (EMTN)	4 years 1.625%	DE000A28VQC4	EUR 336,1m	99,831%	98,53%	4,56%	1,625%	07-Apr-2024	Baa1	A-	BBB+
Bond 030A (EMTN)	2 years 3mS+95bps	XS2368364522	SEK 500,0m	100,000%	99,27%	6,45%	3mS+95bps	08-Apr-2024	Baa1	A-	BBB+
Bond 027A (EMTN)	3.25 years 0.000%	DE000A3E5MF0	EUR 278,3m	100,192%	95,71%	4,67%	0,000%	16-Sep-2024	Baa1	A-	BBB+
Bond 013 (EMTN)	8 years 1.250%	DE000A189ZX0	EUR 871,0m	99,037%	96,17%	4,68%	1,250%	06-Dez-2024	Baa1	A-	BBB+
Bond 009B (EMTN)	10 years 1.500%	DE000A1ZY989	EUR 485,4m	98,455%	95,79%	4,50%	1,500%	31-Mrz-2025	Baa1	A-	BBB+
Bond B. 500-2 (DW)	5 years 1.000%	DE000A289NE4	EUR 589,7m	98,910%	93,97%	5,03%	1,000%	30-Apr-2025	Baa1	NR	BBB+
Bond 020 (EMTN)	6.5 years 1.800%	DE000A2RWZZ6	EUR 429,2m	99,836%	95,15%	4,74%	1,800%	29-Jun-2025	Baa1	A-	BBB+
Bond 015 (EMTN)	8 years 1.125%	DE000A19NS93	EUR 429,8m	99,386%	93,55%	4,68%	1,125%	08-Sep-2025	Baa1	A-	BBB+
Bond 028B (EMTN)	4.25 years 0.000%	DE000A3MP4T1	EUR 1.250,0m	99,724%	90,63%	4,66%	0,000%	01-Dez-2025	Baa1	A-	BBB+
Bond 029A (EMTN)	3.85 years 1.375%	DE000A3MQS56	EUR 610,5m	99,454%	92,49%	4,69%	1,375%	28-Jan-2026	Baa1	A-	BBB+
Bond 018B (EMTN)	8 years 1.500%	DE000A19X8A4	EUR 652,0m <sup>1</sup>	101,119%	92,97%	4,58%	1,500%	22-Mrz-2026	Baa1	A-	BBB+
Bond 011B (EMTN)	10 years 1.500%	DE000A182VT2	EUR 444,2m	99,165%	92,75%	4,44%	1,500%	10-Jun-2026	Baa1	A-	BBB+
Bond 024A (EMTN)	6 years 0.625%	DE000A28ZQP7	EUR 673,0m	99,684%	89,68%	4,52%	0,625%	09-Jul-2026	Baa1	A-	BBB+
Bond 014B (EMTN)	10 years 1.750%	DE000A19B8E2	EUR 500,0m	99,266%	90,51%	4,96%	1,750%	25-Jan-2027	Baa1	A-	BBB+
Bond 030B (EMTN)	5 years 3mS+140bps	XS2368364449	SEK 750,0m	100,000%	94,88%	7,17%	3mS+140bps	08-Apr-2027	Baa1	A-	BBB+
Bond 031A (EMTN)	4.5 years 4.750%	DE000A30VQA4	EUR 750,0m	99,853%	99,20%	5,12%	4,750%	23-Mai-2027	Baa1	A-	BBB+
Bond 027B (EMTN)	6 years 0.375%	DE000A3E5MG8	EUR 1.000,0m	99,947%	84,66%	5,16%	0,375%	16-Jun-2027	Baa1	A-	BBB+
Bond 022B (EMTN)	8 years 0.625%	DE000A2R8ND3	EUR 500,0m	98,941%	84,35%	5,05%	0,625%	07-Okt-2027	Baa1	A-	BBB+
Bond 017B (EMTN)	10 years 1.500%	DE000A19UR79	EUR 491,5m	99,439%	86,93%	5,09%	1,500%	14-Jan-2028	Baa1	A-	BBB+
Bond 029B (EMTN)	6.25 years 1.875%	DE000A3MQS64	EUR 715,2m	99,108%	86,90%	5,17%	1,875%	28-Jun-2028	Baa1	A-	BBB+
Bond 028C (EMTN)	7 years 0.250%	DE000A3MP4U9	EUR 1.233,4m	99,200%	79,52%	5,24%	0,250%	01-Sep-2028	Baa1	A-	BBB+
Bond 021A (EMTN)	10 years 0.500%	DE000A2R7JD3	EUR 500,0m	98,965%	76,84%	5,21%	0,500%	14-Sep-2029	Baa1	A-	BBB+
Bond 027C (EMTN)	8.5 years 0.625%	DE000A3E5MH6	EUR 999,0m	99,605%	76,92%	5,31%	0,625%	14-Dez-2029	Baa1	A-	BBB+
Bond 018C (EMTN)	12 years 2.125%	DE000A19X8B2	EUR 495,6m	98,967%	83,28%	5,37%	2,125%	22-Mrz-2030	Baa1	A-	BBB+
Bond 023B (EMTN)	10 years 2.250%	DE000A28VQD2	EUR 479,7m	98,908%	84,02%	4,64%	2,250%	07-Apr-2030	Baa1	A-	BBB+
Bond B. 500-3 (DW)	10 years 1.500%	DE000A289NF1	EUR 587,3m	98,211%	83,04%	5,23%	1,500%	30-Apr-2030	Baa1	NR	BBB+
Bond 024B (EMTN)	10 years 1.000%	DE000A28ZQQ5	EUR 704,1m	99,189%	76,79%	5,33%	1,000%	09-Jul-2030	Baa1	A-	BBB+
Bond 031B (EMTN)	8 years 5.000%	DE000A30VQB2	EUR 750,0m	99,645%	98,31%	4,48%	5,000%	23-Nov-2030	Baa1	A-	BBB+
Bond 026 (EMTN)	10 years 0.625%	DE000A3E5FR9	EUR 600,0m	99,759%	72,22%	5,38%	0,625%	24-Mrz-2031	Baa1	A-	BBB+
Bond 500_S1-T1 (DW)	10 years 0.500%	DE000A3H25P4	EUR 318,3m	98,600%	75,67%	5,33%	0,500%	07-Apr-2031	NR	NR	BBB+
Bond 029C (EMTN)	10 years 2.375%	DE000A3MQS72	EUR 786,9m	99,003%	80,63%	5,39%	2,375%	25-Mrz-2032	Baa1	A-	BBB+
Bond 028D (EMTN)	11 years 0.750%	DE000A3MP4V7	EUR 1.169,1m	99,455%	68,75%	5,53%	0,750%	01-Sep-2032	Baa1	A-	BBB+
Bond 027D (EMTN)	12 years 1.000%	DE000A3E5MJ2	EUR 964,0m	99,450%	68,19%	5,66%	1,000%	16-Jun-2033	Baa1	A-	BBB+
Bond 021B (EMTN)	15 years 1.125%	DE000A2R7JE1	EUR 500,0m	99,822%	65,36%	5,61%	1,125%	14-Sep-2034	Baa1	A-	BBB+
Bond 018D (EMTN)	20 years 2.750%	DE000A19X8C0	EUR 500,0m	97,896%	72,66%	5,67%	2,750%	22-Mrz-2038	Baa1	A-	BBB+
Bond 022C (EMTN)	20 years 1.625%	DE000A2R8NE1	EUR 500,0m	98,105%	59,47%	5,25%	1,625%	07-Okt-2039	Baa1	A-	BBB+
Bond 025 (EMTN)	20 years 1.000%	DE000A287179	EUR 500,0m	99,355%	50,39%	5,81%	1,000%	28-Jan-2041	Baa1	A-	BBB+
Bond 500_S2-T1 (DW)	20 years 1.300%	DE000A3H25Q2	EUR 265,4m	97,838%	57,01%	5,51%	1,300%	07-Apr-2041	NR	NR	BBB+
Bond 027E (EMTN)	20 years 1.500%	DE000A3E5MK0	EUR 500,0m	99,078%	54,22%	5,10%	1,500%	14-Jun-2041	Baa1	A-	BBB+
Bond 028E (EMTN)	30 years 1.625%	DE000A3MP4W5	EUR 750,0m	97,903%	46,87%	5,44%	1,625%	01-Sep-2051	Baa1	A-	BBB+

Overview includes publicly traded bonds of Vonovia and Deutsche Wohnen (excl. Private Placements, *Namenschuldverschreibungen* (registered bonds) and *Schuldscheindarlehen* (promissory notes)). <sup>1</sup> Incl. Tab Bond EUR 200m, Issue date Feb 6, 2020. <sup>2</sup> As of end of September 2023.  
Green Bond. Social Bond.







