BayWa

(SDAX, Agriculture, BYW6 GR)

Buy	(Hold)
EUR 49.50	(EUR 48.50)
Price	EUR 38.05
Upside	**30.1 %**

Value Indicators:	EUR
DCF:	49.54
FCF-Value Potential 23-25:	51.68

Warburg ESG Risk Score:	**2.4**
ESG Score (MSCI based):	4.0
Balance Sheet Score:	2.3
Market Liquidity Score:	1.0

Description:

BayWa is one of the leading trading and logistics companies in Europe

Market Snapshot:	EUR m
Market cap (total):	1,330
No. of shares (m) (total):	34
EV (total):	8,171
Freefloat MC:	502
Ø Trad. Vol. (30d):	650.72 th

Shareholders:	
Freefloat	39.92 %
Bayr. Raiffeisen-Bet.-AG	34.99 %
Raiffeisen Agrar Invest GmbH	25.09 %

Key Figures (WRe):	2023e
Beta:	1.5
Price / Book:	1.4 x
Equity Ratio:	15 %
Net Fin. Debt / EBITDA:	7.7 x
Net Debt / EBITDA:	8.4 x

Transforming from a PV trader to a renewable energy supplier

BayWa's final FY 2022 figures were in line with preliminary results for sales (EUR 27,062m; +36.4% yoy) and EBIT including income from participations (EUR 504.1m; +89.1% yoy). As a consequence, EPS increased to EUR 4.36 (+168.4% yoy). The significant increase in EBIT was predominantly driven by the Agriculture (+99.9% to EUR 244.1m) and Energy (+92.9% to EUR 292.7m) business units, while the Building Materials segment was down yoy by -3.8% to EUR 70.4m. On top of that, the EBIT loss in the Others division, which mainly reflects both one-off gains and losses as well as costs and profits not allocated to the divisions, widened from EUR -81.1m in FY 2021 to EUR -103.1m a year later.

The huge increase in both sales and EBIT was partly driven by megatrends like sustainable energy production or resource conservation. This was most apparent in the Renewable Energies segment, where the solar trading business was able to increase its PV module sales by 71% and inverter sales by 60% yoy. The project business recorded 26 wind and solar parks sold with a combined electricity output of 797 MW_{peak}, up 30.0% yoy. The company expanded its IPP (independent power producer) portfolio to 26 solar and wind parks with a total output of 0.8 GW_{peak} (+14.3% yoy).

However, the jump in profits was also positively affected by the fact that market conditions were somewhat distorted by the impact of the Russian invasion of Ukraine and the sanctions imposed by the West on Russia and Belarus. Cefetra Group, BayWa's grain trading segment, benefited from a high volatility in the commodities business. The segment's EBIT increased by 53% yoy, despite a loss of EUR 17m because grain could not be shipped out of Odessa (Ukraine) in time to fulfil contractual agreements. Agri Trade & Service benefitted from both higher prices for stored grains and fertilisers. The Traditional Energy segment profited from higher selling prices and robust demand as customers were keen to store ample volumes ahead of the next heating season.

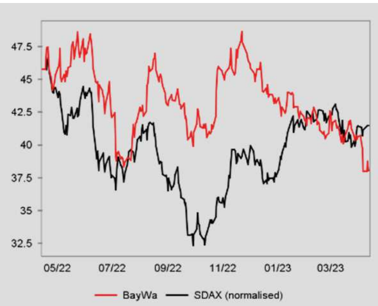
Hence, it comes as no surprise that BayWa considers the FY 2022 EBIT level to be unsustainably high. Given that the tailwind has turned into a headwind in some of its segments, BayWa is aiming for an EBIT of EUR 320-370m in FY 2023, which would arguably still mark the second-highest EBIT in its 100-year history. On top of that, BayWa plans to divest its PV trading operations by 2024, which is slated to create a huge cash inflow. The company is negotiating for a 10x-20x times EBIT multiple on the FY 2022 number of ca. EUR 150m, which would imply a EUR 2.25bn price tag at the midpoint of the range. The respective funds would be used to deleverage the company and grow the IPP business to ca. 3.0 GW by 2025 (+275% to FY 2022). Based on our revised estimates, we change our rating from Hold to Buy, and raise our PT to EUR 49.50 (based on a DCF calculation).

Changes in Estimates:

FY End: 31.12. in EUR m	2023e (old)	+ / -	2024e (old)	+ / -	2025e (old)	+ / -
Sales	26,301	-13.4 %	27,831	-15.8 %	n.a.	n.m.
EBIT	414	-21.0 %	456	-11.2 %	n.a.	n.m.
EPS	1.56	-56.9 %	1.91	-38.5 %	n.a.	n.m.
DPS	1.15	0.0 %	1.20	0.0 %	n.a.	n.m.
Net Debt	5,580	6.3 %	6,200	7.5 %	n.a.	n.m.

Comment on Changes:

- Changes in estimates reflect the reported full set of final FY 2022 figures
- FY 2023e estimates consider the termination of BayWa's Energy Trading business by the end of FY 2022 as well as increased operational headwind in the Agriculture and Building Materials segments
- FY 2024e (and beyond) estimates consider the planned divestment of BayWa's PV trading business
- Higher interest rates lead to significantly higher interest payments



Rel. Performance vs SDAX:	
1 month:	-6.8 %
6 months:	-34.0 %
Year to date:	-22.2 %
Trailing 12 months:	-7.9 %

Company events:	
11.05.23	Q1
06.06.23	AGM
03.08.23	Q2
09.11.23	Q3

FY End: 31.12. in EUR m	CAGR (22-25e)	2019	2020	2021	2022	2023e	2024e	2025e
Sales	-9.3 %	17,059	17,155	19,839	27,062	22,775	23,429	20,206
Change Sales yoy		2.6 %	0.6 %	15.6 %	36.4 %	-15.8 %	2.9 %	-13.8 %
Gross profit margin		*10.5 %*	*11.6 %*	*11.7 %*	*10.7 %*	*11.7 %*	*11.9 %*	*11.8 %*
EBITDA	-3.5 %	297	465	556	796	707	804	715
Margin		*1.7 %*	*2.7 %*	*2.8 %*	*2.9 %*	*3.1 %*	*3.4 %*	*3.5 %*
EBIT	-12.7 %	83	212	270	441	328	405	294
Margin		*0.5 %*	*1.2 %*	*1.4 %*	*1.6 %*	*1.4 %*	*1.7 %*	*1.5 %*
Net income	98.3 %	28	24	58	155	24	43	1,212
EPS	97.1 %	0.79	0.67	1.62	4.33	0.67	1.17	33.17
EPS adj.	-58.2 %	0.79	0.67	1.62	4.33	0.67	1.17	0.32
DPS	0.0 %	0.95	1.00	1.05	1.20	1.15	1.20	1.20
Dividend Yield		3.8 %	3.6 %	2.8 %	2.8 %	3.0 %	3.2 %	3.2 %
FCFPS		-5.13	12.53	-22.69	-18.21	-2.44	-12.86	50.44
FCF / Market cap		-19.4 %	43.1 %	-59.0 %	-40.6 %	-6.1 %	-32.1 %	125.9 %
EV / Sales		0.3 x	0.3 x	0.3 x	0.3 x	0.4 x	0.4 x	0.4 x
EV / EBITDA		20.0 x	12.6 x	12.1 x	10.1 x	11.7 x	11.2 x	11.9 x
EV / EBIT		72.1 x	27.7 x	25.0 x	18.3 x	25.2 x	22.2 x	29.0 x
P / E		31.9 x	41.4 x	22.7 x	9.9 x	56.6 x	32.4 x	1.1 x
P / E adj.		31.9 x	41.4 x	22.7 x	9.9 x	56.6 x	32.4 x	120.6 x
FCF Potential Yield		3.1 %	3.5 %	4.5 %	6.8 %	5.6 %	5.6 %	4.7 %
Net Debt		4,150	3,963	4,520	5,608	5,933	6,667	6,190
ROCE (NOPAT)		1.3 %	2.2 %	3.8 %	4.8 %	3.0 %	3.5 %	2.3 %
Guidance:	FY 2023: operating result EUR 320-370m							

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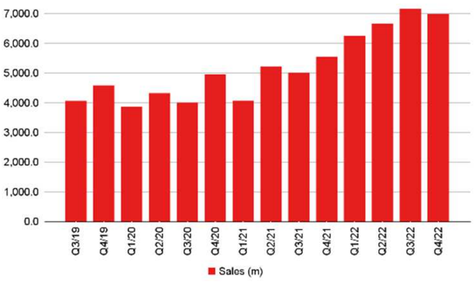
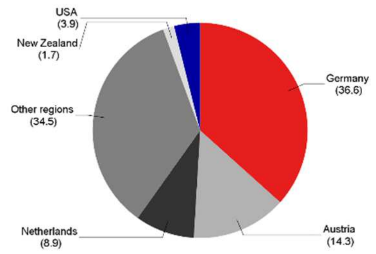
Sales development
in EUR m



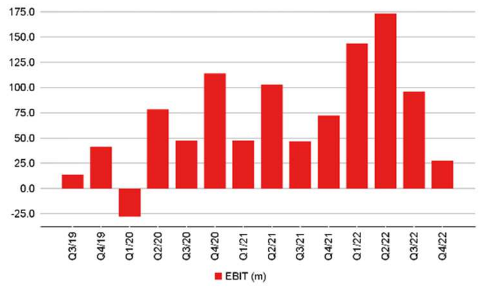
Source: Warburg Research

Sales by regions
2022; in %



Source: Warburg Research

EBIT development
in EUR m



Source: Warburg Research

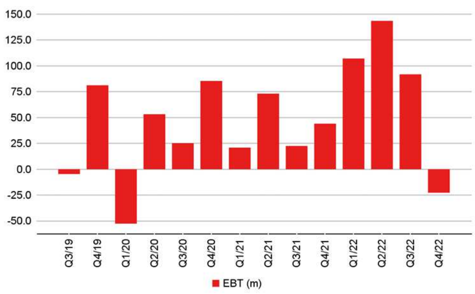
Company Background

- The company, founded in 1923 in Munich, now employs ca. 23,000 people mainly in southern Germany and Austria.
- Including franchisees, the company is present in more than 3,000 locations in 40 countries. It divides into three business segments, agriculture, energy and building materials trading.
- BayWa is by far the largest agricultural trader in southern Germany and Austria. As well as purchasing the harvest from farmers, the company also supplies them with equipment and materials.
- In the Energy segment, the company sells mainly fuels (heating oil, motor fuels and oils). Since 2009, BayWa has been active in the renewable energy area.
- In the Building Materials trade segment, the company offers solutions for new builds, renovation and refurbishment for corporate customers.

