Financialisaton of housing

using the example of listed residential real estate company:

VONOVIA SE

VONOVIA SE - keyfacts

550,000 apartments

3.1 bn rental income

95 bn in real estate assets

- Europe's largest housing company with more than 550,000 apartments.
 - 490k in Germany
 - 39k in Sweden
 - 21k in Austria
- 6.2 bn total turnover, thereof 3.1 bn rental income
- Around 95 bn in real estate assets (on the balance sheet!)
- Listed in DAX since 2015. Shareholders are Norges Bank, BlackRock, APG, DWS Investment, 71% is free-float

Context/background

- According to current findings, Germany has significantly less than 50 % owner-occupied housing. Germany is a tenant country.
- Since the late 1980s, the housing and capital markets have been increasingly deregulated.
- Since the late 1990s, hundreds of thousands of flats have been sold off by the public sector and formerly non-profit industry-affiliated companies.
- Private equity funds bought up the flats and formed the forerunners of today's listed housing companies.

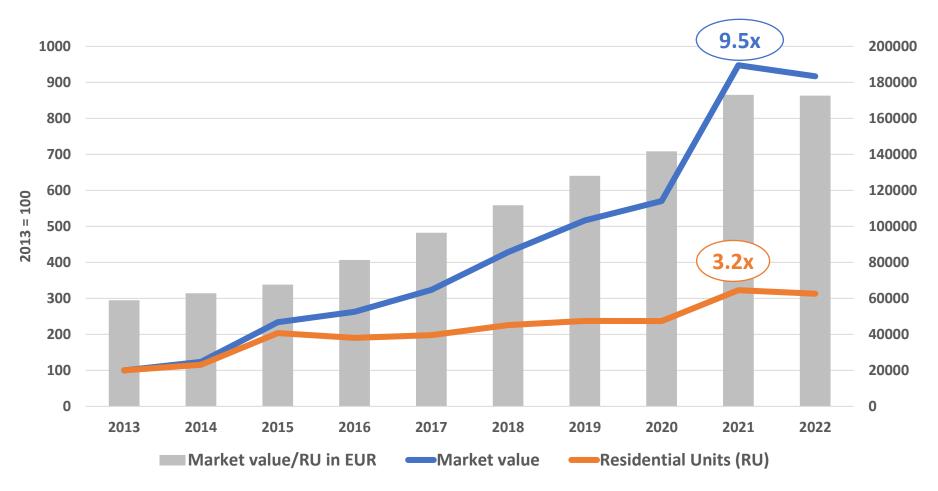
History and Phases of VONOVIA

- 1 Privatisation & private equity
 business model: buy cheap, sell dear.
 Spending down outsourcing rept increases. Selling apartments to
 - Spending down, outsourcing, rent increases. Selling apartments to tenants (failed as strategy). Crisis 2008 ff. threatened exit.
- 2013: IPO at the beginning of an approx. 10-year property boom. Business model: growth, increase in value, high dividends Low interest rates, valuation gains, modernisation, insourcing.
- 3 Crisis
 Since 2022: Abruptly rising interest rates & inflation, refinancing problems, loss of attractiveness on the stock market.
 - Strategies: spending down, no new constructions, portfolio sale, rent increases, focus on public funding & subsidies

Growth

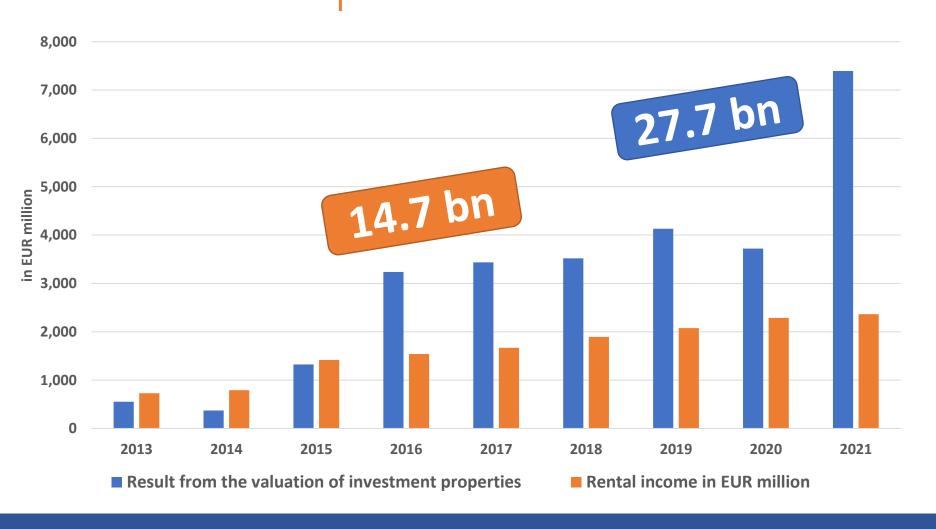
Housing units and property value

- The value of real estate has increased ninefold from approx.
 10.3 billion EUR to approx. 97.8 billion EUR (9.5x)
- Residential units (owned) more than tripled from 175,258 to 565,334 (3.2x)
- In 2021, the average flat is worth approx. 114,000 EUR more than in 2013.