# Bond Covenants

## Substantial Headroom for All Covenants

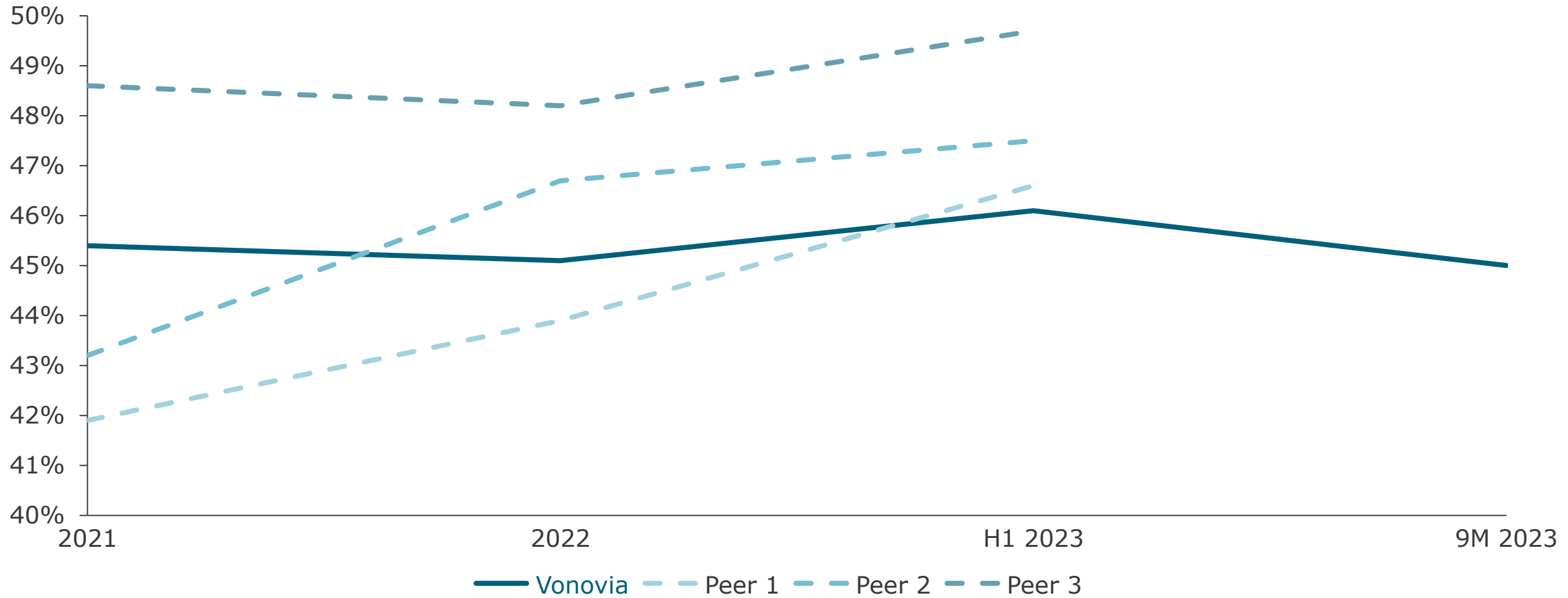
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Bond covenants	Required level	Current level (Sep. 30, 2023)			Headroom
<b>LTV</b> (Total financial debt / total assets)	<60%	43.8bn 95.6bn	→ 45.9%		On the current total financial debt level, fair values would have to drop ~26% for the LTV to cross 60%. <sup>1</sup>
<b>Secured LTV</b> (Secured debt / total assets)	<45%	13.1bn 95.6bn	→ 13.7%		On the current secured debt volume, fair values would have to drop ~77% for the secured LTV to cross 45%. <sup>1</sup>
<b>ICR</b> (LTM Adj. EBITDA / LTM net cash interest)	>1.8x	2,663m 609m	→ 4.4x		On the current EBITDA level, interest expenses would have to increase 143% to ca. €1.5bn for the ICR to fall below 1.8x. <sup>2</sup>
<b>Unencumbered assets</b> (Unencumbered assets / unsecured debt)	>125%	47.1bn 30.8bn	→ 153%		On the current unsecured debt level, fair values would have to drop 22% for the unencumbered assets ratio to fall below 125%. <sup>1</sup>

<sup>1</sup> Headroom calculations are based on sensitivities regarding changes in investment properties, not total assets, while all other variables are kept unchanged. <sup>2</sup> Headroom calculations are based on sensitivities regarding changes in net cash interest in relation to Adj. EBITDA, while all other variables are kept unchanged.

# LTV Development of Listed German Resi Peers

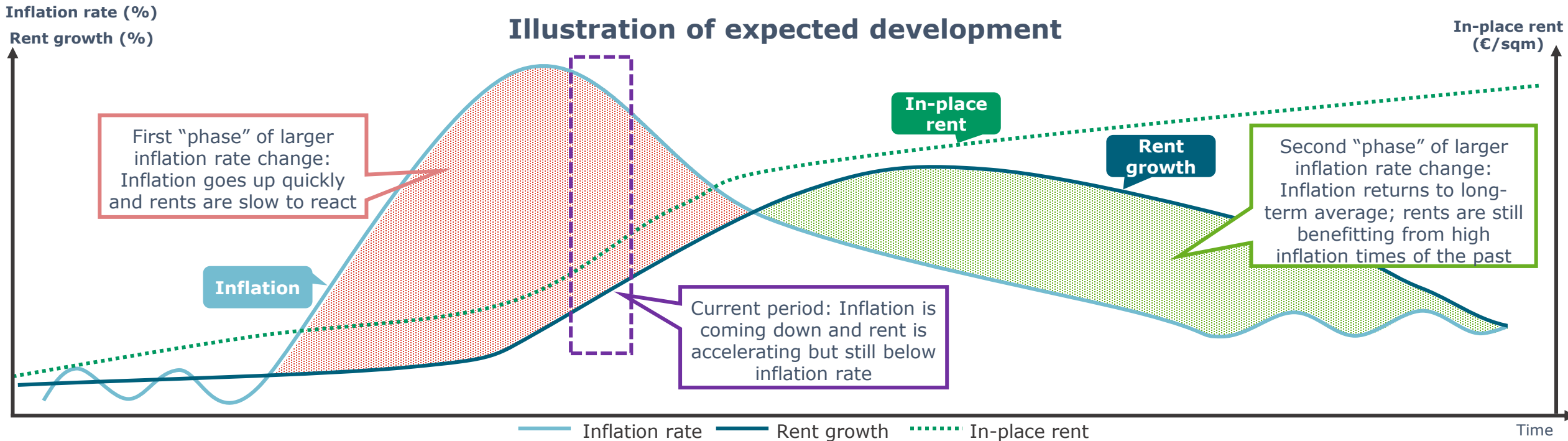
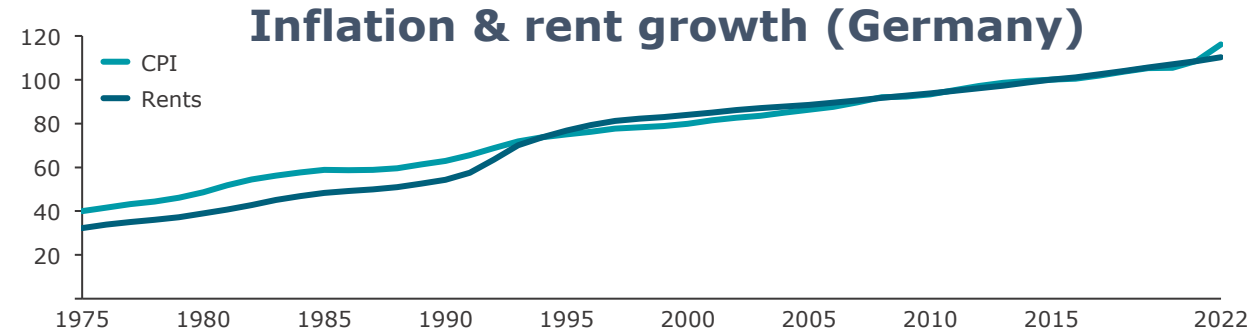


Peer Group includes selected listed residential players in Germany. LTVs shown as reported by companies (eop and including hybrids). Vonovia 9M 2023 pro forma.



# Rent Growth & Inflation

- No direct connection between inflation & rent growth but historic data shows strong correlation & similar growth rates over time.
- When inflation shows meaningful acceleration, rent growth cannot keep up initially due to regulatory constraints that delay implementation but rents are expected to grow faster and for longer once inflationary pressure has subsided.