Competitive Quality

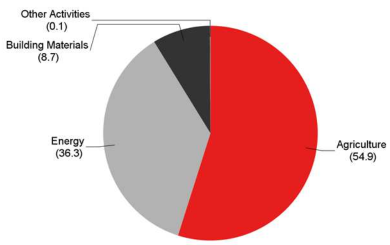
- The company is by far the largest dealer for agricultural products and materials in southern Germany and Austria. BayWa is the exclusive dealer in this region for the Claas und Fendt agricultural machinery brand.
- BayWa is the second-largest building materials trader in Germany and Austria (after Lafarge).
- BayWa is one of the largest providers for turnkey solar and wind energy power plants in Europe as well as one of the largest solar traders.

EBT development
in EUR m



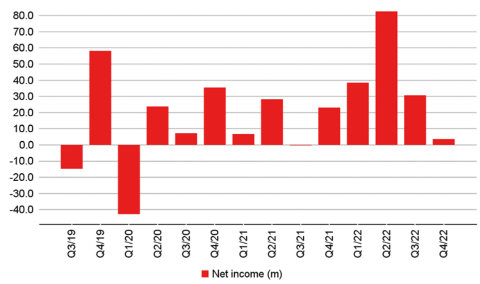
Source: Warburg Research

Sales by segments
2022; in %



Source: Warburg Research

Net income development
in EUR m



Source: Warburg Research

Summary of Investment Case

Investment triggers

- The company is transforming from a PV trader to a much more stable renewable energy supplier.
- Upcoming huge divestment gain helps to keep net debt in check past 2024.
- EBIT is set to decline in FY 2023, but is expected to be the second-best result in the company's history.

Valuation

- At 11.2x EBITDA 2024e, the company is not exactly cheap, but is trading significantly below its historical valuation levels.
- A DCF valuation points to a fair value of EUR 49.50 per share, which is almost 20% below the current share price.
- An FCF potential calculation hints at a fair value of EUR 51.68.

Growth

- While most segments will not achieve their FY 2022 comparable, we expect BayWa's growth engine – the Renewable Energies segment – to deliver once again in FY 2023.
- Both the renewable energy project business and the IPP business are earmarked for a huge scale-up.
- The upcoming divestment of BayWa's PV trading business is set to result in a sales and EBIT decline in FY 2025e.

Competitive quality

- BayWa is one of the largest PV traders in Europe as well as one of the largest globally active renewable energy project developers.
- It is one of the largest building materials suppliers in Germany.
- The company has a monopoly in grain collection in some southern parts of Germany.

Warburg versus consensus

- Our new earnings estimates are ahead of the consensus estimate for FY 2023e and FY 2024e, but below the FY 2025e consensus estimate on Factset. However, we regard this hardly relevant as BayWa is not well covered and estimates are more often than not inconclusive.

Company Overview

Operating Divisions (FY 2022)	Agriculture	Energy	Building Materials	Group
Sales	EUR 14,870m	EUR 9,833m	EUR 2,347m	EUR 2,347m
in % of total	55%	36%	9%	9%
EBIT	EUR 244m	EUR 293m	EUR 70m	EUR 70m
EBIT margin	1.6%	3.0%	3.0%	3.0%

Operating Segments

Cefetra Group
International trade in products, supply chain management

Agri Trade & Service
Collecting of, trade in agricultural inputs and products, logistics

Agricultural Equipment
Trade in agricultural machinery, service and repairs

Global Produce
Trade in fruit, cultivation and marketing of selected vegetable types

Renewable Energies
Project planning, services, independent power producer (IPP), energy trade, PV trade, energy solutions

Energy
Mobility solutiuons, seller of heating oil, fuels and lubricants

Building Materials
Trading activities for building materials, services, system solutions











Source: BayWa, Warburg Research

Growth/Financials

- Divestment of the PV Trading business should have a huge financial impact on FY 2025
- Trading in FY 2023 in the Agriculture division is set to follow a classic “reverse-to-mean” scenario, while macro headwinds should negatively affect the Building Materials division
- Reported net debt is set to expand markedly in the 2023 and 2024 periods as a consequence of the planned fast growth of BayWa’s IPP business

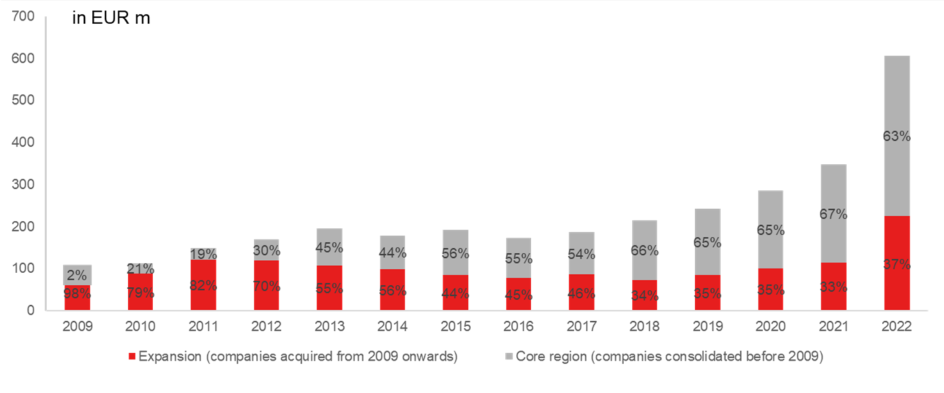
Growth at a cost

Strong growth via acquisition takes its toll on the balance sheet

Acquired entities are driving the company

BayWa’s growth in operating EBIT (operating EBIT is calculated using the combined EBIT of the operating segments while disregarding the EBIT of the Others segment, which contains unallocated costs as well as one-off costs and gains) highlights the increasingly positive EBIT impact of the companies acquired from 2009 onwards. On the one hand, this is clearly attributable to the expansion of the Renewable Energies segment by taking on project developer companies along the road, while at the same time banking on strong organic growth in the segment. On the other hand, it reflects the consequence of successfully adding the grain trading company Cefetra Group in the Netherlands as well as Turners & Growers in New Zealand (the heart of the Global Produce segment) to the Agriculture division, which led to a successful diversification and globalisation of the company.

BayWa: Operating EBIT contribution from expansion in %

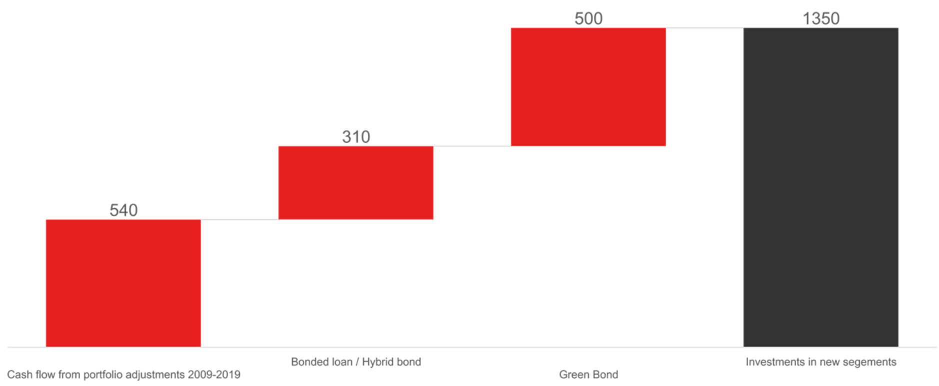


Source: BayWa, Warburg Research

The almost constant acquisitions were partly financed by shedding non-core activities, e.g. BayWa’s DIY markets, its stake in a car dealership, a stake in a car fuel station operator as well as unprofitable parts of the Building Materials segment. In addition, BayWa sold a 49% stake in its Renewable Energies segment, which is bundled in BayWa r.e. AG, to a Swiss specialist energy investor (EIP Ruby Renewables Invest GmbH). On top of that, funds were generated by selling legacy real estate, among them BayWa’s headquarters in Munich (in this particular case via a sale-and-lease-back transaction).

However, as these sources of cash were limited, BayWa also had to fund its expansion through a steady increase of its net debt position. As a consequence of the strong sales expansion in the past decade, FCF was rarely positive in any given financial year as ever-increasing WC requirements and higher tangible asset levels took their toll.