GrowthValuation gains

- Periodically re-valuation of existing houses led to a balance sheet profit of 27.7 bn EUR from 2013-2021
- Not included: value of new acquisitions
- Update 2022: First-time devaluation of the real estate portfolio of approx. 1.2 bn EUR



Growth

as a business model

Portfolio acquisitions and takeovers increase
balance sheet value

Favourable financing options (corporate bonds, issue of shares)

Striving for growth to reflect a steadily increasing company value

Better access to the international capital market

Accounting in accordance with IFRS - fair value

increase balance sheet through re-valuation

valuation gains are recognised in profit or loss

Promotion to stock market indices (MDAX and DAX)

Dividend - absolute

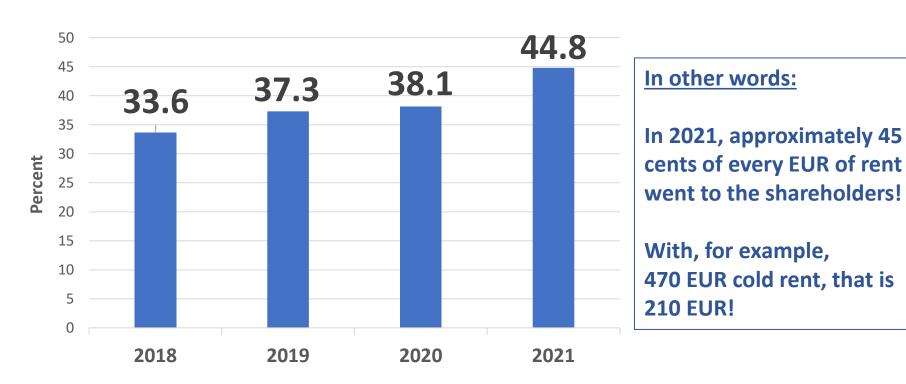


- The dividend is based on the operating profit (Group FFO)
- Since 2016, option to choose between cash dividend and stock dividend
- Stock dividends increase the basis of entitlement!
- For 2021, the dividend amounted to EUR 1.28 billion
- Due to the crisis,
 Vonovia halves the
 dividend for fiscal year
 2022 to "only"
 676 million EUR

"extraction rate"

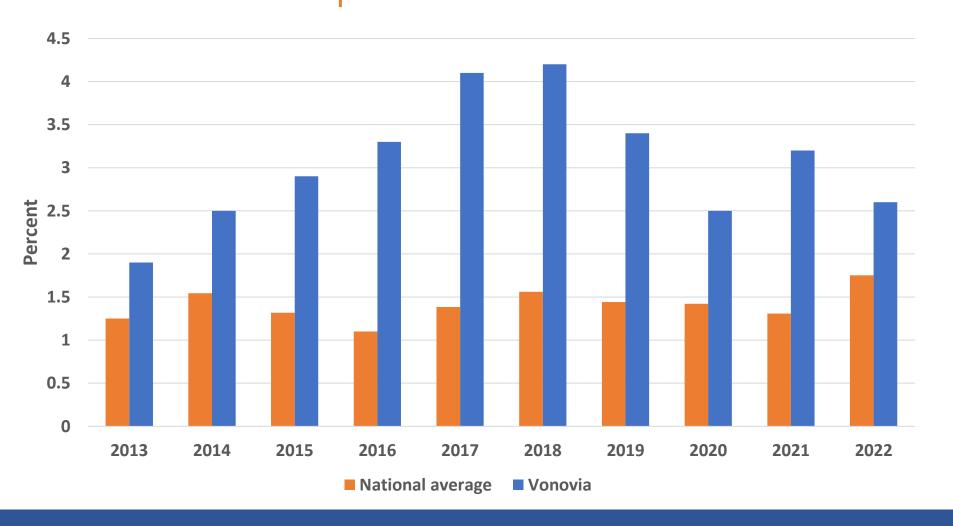
Extraction rate: Part of the rent payment that flows out to the shareholders.

Taking into account proceeds from the sale of housing stock and services for third parties, it is possible to calculate what proportion of rental income is spent on dividend payments.



Rent increases

- For years, Vonovia's rents have been increasing at a significantly higher rate than the national average.
- ➤ Vonovia's avarage rent in DE increased from 5.40 EUR (2013) to 7.40 EUR (2022). That are 37% in 9 years.