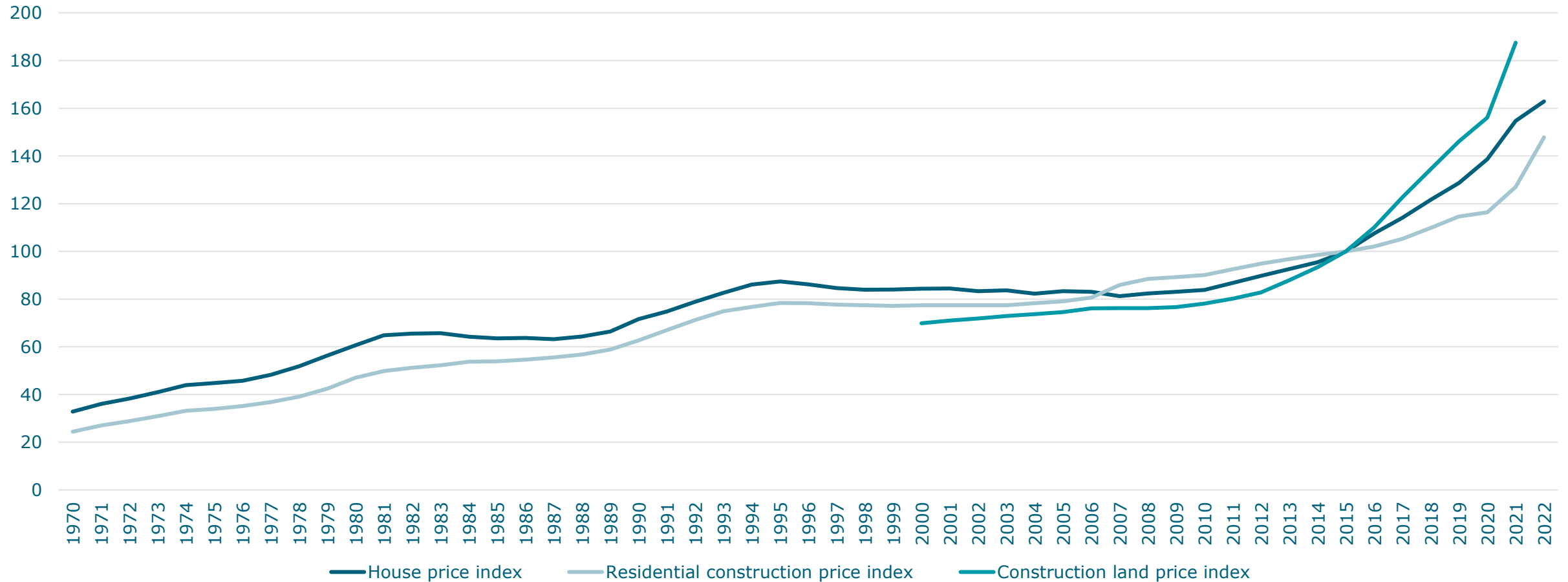


Source: OECD (2015 = 100)

# House Prices & Construction Costs Correlation

Resi Prices Have Been Moving Alongside Construction Prices for 50 Years

House price and construction price indices (2015=100)

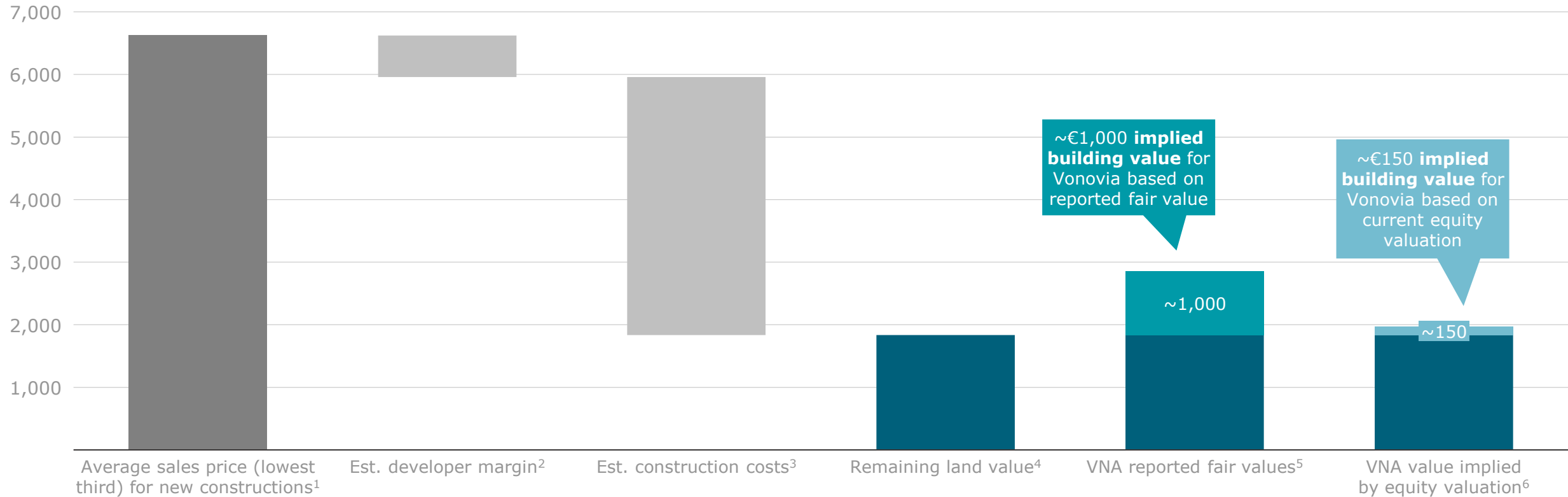


Sources: OECD: House price index. Federal Statistics Office: (a) Residential Construction Price Index ("Baupreisindex für Wohngebäude") and (b) Construction land price index ("Preisindex für Bauland").

# Comps & Implied Building Values

Market Comps and Implied Land Values Suggest Vonovia Valuation Is Conservative

Vonovia's implied building values based on reported fair values and current equity valuation (€/sqm)



<sup>1</sup> Source: Value Data Insights (formerly empirica-systeme), 9M 2023; <sup>2</sup> Assumption: 10% of sales price. <sup>3</sup> Estimated €4.1k per sqm. <sup>4</sup> Residual value of sales price minus est. developer margin minus est. construction costs. <sup>5</sup> Weighted average across the regions Berlin, Rhine Main, Southern Ruhr Area, Rhineland, Dresden, Hamburg, Stuttgart, Leipzig. <sup>6</sup> Implied fair value based on share price of €21 and LTV of 46.8%.

# Vonovia's Fair Values and Rents Are Substantially Below Market

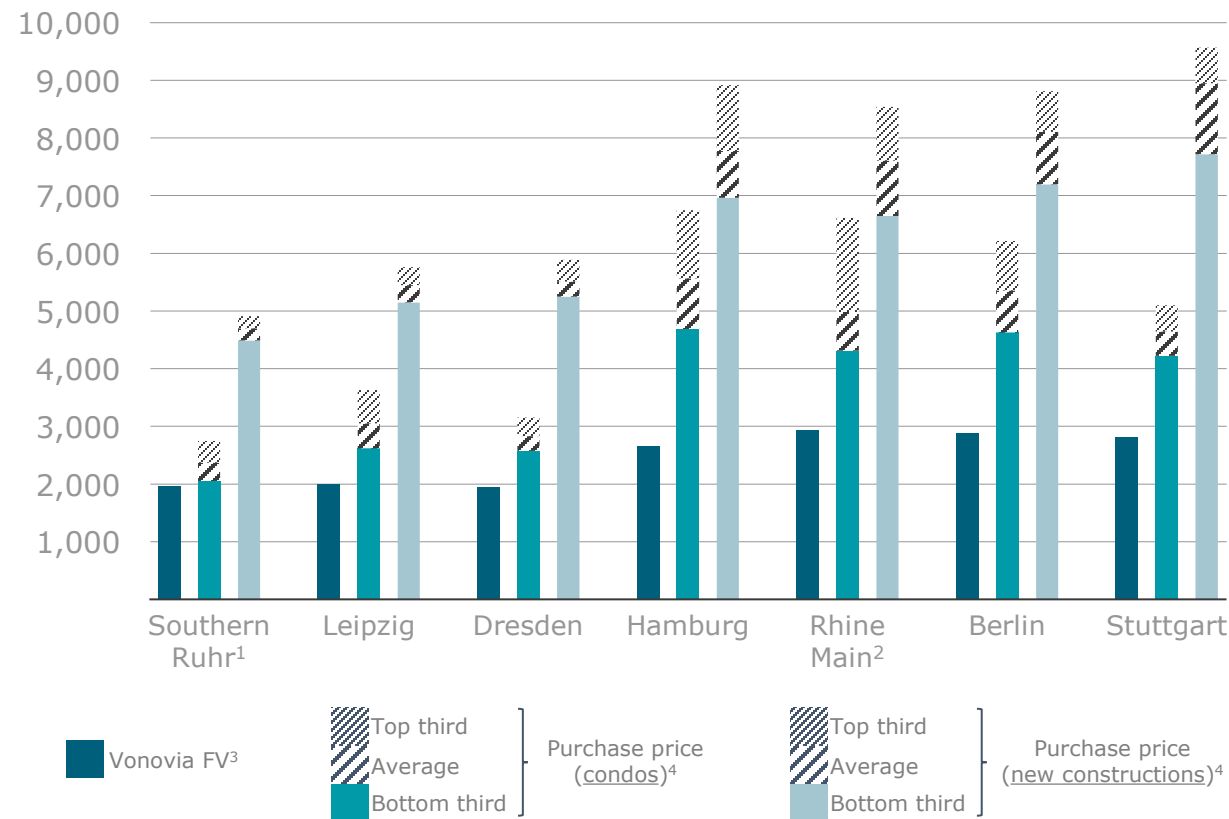
Data Points on Prices for Condos & New Constructions and Rent Levels