BayWa: Source of funds for investments in new segments (in EUR m)

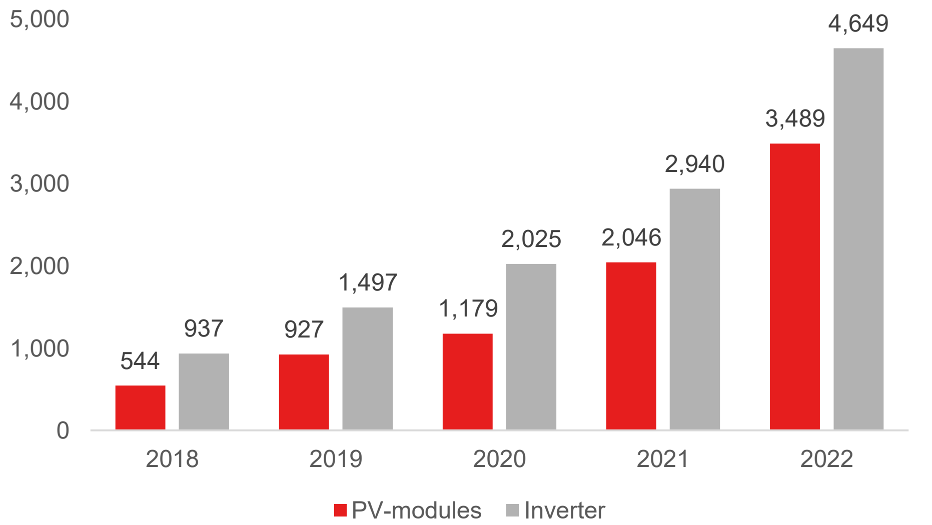


Source: BayWa, Warburg Research

Leverage to remain high despite the planned disposal of the PV Trading business

Given the ever-increasing capital requirement of BayWa's key growth segment, Renewable Energies, management made the tough decision to divest its global PV trading activities (PV panels, inverters, etc.). The business, which started BayWa's Renewables Energies segment in 2009, has grown to EUR 2.7bn in sales and EUR 150m in EBIT, representing roughly 40% of the segment's sales in FY 2022 and 60% of its EBIT.

BayWa: The PV Trading business recorded strong growth in recent years (in MW_{peak})

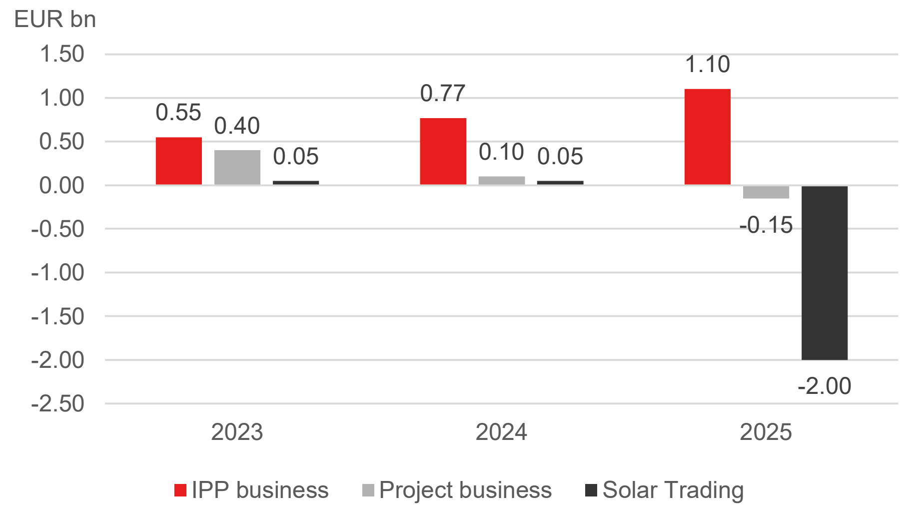


Source: BayWa, Warburg Research

BayWa is aiming for a transfer of the assets in 2024 at 10-20x FY 2022 EBIT, which translates into a price tag of EUR 2.25bn at the midpoint of the valuation range. As there are no pure-play solar traders' stocks listed (especially not of this large size in the European market), it remains to be seen at which price level BayWa will be able to execute the deal.

The expected cash inflow of net EUR 2bn (WRe) will be mostly used to fund BayWa's growth as an Independent Power Producer (IPP) from 0.8 GW_{peak} in 2022 to 3.0 GW_{peak} in 2025. Especially compared to the solar trading business, the IPP business with long-term PPA contracts with customers (power purchase agreements) can be considered as highly stable and cash-generative. However, these advantages come at a price: The IPP business is extremely capital-intensive, as 1 MW_{peak} PV capacity requires an investment of on average ca. EUR 1m, wind turbines ca. 20-50% more. BayWa therefore plans to finance ca. 90% of the required capex via non-recourse debt at project level. Nevertheless, the required equity portion should amount to EUR 220-330m. As a consequence, BayWa's leverage is set to increase until the PV trading business is divested (WRe: beginning of FY 2025) despite the increasing IPP EBIT contribution.

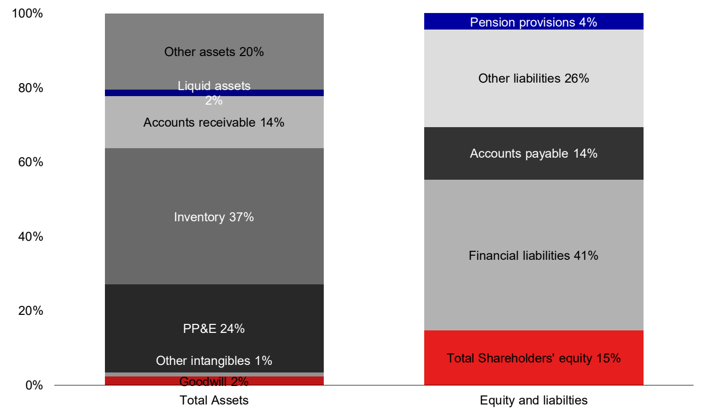
BayWa: Projected additional capital requirement of the Renewable Energies segment FY 2023-2025 (in total: EUR 0.87bn)



Source: Warburg Research

In FY 2022, the asset side of the balance sheet was dominated by tangible assets (24%) and working capital (inventories and accounts receivable combined: 51%). Cash was minimal (2%). The liabilities side consisted of 41% financial liabilities and the equity ratio was 15%.

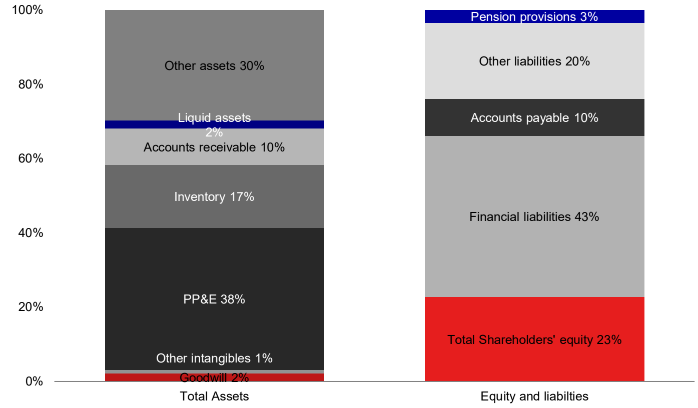
BayWa: Balance sheet structure as of 31.12.2022 (total: EUR 12,976m)



Source: BayWa, Warburg Research

By the end of FY 2025e, the asset side of the balance sheet is expected to be even more dominated by tangible assets (38%), mainly due to the massive build-up of the IPP business. Working capital (inventories and accounts receivable combined: 27%) has been reduced, partly due to the divestment of the PV trading business. The liabilities side is expected to consist of 43% financial liabilities, despite the massive cash inflow at the beginning of the year from the PV Trading divestment (WRe: EUR 2bn net). As a consequence, the equity ratio is expected to increase to 23%.

BayWa: Balance sheet structure as of 31.12.2025e (total: EUR 13,786m)



Source: BayWa, Warburg Research

BayWa will remain highly leveraged even after the divestment of the PV trading business. We are looking for a EUR 5.75bn net debt figure in FY 2025. The IPP business is to be financed mostly via non-recourse debt, with a targeted leverage of 90%. The IPP business is to be expanded by $2.2GW_{peak}$ until 2025, which indicates a capital requirement of ca. EUR 2.4bn. At 90% leverage, EUR 2.16bn should be financed via non-recourse debt. In 2022, non-recourse debt on BayWa's balance sheet amounted to EUR 0.42bn. Thus, non-recourse debt should add up to EUR 2.58bn in FY 2025. Assuming a similar level of readily marketable inventories on BayWa's balance sheet as in FY 2022 (EUR 1.2bn), this would indicate an adjusted net debt of EUR 5.75bn – EUR 2.58bn -EUR 1.2bn = EUR 1.97bn by the end of FY 2025 This would point to an adjusted Net debt/EBITDA (2025) of 2.8x (FY 2022: 4.0x).

Business development in the FY 2022-2025e time frame

FY 2022 was a record year for BayWa with regard to sales and EBIT generation. However, the tailwind triggered by high market volatility and rising product prices following the Russian invasion of Ukraine, which boosted results, is expected to be short-lived.

As windfall profits mainly benefitted the Agriculture business, this division is set to report a significant EBIT drop in FY 2023. As a consequence, this year's group EBIT is guided well below last year's level, as the midpoint of the EUR 320-370m EBIT guidance given by the company translates into a drop of 30% yoy. Given the current market environment, we fully agree with this general assessment, but are looking for reported EBIT at the upper end of the guidance range, mainly due to our expectations of a favourable development in the Renewable Energies segment.

FY 2024 and subsequent years should again be driven by growth in the Renewable Energies segment, as we expect that the planned divestment of the PV Trading business will not take place until early 2025. While we expect performance in the Agriculture Equipment segment to worsen as the German government subsidy programme "Bauernmilliarde" expires at the end of 2023, this should be mostly offset by an improved performance of the Global Produce segment (both part of the Agriculture division). Hence, growth in the Agriculture segment is likely to remain sluggish. As we do not foresee a major improvement in conditions on the German and Austrian construction markets, performance in the Building Materials division is expected to remain muted.

FY 2025 should be highly affected by the successful divestment of the PV trading business. On the one hand, BayWa is set to deconsolidate EUR 3.2bn in sales and EUR 190m in FY 2024e EBIT (WRe). On the other hand, BayWa stands to receive approx. EUR 2bn in cash proceeds after tax as a result of the selling price of EUR 2.25bn for the assets, which in turn should lead to a EUR 1.2bn one-off divestment gain. Against this backdrop, performance in the other segments is expected to improve only slightly.