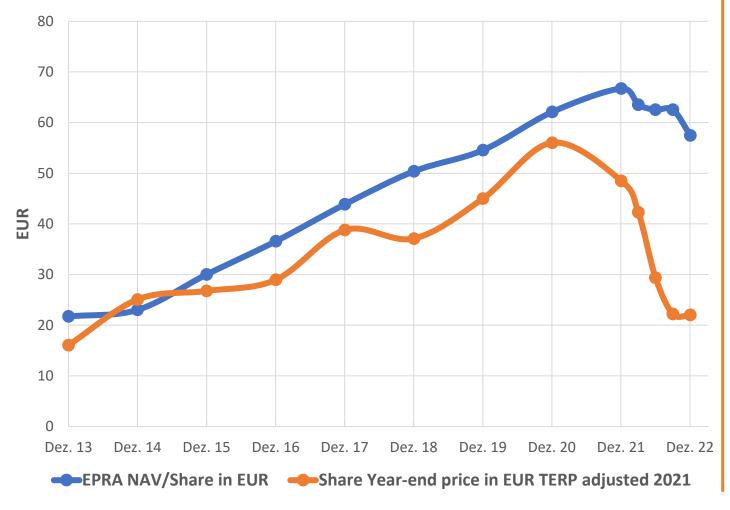


Investments

- Maintenance costs are to be paid in full by the landlord.
- Modernisations are investments that earn interest through higher rental income and can be capitalised on the balance sheet.

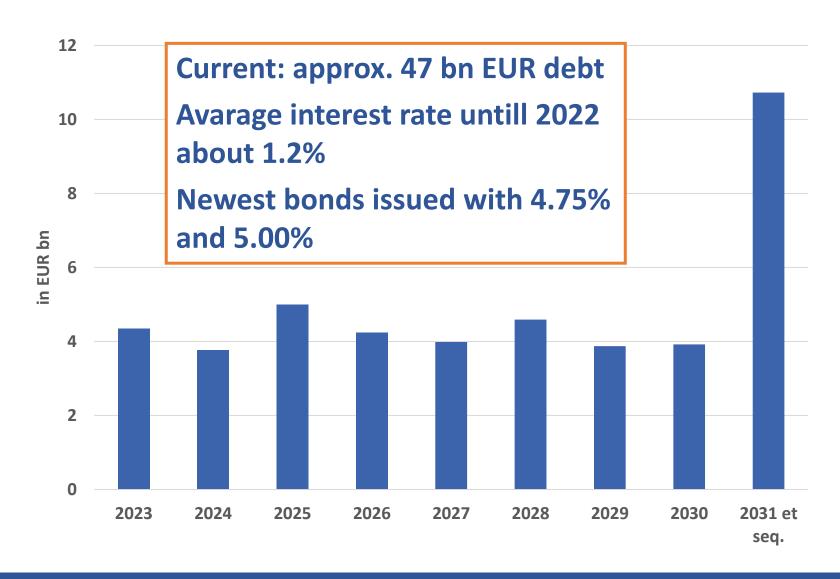


Growth and crisis Net asset value vs. share price



- The share price tracks the development of the net asset value (NAV) until 2021.
- Divergence since
 August 2021 and
 heavy losses of
 share price since
 March 2022 in
 connection with
 first interest rate
 hikes by the FED
- Share price reflecting both: changed conditions on capital markets and not trusting the values on the balance sheet

Maturity profile of Vonovia



Conclusion

Listed housing companies are investment platforms for the capital markets. From this perspective, housing is a financial investment.

Encouraged by economic framework conditions and political decisions, they have optimised the yield of their housing management and used the fictitious increase in the value of the buildings as a driver for expansion.

Permanently high and, at the same time, secure returns were the promise to the share holders. The current crisis is calling the business model into question.

For tenants, this is no more an opportunity than the almost 10-year "boom phase" was.

Appendix

Characteristics of management in the "Boom Phase"

Modernisation

- Modernisation as an investment and most important rent driver
- Instead of maintenance

New building, extension of existing buildings

- Profit from high rents and optimising portfolio
- Cost advantages through economies of scale

Standardisation, automation, digitalisation

- The company is managed through key financial ratios
- IT-supported rent increases
- Frequently accompanied by loss of contact persons on site

Insourcing, expansion of housingrelated services (value add) and intra-group settlements

- VAT fiscal unity
- Additional profits
- Management platform also for third parties

Cost optimisation

- Tax avoidance,
- Escape from the collective agreement
- Economies of scale and optimising portfolio

Political significance of VONOVIA

- Met with the Minister of Economy 10 times in 2022. The German Tenants' Association not once.
- Talked to state secretaries or ministers a total of 23 times. DMB 15 times.
- Spends approx. 1 million EUR p.a. for lobbying at federal level, 13 people employed for this purpose.