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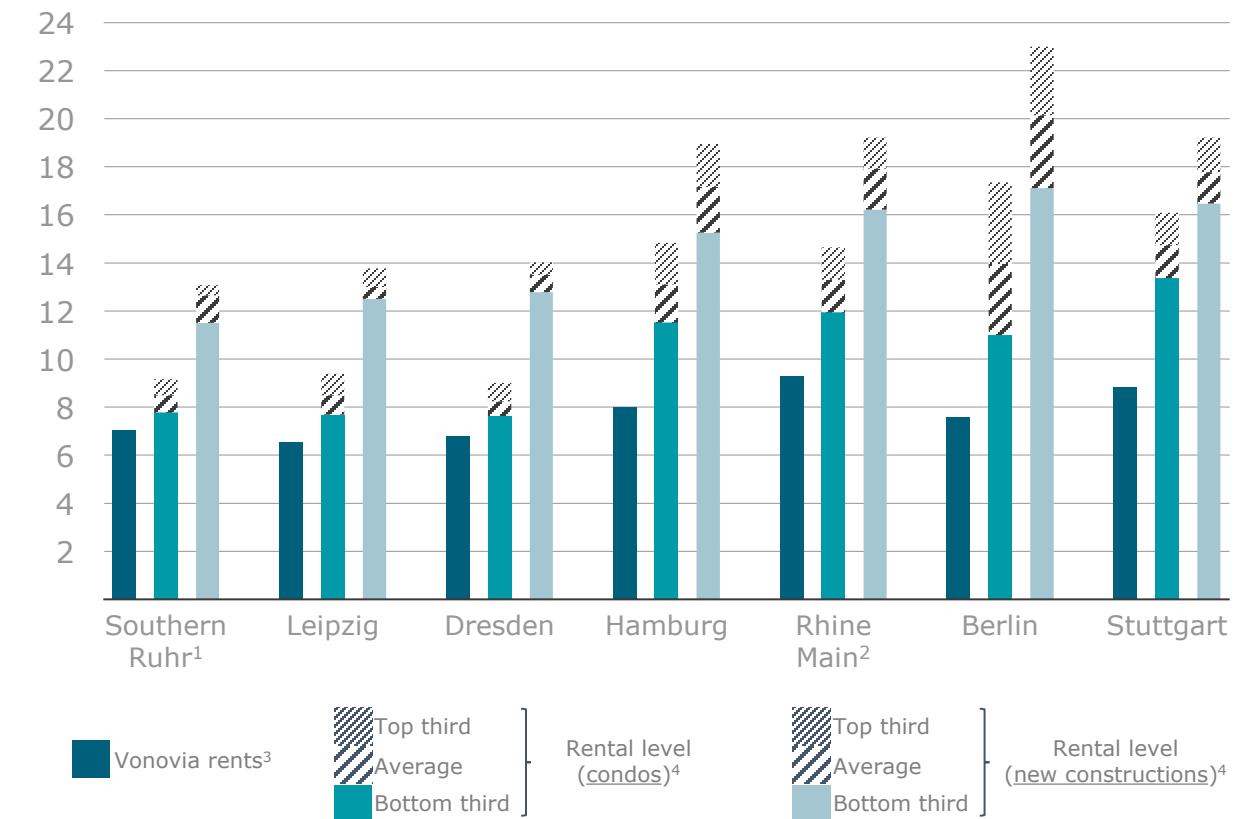
## Price levels

Vonovia fair values versus prices for condos and new constructions (€/sqm)



## Rent levels

Vonovia rental levels versus prices for condos and new constructions (€/sqm)

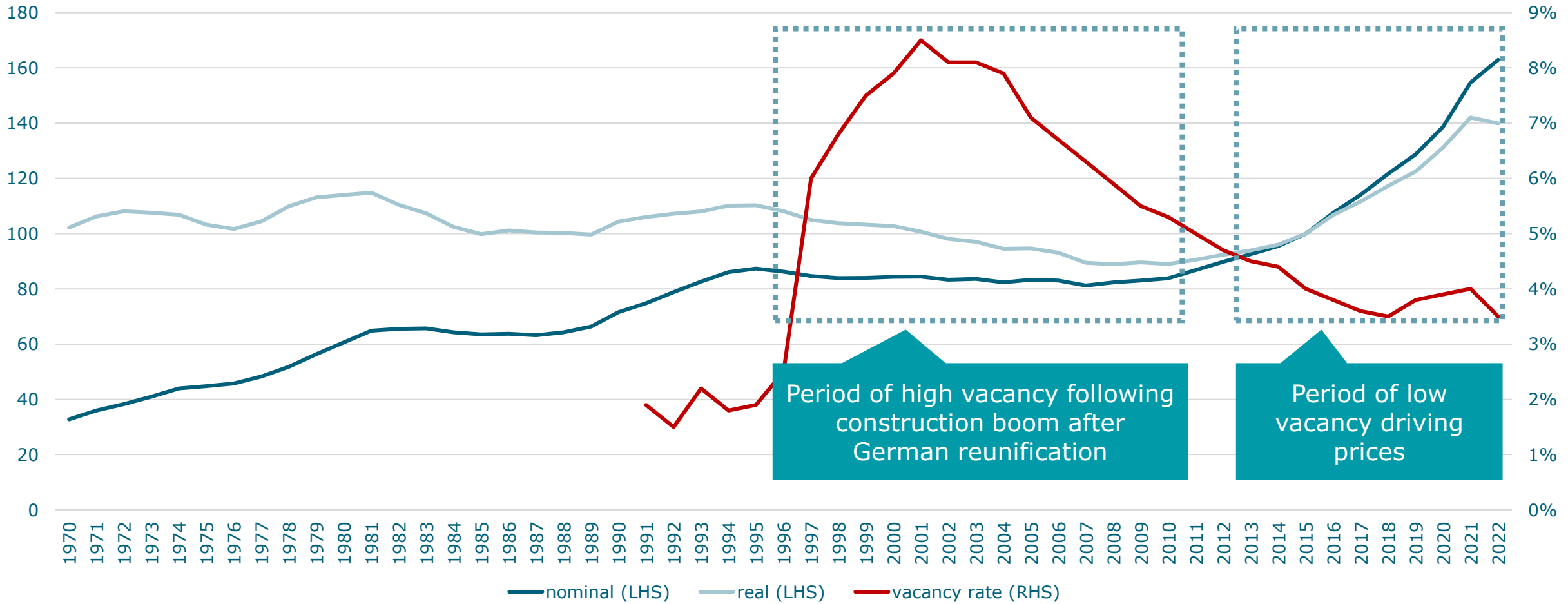


<sup>1</sup> Market data is simple average of Dortmund and Essen. <sup>2</sup> Market data is simple average of Frankfurt and Wiesbaden. <sup>3</sup> Values and rents for Vonovia refer to average of that Regional Market. <sup>4</sup> Source: Value Data Insights (formerly *empirica-systeme*), 9M 2023.

# Resi Prices Have Shown No Real Weakness in 50 Years

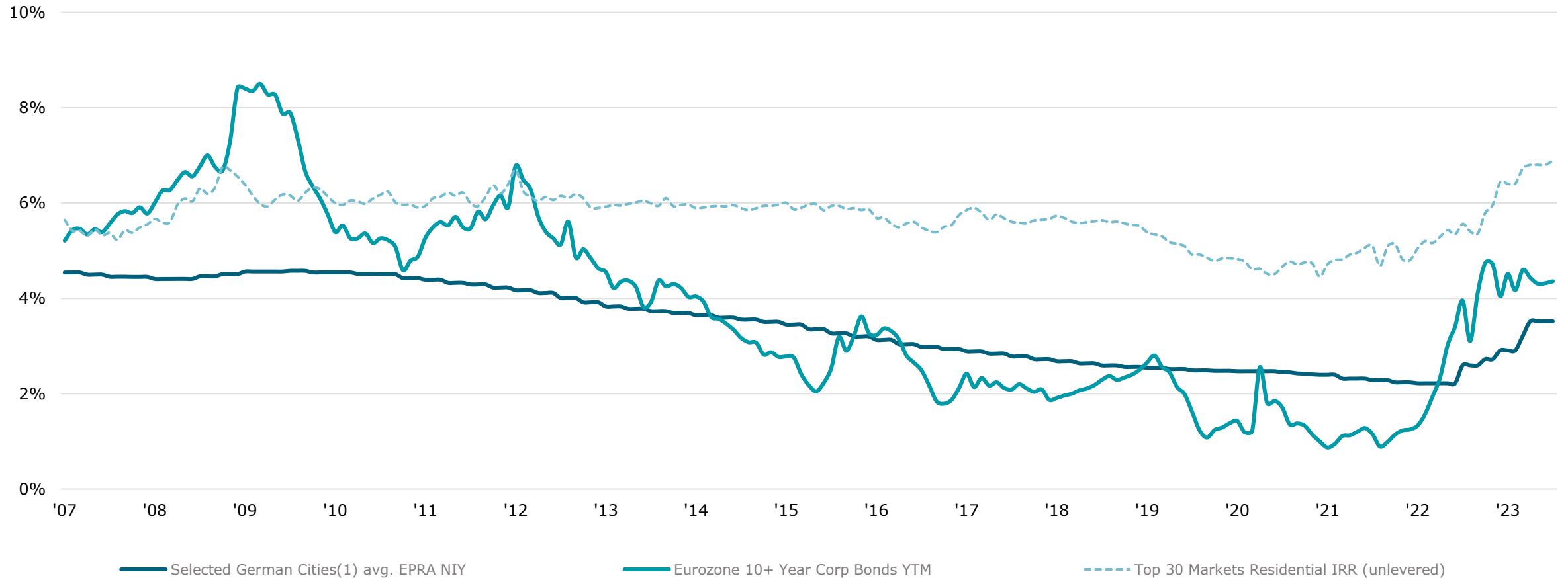
Only Period of Slight Decline Came During High Vacancy Phase

### OECD House Price Index Germany (2015=100) and vacancy rate



Sources: OECD for house prices and GdW (Association of German Housing Companies) for vacancy rate. There are no reliable national statistics on vacancy levels prior to 1991.