BayWa has raised its mid-term sustainable EBIT target for the end of 2025 to EUR 470-520m from EUR 400-450m before. We consider this to be rather aggressive, given that the PV trading business is planned to be deconsolidated by that point in time and all other segments netted should generate an EBIT contribution of EUR 136m in FY 2025 (including the Others segment). Based on our estimates, we are currently looking for an EBIT of EUR 426m by FY 2026e.

BayWa: P&L development FY 2020-2025e

	FY 2020		FY 2021		FY 2022		FY 2023e		FY 2024e		FY 2025e	
in EUR m												
Sales	**17155.4**	**0.6%**	**19839.1**	**15.6%**	**27061.8**	**36.4%**	**22774.9**	**-15.8%**	**23429.1**	**2.9%**	**20205.5**	**-13.8%**
thereof:												
Agriculture	10998.2	1.2%	12055.8	9.6%	14870.1	23.3%	13240.9	-11.0%	13400.9	1.2%	13781.6	2.8%
Energy	4245.8	-5.1%	5688.2	34.0%	9832.8	72.9%	7389.9	-24.8%	7937.8	7.4%	4385.6	-44.8%
thereof: Renewable Energies segment	*2500.6*	26.6%	*3560.0*	42.4%	*6489.2*	82.3%	*4916.9*	-24.2%	*5508.6*	12.0%	*1998.0*	-63.7%
Building Materials	1899.0	11.5%	2084.2	9.8%	2346.9	12.6%	2136.1	-9.0%	2082.4	-2.5%	2030.3	-2.5%
Other	12.4		10.9		12.0		8.0		8.0		8.0	
Change in inventories of finished & unfinished products	172.1	-27.4%	945.1	449.2%	403.6	-57.3%	0.0		0.0		0.0	
Other operating income	353.0	56.5%	404.2	14.5%	492.9	21.9%	408.7	-17.1%	420.5	2.9%	362.6	-13.8%
Cost of materials	-15335.7	-1.1%	-18457.1	20.4%	-24581.2	33.2%	-20136.6	-18.1%	-20646.3	2.5%	-17821.9	-13.7%
Personnel expenses	-1184.9	9.5%	-1320.5	11.4%	-1509.5	14.3%	-1481.7	-1.8%	-1504.3	1.5%	-1277.3	-15.1%
Other operating expenses	-253.2	18.0%	-286.2	13.0%	-354.7	23.9%	-379.0	6.9%	-398.9	5.2%	-421.4	5.6%
Depreciation												
EBIT	**212.0**	**156.7%**	**269.6**	**27.2%**	**440.9**	**63.5%**	**327.5**	**-25.7%**	**404.7**	**23.6%**	**293.5**	**-27.5%**
therof	0.0		0.0		0.0		0.0		0.0		0.0	
Agriculture	96.2	17.3%	122.1	26.9%	244.1	99.9%	135.5	-44.5%	127.7	-5.7%	141.1	10.5%
Energy	142.7	12.0%	152.4	6.8%	292.7	92.1%	306.9	4.9%	370.8	20.8%	244.1	-34.2%
thereof: Renewable Energies segment	*110.9*	9.8%	*135.0*	21.7%	*239.1*	77.1%	*278.2*	16.4%	*341.4*	22.7%	*214.0*	-37.3%
Building Materials	46.9	46.1%	73.2	56.1%	70.4	-3.8%	47.1	-33.1%	41.1	-12.7%	43.2	5.0%
Other	-70.6	33.0%	-81.1	14.9%	-103.1	27.1%	-112.0	8.7%	-85.0	-24.1%	-85.0	0.0%
EBIT	**215.2**	**14.2%**	**266.6**	**23.9%**	**504.1**	**89.1%**	**377.5**	**-25.1%**	**454.7**	**20.4%**	**343.5**	**-24.5%**
Interest income	14.5	13.3%	15.7	8.3%	17.6	12.1%	14.8	-15.9%	18.1	22.3%	19.0	4.9%
Interest payments	-118.5	-2.9%	-121.7	2.7%	-202.1	66.1%	-254.9	26.1%	-287.9	12.9%	-312.5	8.5%
EBT	**111.2**	**40.4%**	**160.6**	**44.4%**	**319.7**	**99.1%**	**137.3**	**-57.0%**	**184.9**	**34.6%**	**50.0**	**-73.0%**
Taxes on income and earnings	-49.9	253.9%	-31.8	-36.3%	-80.1	151.9%	-39.8	-50.3%	-53.6	34.6%	-14.5	-73.0%
Consolidated result for the period	61.3	-5.8%	128.8	110.1%	239.6	86.0%	97.5	-59.3%	131.2	34.6%	1235.5	841.3%
thereof non-controlling interests	-37.5	0.8%	-71.0	89.3%	-84.2	18.6%	-73.3	-13.0%	-88.6	20.9%	576.1	-750.1%
thereof BayWa AG shareholders	**23.8**	**-14.7%**	**57.8**	**142.9%**	**155.4**	**168.9%**	**24.2**	**-84.4%**	**42.6**	**75.8%**	**611.5**	**1334.4%**
EpS (EUR)	0.67	-15.0%	1.62	140.4%	4.35	168.4%	0.68	-84.5%	1.18	74.8%	33.32	2724.6%
DpS (EUR)	1.00	5.3%	1.05	5.0%	1.20	14.3%	1.15	-4.2%	1.20	4.3%	1.20	0.0%

Source: BayWa, Warburg Research

Valuation

- We have used a DCF calculation to determine a fair value of EUR 49.54 per BayWa share.
- We used a free cash flow value potential calculation to gauge the company's ability to generate sustainable FCFs.
- As there are no directly comparable quoted companies, no peer-group valuation was carried out.

DCF valuation as key method points to fair value of EUR 49.54

Key assumptions of the DCF model

The valuation of BayWa is based on a three-stage DCF calculation, which arrives at a fair value of EUR 49.54 per share. The fair value of the company is derived from the assumption that BayWa is able to benefit from growth opportunities, mainly in its Renewable Energies segment. Given that the company's business model is geared towards significant growth in its IPP and renewable energy project businesses, while a large chunk of the segment (the PV Trading business) is expected to be divested in early 2025 (WRe), the fair value of the company is mostly based on its mid-term (transitional period) and long-term (terminal value) business prospects. Thus, the result of the DCF calculation is rather sensitive to changes in the underlying profitability.

The three stages of the DCF calculation are structured as follows:

- The first stage is based on detailed estimates regarding cash flow, balance sheet and P&L numbers for the years 2023–2025.
- The second stage is an assessment of the company's development in the years 2026–2035. The model is based on the anticipated effects of key drivers in terms of sales growth, development of the operating margin, changes in working capital and the evolution of capex and depreciation. This includes the end of the expansion of BayWa's IPP business in 2026e, which should result in a significant increase in the renewable project business, as from there on its full capacity can be utilised for external customers.
- The third stage is based on perpetual growth from 2036 onwards. It is based on a static sales growth rate with a fixed operating margin. Depreciation corresponds to investments in tangible and intangible assets as well as investments in capitalised research projects.

Underlying assumptions included in the DCF model are based on the following scenario:

- Stage 1: The company is expected to see sales and earnings decline yoy in 2023. The positive effects of the expansion of the IPP business in the Renewable Energies segment as well as the segment's sales increase in PV trading and the renewable energy project businesses are to be more than offset by a significantly weaker performance in all other segments. In 2024, sales and earnings should expand yoy on the back of a good performance in the Renewable Energies segment, while the combined results of all other segments are expected to grow only slightly. BayWa is set to divest its PV trading business in early FY 2025 (WRe). This is set to result in a decline in sales and EBIT in the Renewable Energies segment, while all other segments are expected to grow slightly (on average).
- Stage 2: Volume growth of 1-3% in the relevant markets and a slight decline in the EBIT margin in a bracket of 1.80-1.73% are assumed as a consequence of faster-growing businesses with lower margins. The EBIT margin is to increase from 2025e to 2026e due to the end of the build-out of BayWa's IPP portfolio. This will also result in substantially lower capex from FY 2026 onwards, meaning that significant renewable energy project capacities that were used internally to expand the company's IPP portfolio will now be available for third-party business. On top of that, the expanded IPP portfolio will be able to generate a significantly higher EBIT contribution. In the following years, growth will be

generated mainly in the other parts of the business portfolio, leading to a slow margin dilution.

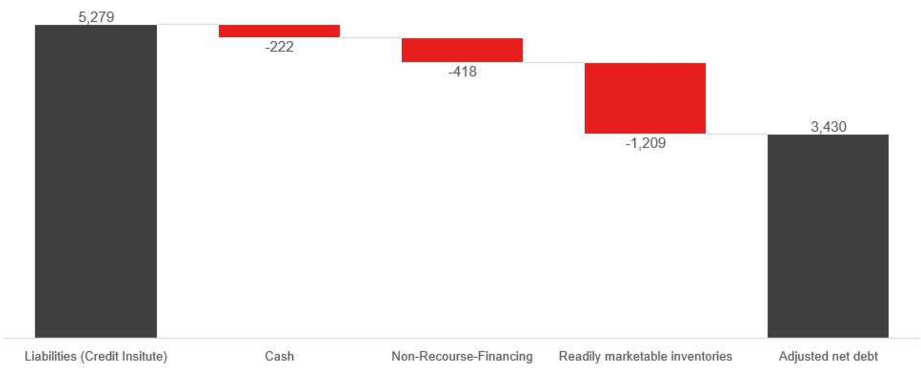
- Stage 3: A terminal growth rate of 1% was applied, as well as a 1.73%% EBIT margin.