Valuation method and parameters

Basis: According to IFRS, the "fair value" of "investment property" is to be accounted for.

Method (de facto, not mandatory): Discounted cash flow model

Basic question: Which cash flows will arise in the future/in the period under consideration and what is their value at the present time?

Parameters

- Maintenance costs
- Cost increase/inflation %
- Market rent
- Market rent increase

- Stabilised vacancy rate in %
- Discount rate
- Capitalisation rate

"Sensitivity analysis"

Example calculation

Reference here: only properties in Germany, incl. DeuWo

Inflation rate is raised from 1.5% (H1 2022) to 2.5%:

0.5 % point -> change in value of -4.7

1 %-point -> change in value of -9.4

-> EUR 82.093 billion * (1 - 0.094) = EUR 74.376 billion

-7.7 bn

Discount and capitalisation rate is increased by 1 %:

0.25 % point -> change in value of -8.4

1 % point -> change in value of -33.6

-> 82.093 bn EUR * (1 - 0.336) = 54.509 bn EUR

-27.6 bn

2022: Crisis!

Inflation

- Low risk, cost ratio at only approx. 25 % in the rental business
- But: returns for new construction and modernisation affected

Rising interest rates

- Financing costs rise
- Current example: two bonds of EUR 750 million each with maturities of 4.5 and 8 years and a coupon of 4.75% and 5.00% respectively. (most recently average 1.2 - 1.3 %)
- Higher financing costs affect cash flow

2022: Crisis!

Valuation model is in question

- Rising interest rates and inflation have a value-reducing effect on real estate values.
- High risk, as there is a threat of potentially enormous devaluations, which could set in motion a downward spiral: destruction of equity capital on the balance sheet, higher debt ratio, possible problems with bonds, poorer refinancing options/conditions, repercussions on sales prices.

Share

- Heavy losses from autumn 2021, but especially since March 2022
- From EUR 54 high to below EUR 20 (October 2022, March 2023)
- Further share issue ruled out as financing channel

Crisis - Measures

>Avoid further debts

- > Acquisitions/expansion on hold
- ➤ Discontinue or relocate new construction (dev. to hold -> dev. to sell approx. EUR 900 million)
- ➤ If necessary, reduction of modernisation investments in line with changed yield calculation

≻Optimise revenue side

- ➤ Index rents linked to the inflation rate (potential analysis: 140,000 RU in DE)
- Existing rents, value add, energy sector

Cost reduction

➤ Maintenance, staff reduction (from 2024?)

Crisis - Measures

- ➤ Create liquidity
 - ➤ Sale of portfolios announced: 66K units, approx. 13 billion EUR
 - ➤ Reduction of investments from EUR 2,300 million planned for 2022 to approx. EUR 1,350 million in real terms in 2022 and EUR 850 million in 2023
- ➤ Create additional investment opportunities for other types of investors (insurance companies, pension funds)
 - ➤ Sale of shares in sub-portfolios in Baden-Württemberg (Germany) and Sweden. Comprises approx. 60,000 units.
- Expand management platform to/for third parties
 - ➤ Vonovia already manages > 70,000 homes for third parties

Discussion

Questions you may consider:

- Do listed housing companies play a relevant role in your country?
- Which other forms of financialisation of housing can be found on the housing markets of your country?

Sources & Notes

Unless otherwise stated, figures and data are largely taken from the annual and quarterly reports, the corresponding presentations or directly from Vonovia's website. Own calculations have largely been made on this basis. Annual and quarterly reports available at:

https://investoren.vonovia.de/news-und-publikationen/berichte-publikationen/

The data on the national average rent development is taken from the consumer price index of the Federal Statistical Office:

https://www.destatis.de/DE/Themen/Wirtschaft/Preise/Verbraucherpreisindex/ inhalt.html

Position paper of the German Tenants' Association on the business practices of listed housing companies: https://www.mieterbund.de/fileadmin/public/Gesetze Positionen/20211105-Wohnungskonzerne.pdf

Final Report of the Enquete Commission of the NRW State Parliament (2013):

https://www.landtag.nrw.de/files/live/sites/landtag-

r20/files/Internet/I.A.1/EK/16.WP/EK I/LT 2013%2003%2025%20Endbericht%20insgesamt-Druckfassung.pdf

For the calculation of the extraction rate see:

https://www.rosalux.de/publikation/id/46379/vonovia-ein-problem-das-immer-groesser-wrid

Contact

Daniel Zimmermann

Deutscher Mieterbund NRW e.V.

Mail: daniel.zimmermann@dmb-nrw.de

Fon: +49 (0)211 586 009 14