# Relation between NIY and Financing Costs



(1) Simple average of Berlin, Cologne, Dusseldorf, Frankfurt, Hamburg, and Munich residential EPRA NIY (B/B+ quality). Source: Markit IHS, Green Street

# Residential Market Fundamentals (Germany)

## Household Sizes and Ownership Structure

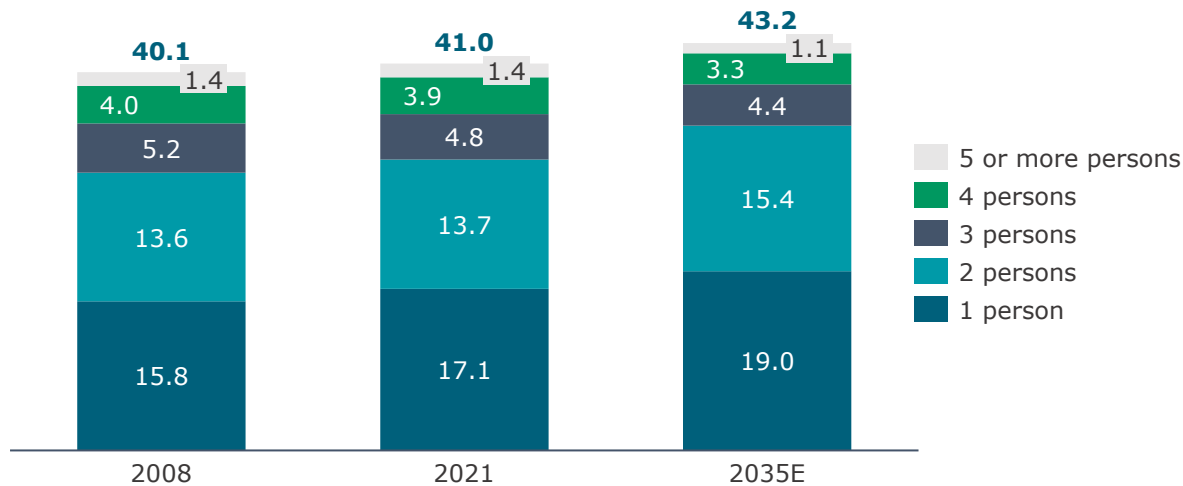
### Growing number of smaller households

- While the overall population in Germany is expected to slightly decline, the number of households is forecast to grow until at least 2035 with a clear trend towards smaller households.
- The household growth is driven by various demographic and social trends including divorce rates, employment mobility etc.

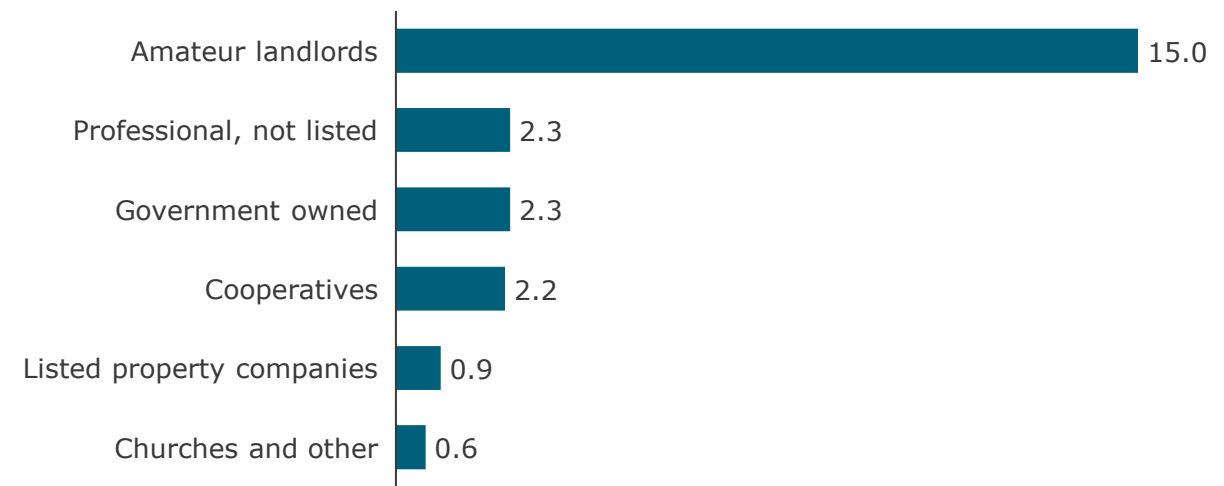
### Fragmented ownership structure

- Germany is the largest housing market in Europe with ~43m housing units, of which ~23m are rental units.
- Ownership structure is highly fragmented and majority of owners are non-professional landlords.
- Listed sector represents ~4% of total rental market.

### Distribution of household sizes (million)



### Ownership structure (million units)



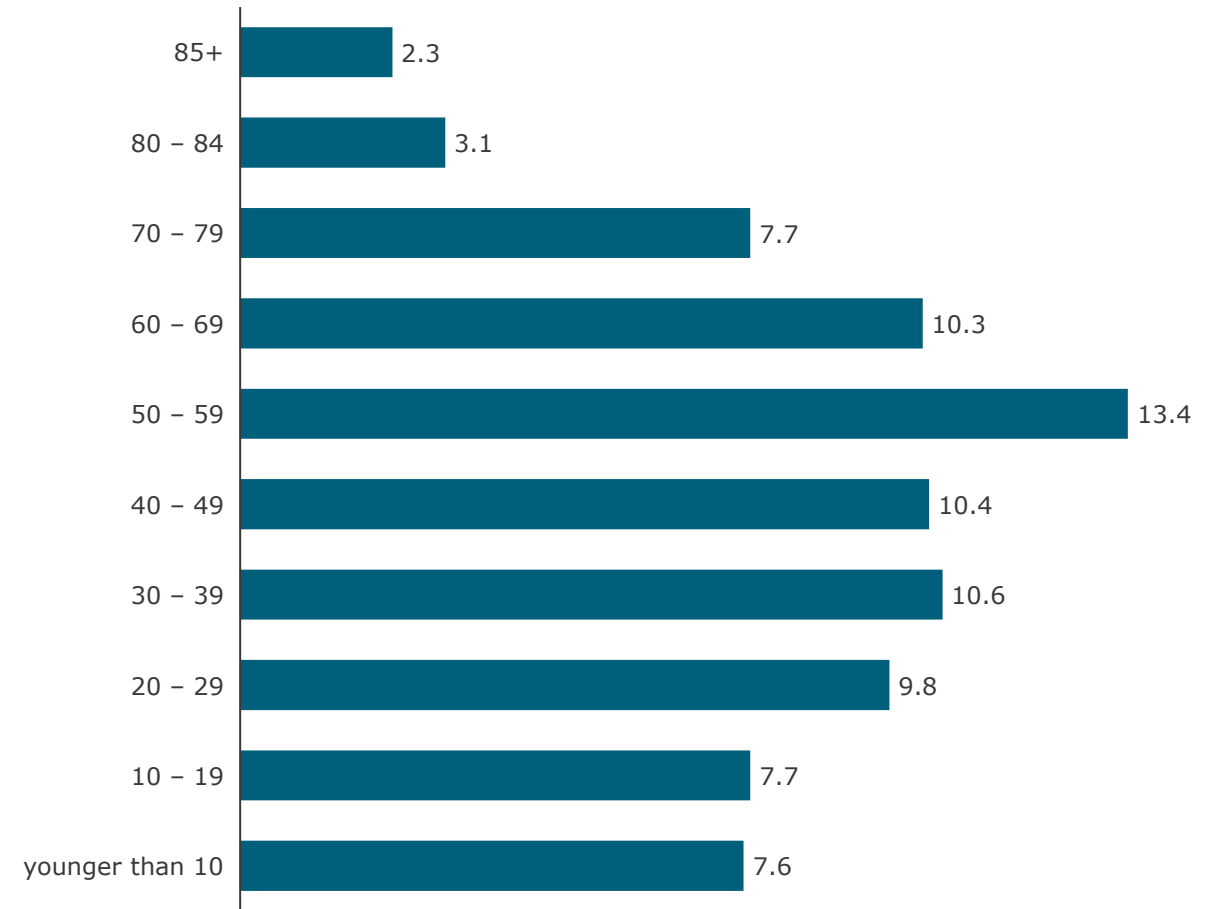
Sources: German Federal Statistics Office, GdW (German Association of Professional Homeowners). 2035E household numbers are based on trend scenario of the German Federal Statistics Office.