No effects from M&A transactions beyond the announced divestment of BayWa's PV trading business were included in our model.

For the calculation of the WACC, a beta of 1.47 was used. The above-average risk results from 1) limited liquidity of the shares – free-float of 38.3%, free-float MC of approx. EUR 530m at the time of writing 2) the company's limited balance sheet strength – equity ratio of 14.7% (2022), net debt/EBITDA of 6.15x (2022; adjusted net debt/EBITDA of 4.00), 3) the absence of an external credit rating, 4) limited visibility regarding the mid-term development of the company as well as structurally limited transparency as a B2B company. A market risk premium of 8.25% and a risk-free rate of 2.75% were applied, as well as a normalised tax rate of 29%. The resulting WACC is 5.23%, the calculated fair value EUR 49.54 per share.

We have adjusted the FY 2022 net debt figure for non-recourse financing (used for the financing of IPP projects) and readily marketable inventories, as both have no impact on the structural level of the BayWa group's net debt in our view.

BayWa: FY 2022 – From reported net debt to adjusted net debt



Source: BayWa, Warburg Research

FCF Value Potential indicates a fair value of EUR 51.68 per share

WR's "FCF Value Potential" model reflects the ability of the company to generate sustainable free cash flows. It is based on the FCF potential – a FCF figure calculated on an "ex growth" basis, which assumes unchanged working capital and pure maintenance capex in a given year. The value indication is derived via the perpetuity of a given year's FCF potential with consideration of the weighted costs of capital. The fluctuating value indications for the various years add a timing element to the DCF model (our preferred valuation tool). We assume maintenance capex of EUR 253-351m in the FY 2023e – FY 2025e periods.

The FCF Value Potential model calculates the value of the BayWa share between EUR 66.34 (FY 2023e) and EUR 23.59 (FY 2025e). We used the average result of the 2023e - 2025e periods which is EUR 51.68.

Free Cash Flow Value Potential

Warburg Research's valuation tool "FCF Value Potential" reflects the ability of the company to generate sustainable free cash flows. It is based on the "FCF potential" - a FCF "ex growth" figure - which assumes unchanged working capital and pure maintenance capex. A value indication is derived via the perpetuity of a given year's “FCF potential” with consideration of the weighted costs of capital. The fluctuating value indications over time add a timing element to the DCF model (our preferred valuation tool).

in EUR m	2019	2020	2021	2022	2023e	2024e	2025e
Net Income before minorities	65	61	129	240	98	131	35
+ Depreciation + Amortisation	215	253	286	355	379	399	421
- Net Interest Income	-109	-104	-106	-185	-240	-270	-294
- Maintenance Capex	204	216	215	231	253	300	351
+ Other	0	0	0	0	0	0	0
= Free Cash Flow Potential	**184**	**203**	**306**	**548**	**464**	**500**	**399**
FCF Potential Yield (on market EV)	3.1 %	3.5 %	4.5 %	6.8 %	5.6 %	5.6 %	4.7 %
WACC	5.23 %	5.23 %	5.23 %	5.23 %	5.23 %	5.23 %	5.23 %
= Enterprise Value (EV)	**5,956**	**5,862**	**6,752**	**8,070**	**8,238**	**8,981**	**8,512**
= Fair Enterprise Value	**3,529**	**3,879**	**5,854**	**10,478**	**8,877**	**9,569**	**7,643**
- Net Debt (Cash)	5,056	5,056	5,056	5,056	5,424	6,151	5,709
- Pension Liabilities	552	552	552	552	508	516	480
- Other	0	0	0	0	0	0	0
- Market value of minorities	909	909	909	909	909	909	909
+ Market value of investments	279	279	279	279	279	279	279
= Fair Market Capitalisation	**n.a.**	**n.a.**	**n.a.**	**4,239**	**2,314**	**2,271**	**823**
Number of shares, average	35	35	36	36	36	36	37
= Fair value per share (EUR)	**n.a.**	**n.a.**	**n.a.**	**118.21**	**64.13**	**62.56**	**22.53**
premium (-) / discount (+) in %					68.6 %	64.4 %	-40.8 %

Sensitivity Fair value per Share (EUR)

	8.23 %	n.a.	n.a.	n.a.	11.98	n.a.	n.a.	n.a.
	7.23 %	n.a.	n.a.	n.a.	38.39	n.a.	n.a.	n.a.
	6.23 %	n.a.	n.a.	n.a.	73.28	25.46	21.05	n.a.
WACC	**5.23 %**	**n.a.**	**n.a.**	**n.a.**	**118.21**	**64.13**	**62.56**	**22.53**
	4.23 %	n.a.	n.a.	28.68	192.63	126.57	130.03	75.45
	3.23 %	n.a.	n.a.	93.02	307.80	224.14	235.21	159.46
	2.23 %	58.71	82.25	215.19	526.46	409.40	434.89	318.96

- Historical volatility of the value indication is due to cyclical operative development, portfolio changes.

DCF model

	Detailed forecast period			Transitional period										Term. Value
Figures in EUR m	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2034e	2035e	
Sales	22,775	23,429	20,206	20,812	21,436	22,079	22,741	23,424	24,126	24,850	25,596	26,364	26,627	
Sales change	*-15.8 %*	*2.9 %*	*-13.8 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*1.0 %*	*1.0 %*
EBIT	328	405	294	375	386	396	405	415	425	436	446	457	461	
EBIT-margin	*1.4 %*	*1.7 %*	*1.5 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.7 %*	*1.7 %*	*1.7 %*	
Tax rate (EBT)	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	
NOPAT	233	287	208	266	274	281	288	295	302	309	317	324	328	
Depreciation	379	399	421	455	468	482	497	512	527	543	559	576	582	
in % of Sales	*1.7 %*	*1.7 %*	*2.1 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	
Changes in provisions	-44	7	-35	14	15	15	16	16	17	17	18	18	6	
Change in Liquidity from														
- Working Capital	-301	85	-416	124	127	131	135	139	143	148	152	156	54	
- Capex	790	1,000	1,300	312	317	322	332	342	352	363	374	385	389	
Capex in % of Sales	*3.5 %*	*4.3 %*	*6.4 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	
- Other	0	0	-1,200	0	0	0	0	0	0	0	0	0	0	
Free Cash Flow (WACC Model)	79	-392	910	300	313	325	334	342	350	359	368	377	473	282
PV of FCF	76	-360	794	249	247	244	237	231	225	220	214	208	248	3,506
share of PVs	8.06 %			36.65 %										55.29 %

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	77.00 %	Financial Strength	2.00
Cost of debt (after tax)	3.6 %	Liquidity (share)	1.75
Market return	8.25 %	Cyclicality	1.30
Risk free rate	2.75 %	Transparency	1.30
		Others	1.00
WACC	**5.23 %**	**Beta**	**1.47**

Valuation (m)

Present values 2035e	2,834		
Terminal Value	3,506		
Financial liabilities	3,652		
Pension liabilities	552		
Hybrid capital	0		
Minority interest	909		
Market val. of investments	279		
Liquidity	223	No. of shares (m)	34.9
Equity Value	**1,728**	**Value per share (EUR)**	**49.54**

Sensitivity Value per Share (EUR)

		Terminal Growth						
Beta	WACC	0.25 %	0.50 %	0.75 %	**1.00 %**	1.25 %	1.50 %	1.75 %
2.26	6.2 %	6.80	9.55	12.56	15.85	19.47	23.48	27.93
1.87	5.7 %	19.38	22.87	26.72	30.97	35.70	40.98	46.93
1.67	5.5 %	26.54	30.50	34.88	39.75	45.20	51.33	58.29
1.47	5.2 %	34.39	38.91	43.93	**49.54**	55.86	63.03	71.23
1.27	5.0 %	43.06	48.23	54.02	60.53	67.92	76.37	86.13
1.07	4.7 %	52.66	58.62	65.34	72.95	81.66	91.72	103.47
0.68	4.2 %	75.39	83.48	92.74	103.42	115.91	130.68	148.44

		Delta EBIT-margin						
Beta	WACC	-0.8 pp	-0.5 pp	-0.3 pp	**+0.0 pp**	+0.3 pp	+0.5 pp	+0.8 pp
2.26	6.2 %	-52.12	-29.47	-6.81	15.85	38.50	61.16	83.82
1.87	5.7 %	-44.27	-19.19	5.89	30.97	56.05	81.13	106.21
1.67	5.5 %	-39.74	-13.24	13.26	39.75	66.25	92.75	119.25
1.47	5.2 %	-34.71	-6.62	21.46	**49.54**	77.63	105.71	133.79
1.27	5.0 %	-29.08	0.79	30.66	60.53	90.40	120.27	150.14
1.07	4.7 %	-22.74	9.16	41.06	72.95	104.85	136.74	168.64
0.68	4.2 %	-7.26	29.63	66.53	103.42	140.32	177.21	214.11

- The company's beta value reflects limited liquidity (strategic investors hold more than 50% of the shares)
- The reported net debt was adjusted for non-recourse financing (EUR 418m) and readily marketable inventories (EUR 1,209m)
- We are looking for a divestment gain of EUR 1,200m in FY 2025 in the amount
- Capex spending should normalize from 2026e onwards, as the expansion of the IPP business should be concluded by then.

Company & Products

Transformation from PV trader to renewable energy supplier

FY 2023: No more Goldilocks

BayWa consists of the three operating segments Energy, Agriculture and Building Materials.

BayWa: Structure by operating segments

BayWa

Energy	Agriculture	Building Materíals
Renewable Energies Project planning, services, independent power producer (IPP), energy trade, PV trade, energy solutions	Cefetra Group International trade in products, supply chain management	Building Materials Trading activities for building materials, services, system solutions
Energy Mobility solutiuons, seller of heating oil, fuels and lubricants	Agri Trade & Service Collecting of, trade in agricultural inputs and products, logistics	
	Agricultural Equipment Trade in agricultural machinery, service and repairs	
	Global Produce Trade in fruit, cultivation and marketing of selected vegetable types	

Source: BayWa, Warburg Research

Both Energy and Agriculture performed way ahead of their FY 2021 comparable numbers in FY 2022. This was partly due to ongoing beneficial megatrends and some structural improvements, but also due to the significant market distortions caused by the Russian invasion of Ukraine and the related Western sanctions. Building Materials was the odd one out, as it started to suffer from adverse effects of higher interest rates on the German housing market as well as from significantly higher raw material costs.

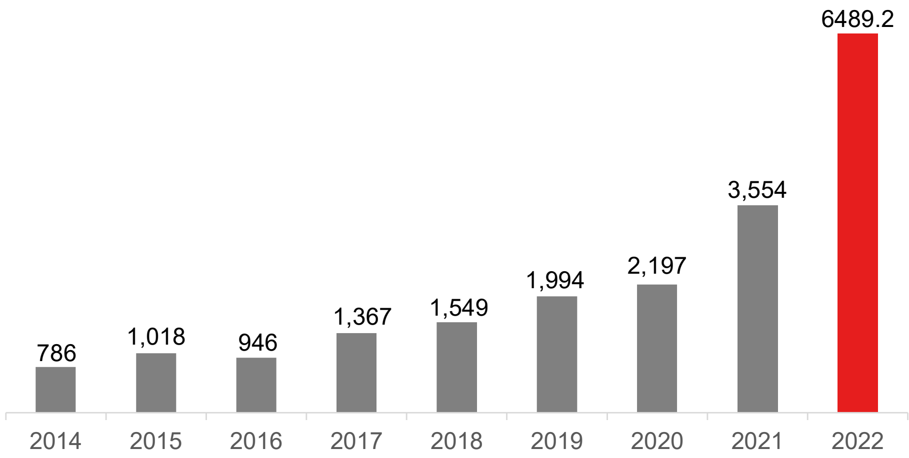
Looking at FY 2023 and beyond, some of the market tailwinds have died down in the meantime and the windfall profits of FY 2022 – especially in the Agricultural division – are unlikely to be repeated. As a consequence of this expected “return-to-mean” development in the majority of BayWa’s seven segments, the FY 2023 EBIT of the group is guided to fall significantly to EUR 320-370m, which corresponds to a -32% yoy decline at the midpoint of the guidance range. Nevertheless, this would still represent the second-highest EBIT in BayWa’s 100-year history. From our point of view, the only segment that is likely to stand out positively in FY 2023e and beyond is the Renewable Energies segment, which is on the verge of a seismic shift in its business model. The upcoming changes promise a positive but much more stable earnings development in the medium term, albeit at a greatly reduced operational risk.

Energy division: Driven by renewable energy activities

Renewable Energies segment: Transformation from solar trader to project developer and electricity provider in full swing

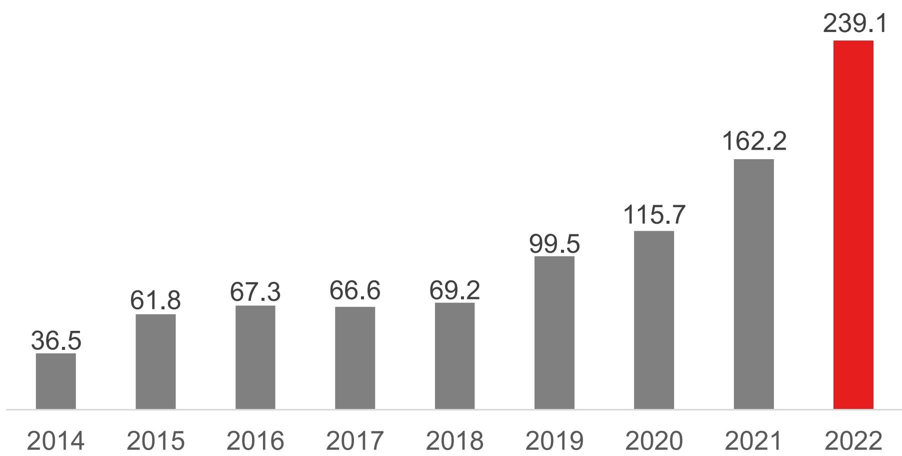
BayWa r.e. AG was founded in 2009, starting out from the then small solar trading business of the Building Materials division. With the help of various small and mid-sized acquisitions as well as significant organic growth, the segment has basically become the main driver for BayWa’s sales and EBIT growth in recent years. This was helped especially by the strong growth of the PV and wind project business as well as the solar trading activities. Given ongoing strong demand for renewable energy production in virtually all parts of the globe, we expect the support from the underlying demand trend to continue in both the short and medium term.

Renewable Energies segment: Steady increase in sales since 2016…



Source: BayWa, Warburg Research

…while EBIT progression accelerated from 2018 onwards (in EUR m)

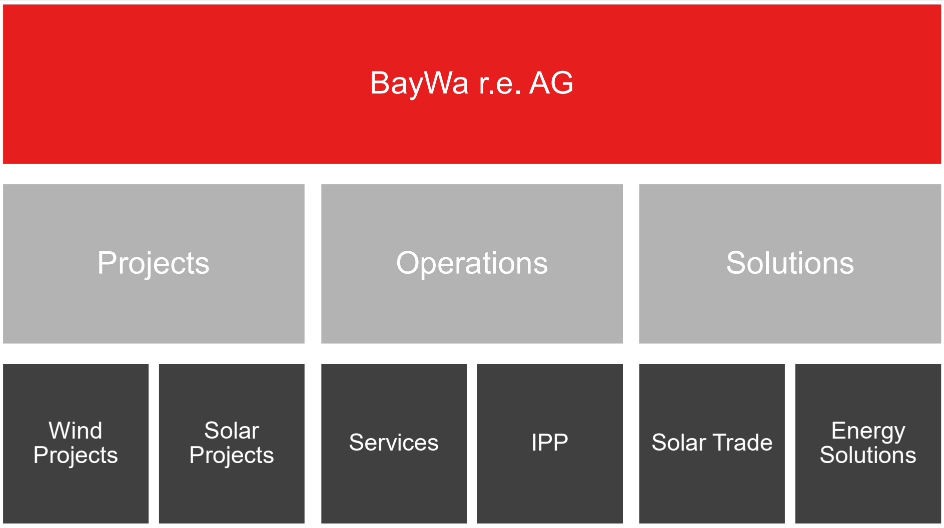


Source: BayWa, Warburg Research

The strong growth of BayWa r.e. also had implications for the BayWa group in terms of increasing capital requirements to support its rapidly expanding asset base. As a result, BayWa started looking for co-investors in BayWa r.e. by late 2019/early 2020. On 19.3.2021, Swiss specialist energy investor EIP Ruby Renewables Invest GmbH contributed EUR 530m to the equity of BayWa r.e.. Following the capital increase, BayWa holds 51% of the BayWa r.e. shares, while EIP Ruby Renewables Invest GmbH holds 49%. BayWa r.e. AG continues to be a fully consolidated subsidiary of BayWa AG.

BayWa r.e. aims to cover essential parts of the renewable energies value chain. To achieve this goal, BayWa r.e. pursues a threefold diversification strategy for its business portfolio: by country, by energy source and by business activity. The business activities are divided into the three areas Projects, Operations and Solutions and are carried out in six business areas (reflected by Business Entities; BEs).

Structure of BayWa r.e.

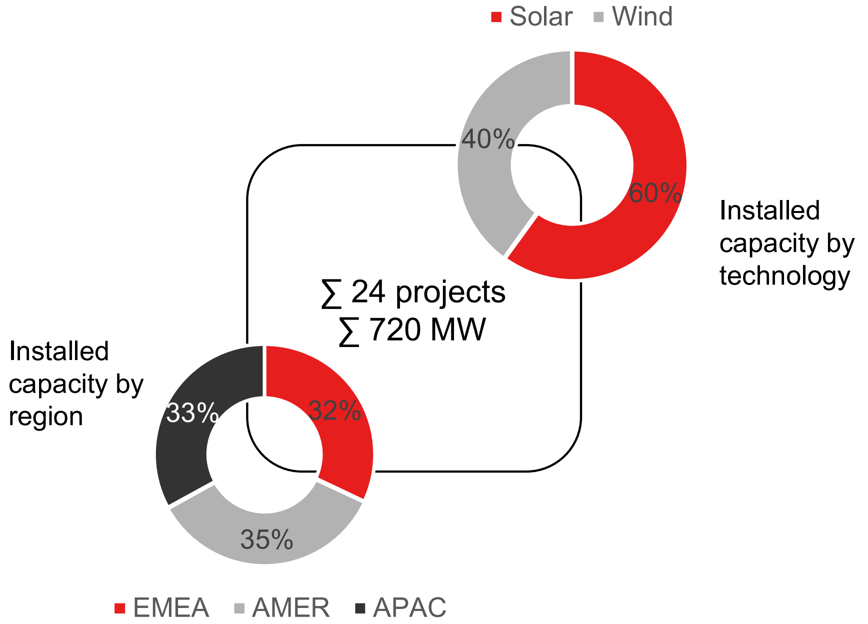


Source: BayWa, Warburg Research

The Projects division deals with the planning and construction of wind and solar energy systems worldwide as well as the sale of ready-to-operate systems. BayWa r.e. expanded its activities to include offshore wind turbines for the first time in FY 2022. The Operations division includes planning and technical services, the supply of consumables, technical and commercial management, plant maintenance, energy trading and the marketing of electricity from its own plants as an Independent Power Producer (IPP). Branches in Europe and Southeast Asia provide international 24-hour service for BayWa r.e. customers. Systems with an installed capacity of around 10.2 GW were serviced worldwide in the service business in FY 2022. In energy trading, which is assigned to the IPP business unit, BayWa r.e. markets electricity and gas from renewable generation. In the Solutions business unit, photovoltaic systems and components are sold and tailor-made energy solutions for the energy supply of commercial and industrial customers are developed. BayWa r.e. has a strong international focus. It is currently active in Europe, North America, the Asia-Pacific region and Africa – in a total of 29 countries. To remain at the cutting edge of renewable energy developments, BayWa r.e. is actively piloting and developing projects featuring innovative technologies such as floating photovoltaics, agrivoltaics (Agri-PV), offshore wind, battery energy storage and green hydrogen.