# Supply/Demand Imbalance

## Gap Will Become Even Larger

- Vonovia considers the structural supply/demand imbalance in urban areas to be the most relevant driver of residential property values.
- A meaningful improvement to this imbalance is not in sight:
  - Building permits are hard to obtain;
  - Craftsmen capacity remains a scarcity;
  - Residents do not want their neighborhood to change with new construction and new people (NIMBY – “Not In My Back Yard”).
- The rate of completion falls short of current construction targets.
- At the same time, the actual need for new housing is likely to be substantially larger than widely anticipated:
  - One factor that has received little attention in housing and population forecasts is the retirement of the strongest age group 50-59 years.
  - Over the next 10 years, many members from this age group will be retiring and the younger age groups are all significantly smaller.
  - If Germany is to maintain its current productivity, there remains a gap that can only be replaced through immigration. The Head of Germany’s Federal Labor Agency estimates that in order to maintain its productivity, Germany will need to see an inflow of ca. 400k immigrants per year to plug gaps in the work force as the population ages.<sup>1</sup>
  - After Russia’s attack on Ukraine, about 1.1 million people from Ukraine arrived in Germany in 2022.<sup>3</sup>
- The incremental demand for housing has so far been largely ignored in discussions around the supply/demand imbalance and the need for new construction.

Age group distribution in Germany (million)<sup>2</sup>



<sup>1</sup> Source: <https://apnews.com/article/europe-business-germany-immigration-migration-066b67d8f256f64f781793d9ea659c59>. <sup>2</sup> Source: Federal Bureau for Political Education ([www.bpb.de](http://www.bpb.de)).

<sup>3</sup> Source: [https://www.destatis.de/EN/Press/2023/02/PE23\\_N010\\_12411.html](https://www.destatis.de/EN/Press/2023/02/PE23_N010_12411.html).



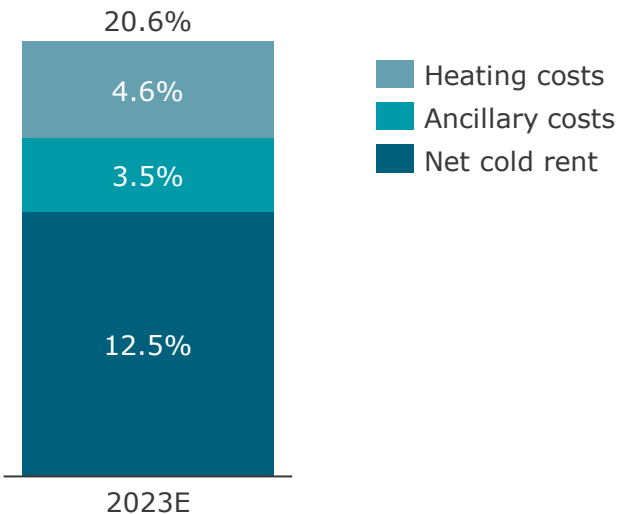
# Affordability

## Average German Household Income and Average Cost of Vonovia Apartment

Average disposable income per household in Germany in 2021 was €3,813/month (€45,756/year).<sup>1</sup>

On that basis, the average cost of a Vonovia apartment in relation to this average disposable household income (unadjusted for recent wage increases) is as shown in the chart below.

### Average cost of Vonovia apartment in relation to average disposable household income in Germany



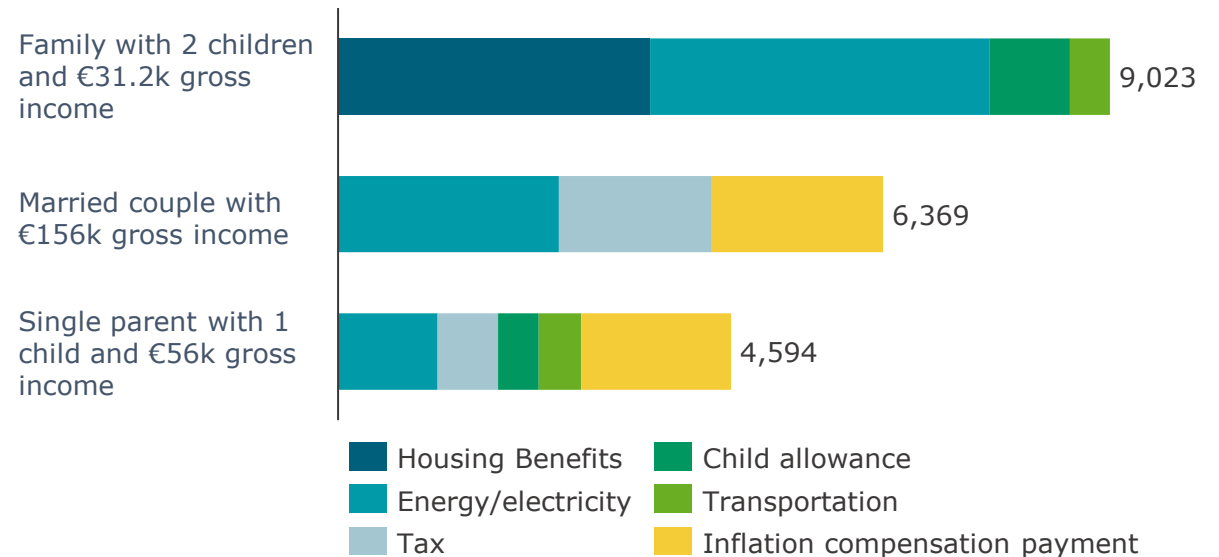
### Wage and salary increases have provided additional compensation. Examples

+24%	Minimum wage
+10.5%	Temp workers
+10.5%	Civil servants
+15%	Deutsche Post
+12%	Deutsche Bahn
+13%	Union for wholesale and export industry

In an effort to mitigate the financial burden from increased cost of living, the government has put in place various support schemes and subsidies with an aggregate amount of ca. €300bn.

The Federal Finance Ministry calculated the financial benefit of different types of households to show what the impact of the government assistance is on individual families.

### Average subsidies & benefits<sup>2</sup>



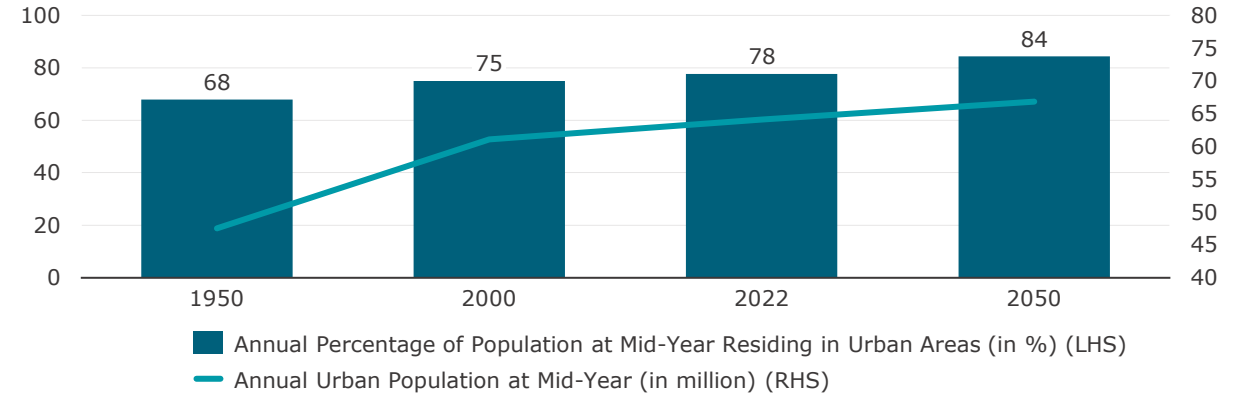
<sup>1</sup> Source: Federal Statistics Office. <sup>2</sup> Source: Handelsblatt based on data provided by the Federal Finance Ministry.