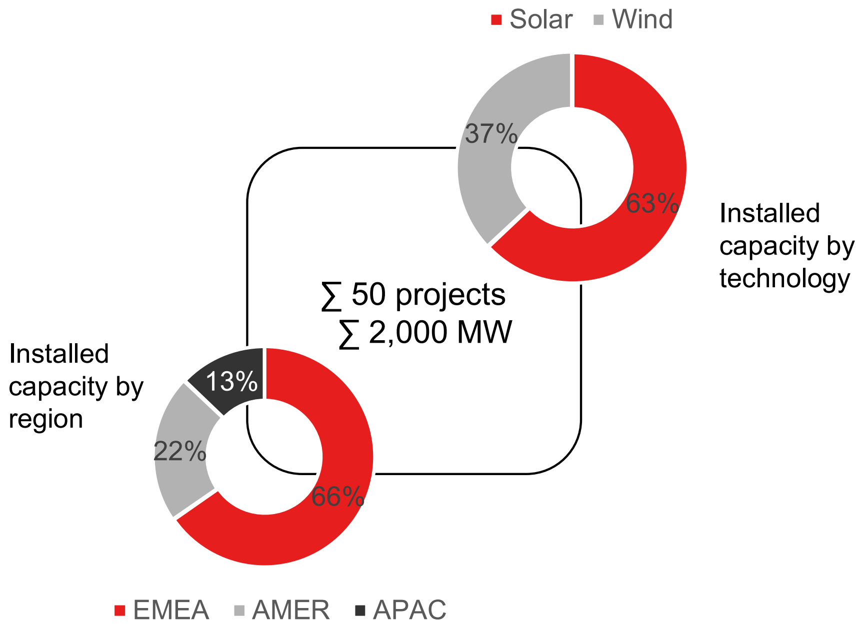
BayWa r.e.'s mid-term targets include scaling, internationalisation and optimisation of its service business. In addition, BayWa r.e. aims to grow its IPP business and become a significant supplier of industrial green electricity and integrated energy solutions. To accomplish this, BayWa r.e. plans to increase its marketing of electricity from owned, subsidy-free solar and wind parks to industrial customers by means of long-term supply contracts (PPAs) and the combination of renewable generation systems with efficient energy storage and/or charging solutions in the field of electromobility. As a consequence, the project business is to be expanded to an annual volume of 2.5 GW_{peak} in the medium term (FY 2022: 0.8 GW_{peak}). In addition, the expansion of the IPP portfolio of own solar and wind parks to a capacity of 3.0 GW_{peak} is planned until 2025. This should result in the generation of stable annual cash flows. The worldwide solar trading business will be sold to a new owner, allowing BayWa r.e. to invest the proceeds in the growth of its future core businesses. Furthermore, the company's realignment is set to reduce complexity and therefore enable the group to achieve efficiency gains.

BayWa r.e.: IPP portfolio by mid-2022



Source: BayWa r.e., Warburg Research

BayWa r.e.: Planned IPP portfolio by end of FY 2024

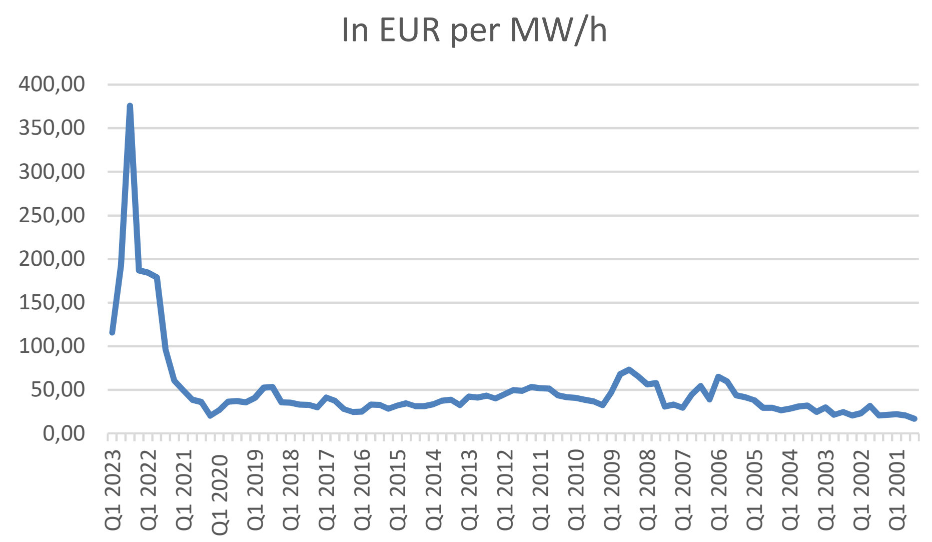


Source: BayWa r.e., Warburg Research

Developments in the renewable energy market in 2022, 2023e and beyond

The ongoing Russian attack on Ukraine since 24.2.2022 and the subsequent political instrumentalisation of gas exports from Russia to Europe led to a destabilisation of the European energy markets. European natural gas prices averaged EUR 122 per MWh (MWh) in 2022 at the Title Transfer Facility (TTF, a virtual trading point in the Netherlands). For comparison: In the periods 2015-2020, the average price was EUR 16 per MWh. As a result, electricity prices in many European states rose to as much as EUR 400-550 per MWh by August 2022.

Electricity costs still at elevated level, but significantly below the peak of summer 2022



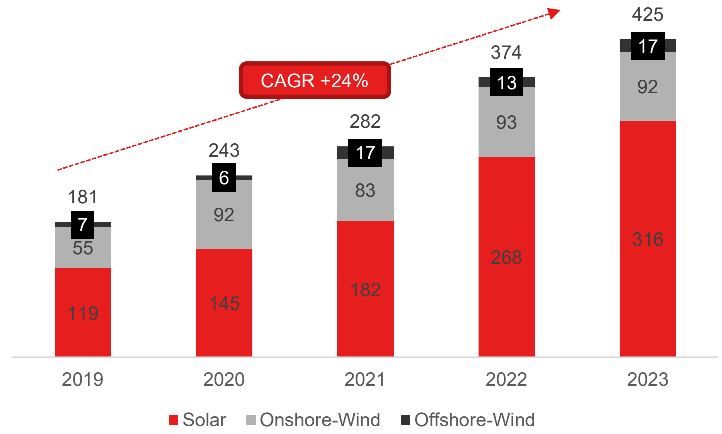
Source: EEX, Warburg Research

This led to a new wave of regulation, including the revenue cap introduced at EU level to collect “surplus profits” from “inframarginal generators” such as wind farms and solar parks. The varying interpretations and measures taken by the individual EU member states to implement the cap led to uncertainty among investors. To alleviate the situation, the regulatory agencies of the EU and its member states, as well as the UK, have started to redefine the regulatory framework for their respective markets. Despite these challenges in EU markets, an estimated 375 GW_{peak} of photovoltaic (PV) systems and wind turbines were installed globally in 2022, +33% yoy. Thereof, 269 GW_{peak} was in PV (+47% yoy) and 106 GW_{peak} was in wind installations (+6% yoy).

The easing of pandemic-related restrictions in China, Europe’s increased determination to accelerate the expansion of renewable energies as part of the REPowerEU programme and the introduction of the Inflation Reduction Act in the US are expected to push PV capacity expansion to over 300 GW in 2023 (+12% yoy). The wind energy market is expected to continue to grow, albeit at a slower pace. Expectations for newly installed capacities are for ca. 109 GW in 2023 (+3% yoy). Given a multitude of political measures stimulating demand for renewable energies, annual global installations are anticipated to exceed 500 GW between now and 2025. Additional growth might be possible if political decision-makers and the industry succeed in overcoming challenges with regard to terms of approvals and supply-chain bottlenecks.

Global capacity installation – forecast 2023

in GW

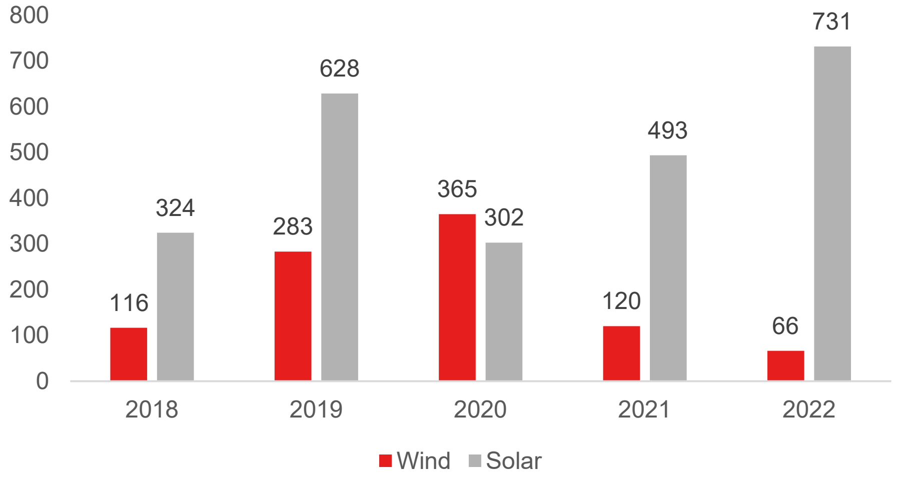


Source: Warburg Research

Renewables Energies segment in FY 2022

The project business generated sales of a combined output of 797.0 MW_{peak} in FY 2022, (30% yoy) with the share of turnkey energy plants at roughly 97%. In 2021, projects with a combined output of 612.8 MW_{peak} were sold, with turnkey energy plants accounting for 74%. To put this in perspective, the 2020 figures were 667.0 MW and 94%. The numbers can fluctuate quite a bit in any given year, depending on the project pipeline and newly acquired projects. Nevertheless, the growth trajectory has remained positive in the past and is expected to continue to do so. Alongside the construction of turnkey wind farms and solar parks, total output also includes the sale of ready-to-build project rights and general contracting services such as planning, procurement and construction services.