# Long-term Positive Fundamentals (Germany)

## Positive Fundamentals

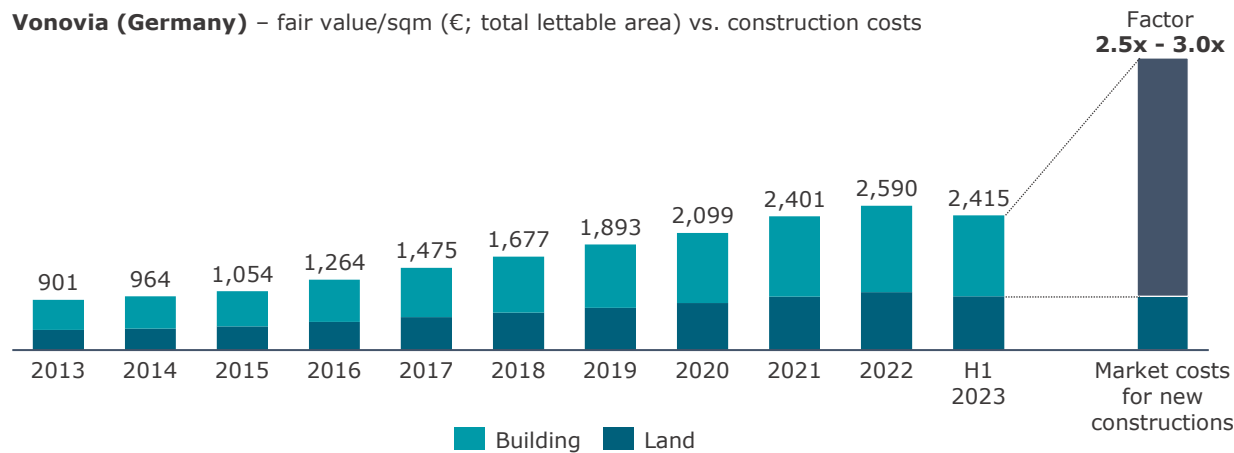
- Long-term structural support from
  - Insufficient levels of new construction;
  - Urbanization driving supply/demand imbalance in urban areas;
  - High replacement costs.

### Urbanization<sup>1</sup>

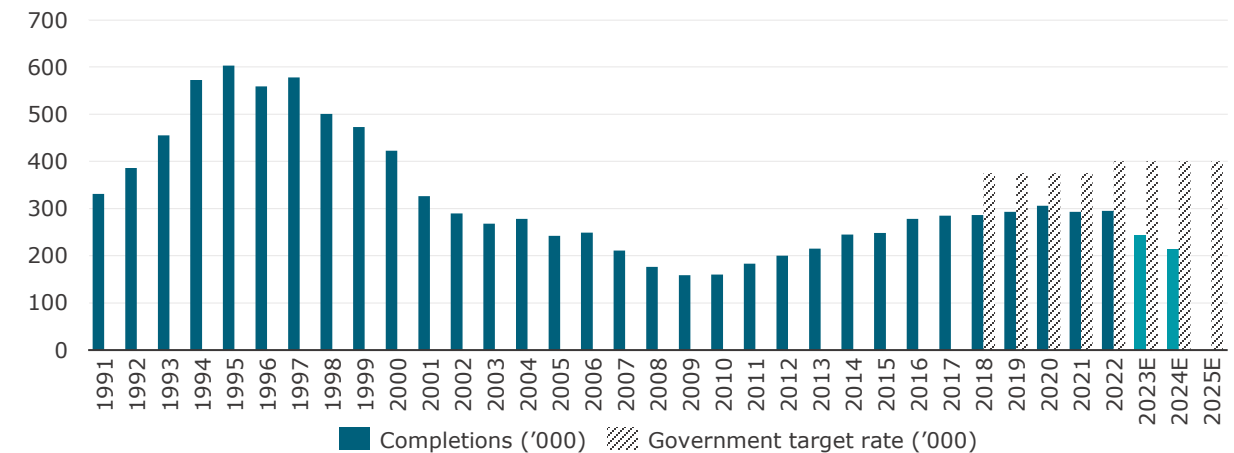


### Large gap between in-place values and replacement costs<sup>2</sup>

Vonovia (Germany) – fair value/sqm (€; total lettable area) vs. construction costs



### Structural supply/demand imbalance<sup>3</sup>



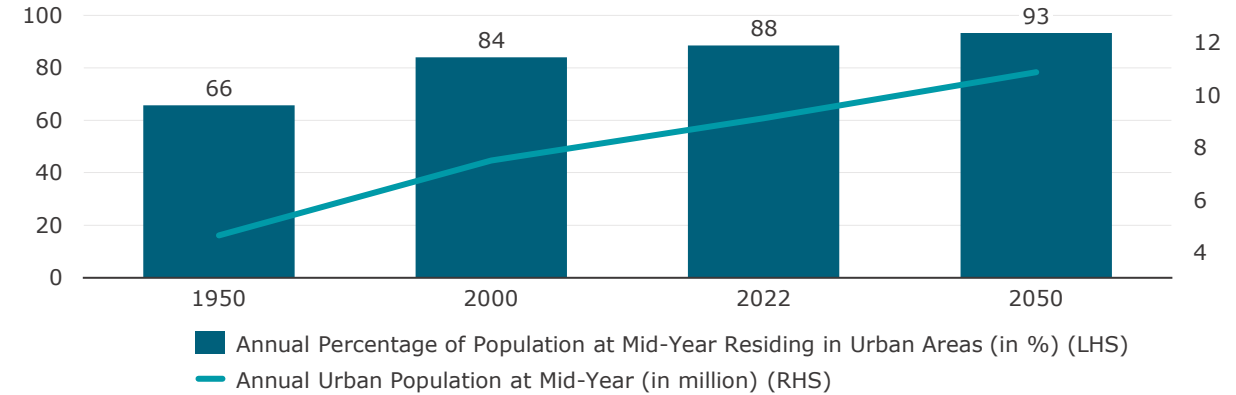
<sup>1</sup> Source: United Nations. <sup>2</sup> Note: VNA 2013 & 2014 refers to Deutsche Annington portfolio at the time. The land value refers to the share of total fair value estimated to relate to the land. <sup>3</sup> Federal Statistics Office for actual completions, 20223-2024E GdW estimate; CDU/SPD government for 2018-2021 and current government coalition (SPD, Greens, FDP (Liberals)) for 2022E-2025E target rate.

# Long-term Positive Fundamentals (Sweden)

## Positive Fundamentals

- Long-term structural support from
  - Insufficient levels of new construction;
  - Urbanization driving supply/demand imbalance in urban areas;
  - High replacement costs.

### Urbanization<sup>1</sup>

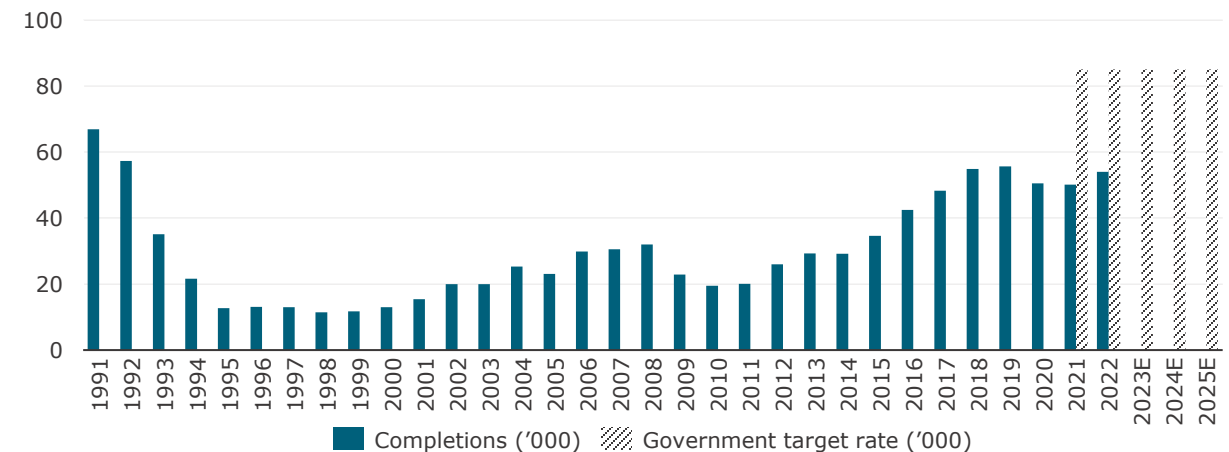


### Large gap between in-place values and replacement costs<sup>2</sup>

Vonovia (Sweden) – fair value/sqm (SEK; total lettable area) vs. construction costs



### Structural supply/demand imbalance<sup>3</sup>



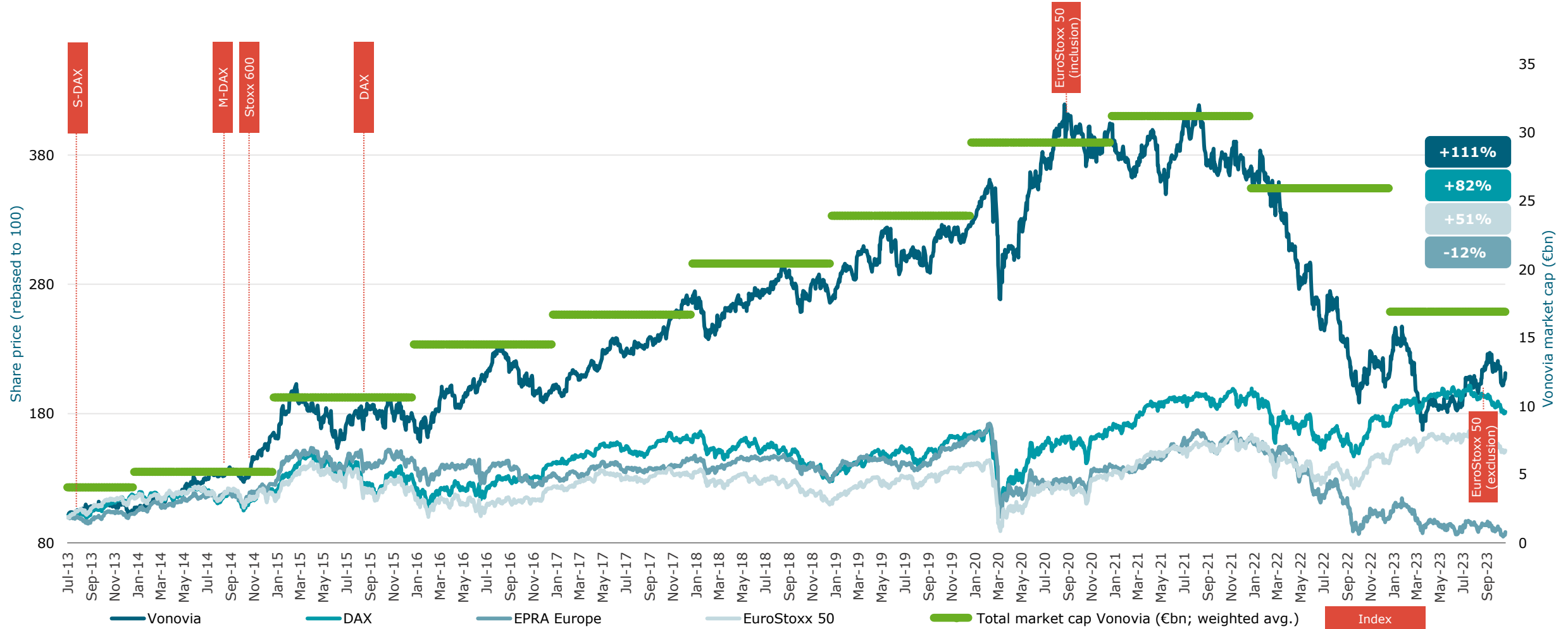
<sup>1</sup> Sources: United Nations. <sup>2</sup> Note: The land value refers to the share of total fair value estimated to relate to the land. Allocation between building and land in Sweden assumed to be similar to Germany. <sup>3</sup> Sources: Swedish National Board of Housing, Building and Planning, Statistics Sweden.

# Liquid Large-cap Stock

Total Performance since IPO

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Appendix



Source: Factset until October 31, 2023, company data; VNA and DAX performance are total shareholder return (share price plus dividends reinvested); EuroStoxx50 and EPRA Europe are share price performance only.

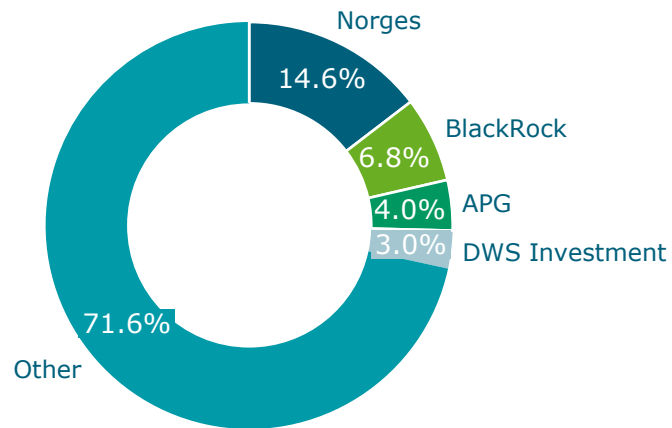


# Vonovia Shares

## Basic Data and NOSH Evolution

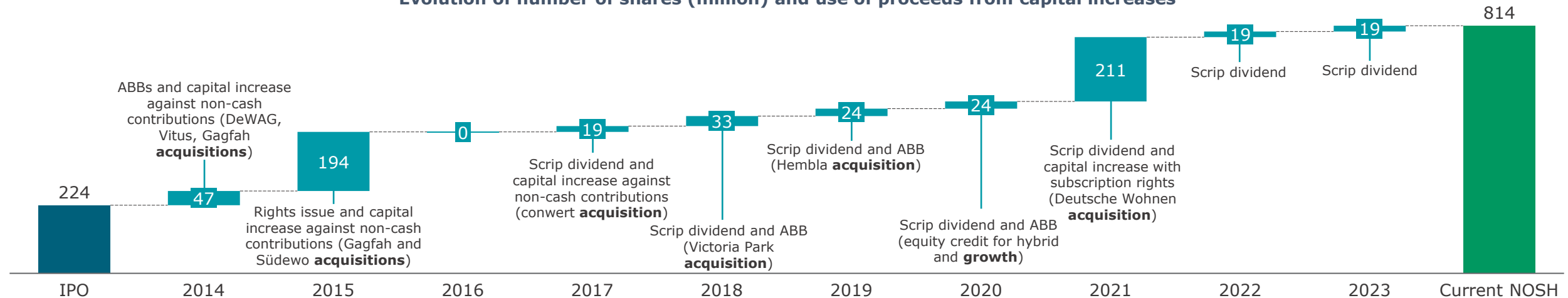
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First day of trading	July 11, 2013
No. of shares outstanding	814.6 million
Free float	85.4%
ISIN	DE000A1ML7J1
Ticker symbol	VNA
Share class	Registered shares with no par value
Main listing	Frankfurt Stock Exchange
Market segment	Regulated Market, Prime Standard
Major indices	DAX 40, GPR 250 World, FTSE EPRA/NAREIT Europe, DAX 50 ESG, STOXX Global ESG Leaders, EURO STOXX ESG Leaders 50, Dow Jones Sustainability Index Europe

### Evolution of number of shares (million) and use of proceeds from capital increases



# IR Contact & Financial Calendar

<https://investors.vonovia.de>

Business Update &  
9M 2023 Results

Appendix

## Contact

Rene Hoffmann (Head of IR)  
Primary contact for Sell side, Buy side  
+49 234 314 1629  
[rene.hoffmann@vonovia.de](mailto:rene.hoffmann@vonovia.de)



Stefan Heinz  
(Primary contact for Sell side, Buy side)  
+49 234 314 2384  
[stefan.heinz@vonovia.de](mailto:stefan.heinz@vonovia.de)



Oliver Larmann  
(Primary contact for private investors, AGM, financial regulator)  
+49 234 314 1609  
[oliver.larmann@vonovia.de](mailto:oliver.larmann@vonovia.de)



Simone Kaßner  
(Primary contact for private investors, ESG)  
+49 234 314 1140  
[simone.kassner@vonovia.de](mailto:simone.kassner@vonovia.de)



General inquiries  
[investorrelations@vonovia.de](mailto:investorrelations@vonovia.de)

## Financial Calendar 2023 and 2024

Nov 6	Roadshow with Goldman Sachs (Frankfurt)
Nov 7-8	Roadshow with Goldman Sachs (London)
Nov 9	Roadshow with Goldman Sachs (Amsterdam)
Nov 10	Roadshow with Goldman Sachs (virtual)
Nov 13-15	Roadshow with Kepler (USA)
Nov 16	Kepler Pan Euro Real Estate Conference, London (IR only)
Nov 21-23	UBS Asia Debt Capital Markets Issuer/Investor Event 2023 (IR only)
Nov 22	Van Lanschot Kempen Conference, London
Nov 24	SEB Real Estate Seminar, Stockholm (Debt)
Nov 29	UBS Global Real Estate CEO/CFO Conference, London
Nov 30	Société Générale Flagship Conference, Paris
Dec 4-5	Jefferies Global Real Estate Conference, Miami Beach (IR only)
Dec 7	Berenberg European Conference, London
Jan 9-10	GIS Commerzbank & ODDO BHF, New York
Jan 11	Barclays European Real Estate Conference, London
Jan 12	ODDO BHF Forum, Lyon (IR only)
Jan 16	Uni Credit & Kepler German Corporate Conference, Frankfurt
<b>Mar 15</b>	<b>FY 2023 Results</b>
<b>Apr 30</b>	<b>Q1 2024 Results</b>
<b>Aug 2</b>	<b>H1 2024 Results</b>
<b>Nov 6</b>	<b>9M 2024 Results</b>

Dates are subject to change. The most up-to-date [financial calendar](#) is always available online.

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Tables and diagrams may include rounding effects.

Per share numbers for 2013-2014 are TERP adjusted (TERP factor: 1.051). Subscription rights offering in 2015 due to Südewo acquisition.

Per share numbers for 2013-2020 are TERP adjusted (TERP factor: 1.067). Subscription rights offering in 2021 due to Deutsche Wohnen acquisition.

# For Your Notes

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