BayWa r.e.: Volatile, but growing



Source: Warburg Research

The project business also comes with project-specific risks: During the construction of a 95 MW_{peak} wind farm in the US in FY 2022, site-related uncertainties led to significant delays and thus cost increases. As a consequence, the book value of the wind farm under construction was subject to a write-down (WRe: EUR 50m).

On the flip side, BayWa sold its remaining biogas activities, which are bundled in Bioenergy GmbH, to the Green Investment Group, a part of Macquarie Asset Management

(Australia), at a profit of EUR 36m by the end of Q3 2022. Bioenergy GmbH generated sales of EUR 4.9m and a net loss of EUR -1.2m in FY 2021.

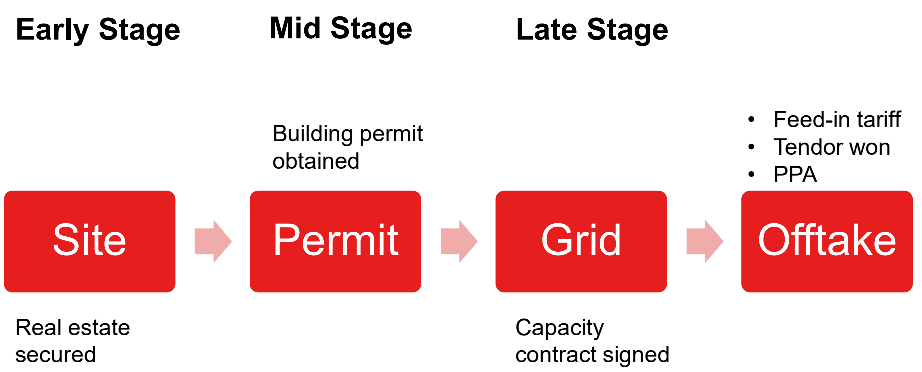
The IPP (Independent Power Producer) business entity operates selected solar parks and wind farms. Energy trading activities are also part of the IPP business entity. However, the energy trading business was terminated by the end of 2022 to reduce underlying risks. In 2022, the IPP portfolio was increased by seven parks. As a result, 26 wind farms and solar parks in Europe, North America and Australia with a total output of roughly 0.8 GW_{peak} (+14.8% yoy) were part of the operating portfolio at the end of the year. Both the portfolio and the energy trading activities benefited from the high electricity prices. However, the increased volatility of energy prices also led to higher procurement prices in energy trading.

The Services business entity recorded a rise of 5.2% in the total plant capacity it manages worldwide to more than 10.2 GW in 2022. This growth was complemented by PV repowering sales in Germany, Italy and France. However, supply-chain-related delays in the commissioning of renewable energy systems and delays in the start dates of repowering projects held the Services business back in 2022.

Outlook on 2023e and beyond

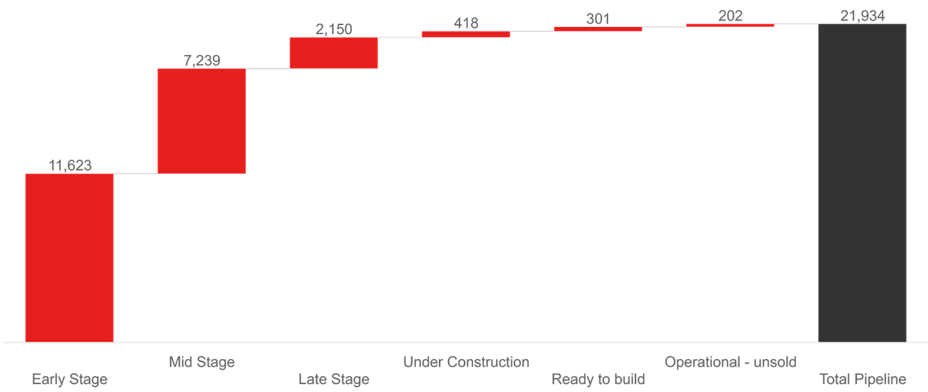
While the solar trading business is earmarked for divestment in FY 2024, BayWa plans to sign off on the sale by late 2023 at the earliest. The prospective growth in 2023 will therefore be fully reflected in the results of the Renewable Energies segment in FY 2023 and – at least according to WRe – also in FY 2024 before it is removed from the scope of consolidation in early FY 2025. The IPP business is slated for significant growth as installed capacity is planned to rise from 0.8 GW_{peak} to 1.3 GW_{peak} (+62.5% yoy) in FY 2023. On top of that, BayWa plans to double project sales from 0.8 GW_{peak} in FY 2022 to 1.6 GW_{peak} in the current fiscal year. Given BayWa's project pipeline of 24 GW_{peak}, which is spread across various stages of completion, we deem this to be an ambitious but feasible goal. However, the Renewable Energies segment's sales and EBIT in FY 2023 will have to digest the absence of the terminated energy trading business, which we assume generated 38% of the segment sales and ca. 20% of its EBIT in FY 2022 (EUR 2.5bn and EUR 50m respectively). As a consequence, BayWa expects EBIT in the Renewable Energies segment to decline slightly.

BayWa r.e.: Parameters used as criteria to categorise the maturity of a project



Source: BayWa r.e., Warburg Research

BayWa r.e.: Project development pipeline snapshot in MW as of April 2022; total pipeline was 24 GW by year-end 2022



Source: BayWa r.e., Warburg Research

Impact of the planned divestment of the solar trading business in FY 2024

With BayWa's decision on 1.3.2023 to divest its booming Solar Trading business, BayWa r.e. is set to focus on its international PV and wind project business as well as the IPP business. This step will affect ca 1,400 of the ca. 3,800 employees in the Renewable Energies segment in FY 2022. In FY 2022, the solar trading business generated ca EUR 2.7bn in sales (42% of the Renewable Energies segment sales) and an EBIT of ca. EUR 150m (ca EUR 165m of EBITDA), which was ca. 63% of the segment EBIT. BayWa is aiming for a rather broad range of valuation multiples, which management has quantified as 10-20x FY 2022 EBIT. At the midpoint (15x), this would equate to a price tag of EUR 2.25bn, which might translate into a lump sum of EUR 2bn after taxes (WRe). The effect of the transaction on BayWa is likely to be highly positive as it would enable:

- a reduction in the company's leverage,
- an acceleration/enablement of the growth of the IPP and the project business.

Reducing the leverage of BayWa AG

Funds tied up in the working capital of the solar trading business were ca. EUR 450m in FY 2022 and are likely to expand to EUR 600m by the end of FY 2023 due to the continued significant growth of the operations. BayWa r.e. is currently financed, on the one hand, through the parent company BayWa AG and its subsidiary BayWa Finanzservice GmbH, namely through a passed-on long-term loan from the "Green Bond" in the amount of EUR 500m, an additional long-term loan in the amount of EUR 200m and short-term funds of EUR 41m in FY 2021 (FY 2022 numbers are not yet disclosed). The "Green Bond" was issued in June 2019 and has a coupon of 3 1/8%. It is due on 17.6.2024. In addition, BayWa r.e. is financed via an externally subscribed revolving credit line as well as the external financing of its respective project companies. The expected cash inflow from the divestment in FY 2025 would enable BayWa r.e. to repay the ca. EUR 750m in internal financing to the parent company.

A cash injection in the IPP business

BayWa plans to increase its IPP business from 0.8 GW_{peak} in FY 2022 to 1.3 GW_{peak} in FY 2023, 2.0 GW_{peak} in FY 2024 and 3.0 GW_{peak} in FY 2025, which represents a whopping 275% increase within the next three years. Depending on the mix of PV and wind energy power plants, and also depending on their regional location, the additional 2.2GW_{peak} might come at an investment of EUR 2.2-2.7bn. Numbers may vary depending on the region where the respective installations are built (Europe, APAC, Americas) and which type (PV or wind) is built. Typically, IPP plants with long-term PPA contracts are leveraged in the vicinity of 80-90% via non-recourse debt. This would put the required equity portion in a range of EUR 220m-540m.

Acceleration of growth in the project business

The project business is earmarked to grow from 0.8 GW_{peak} in FY 2022 to a size of 2.5 GW_{peak} in the medium term. 2.5 GW_{peak}/year is roughly 10% of the current pipeline and thus looks readily achievable. However, the bottleneck so far has most likely been the availability of capital required to fund the business's expansion. An increase in realised projects of 2.5 GW_{peak}/year would result in a significant increase in working capital, as capital turnover could only be increased on the back of significantly shorter periods for the construction and divestment of projects – a scenario we consider rather unlikely. The working capital requirements of the project business are therefore likely to increase significantly on the back of the expanding business. BayWa r.e. does not communicate WC by business activity. However, the segment's WC was ca. EUR 1.7bn in FY 2021, up from EUR 1.1bn in FY 2020 (+55% yoy). The company has not yet disclosed WC numbers for FY 2022.

That being said, we applaud BayWa's planned exit from the solar trading business. Capital requirements to grow all three key activities (project business, IPP business and solar trading) in line with its respective markets would have swamped the already highly leveraged company. The planned divestment releases working capital, which can be invested in BayWa r.e.'s remaining core activities and is set to generate a huge divestment gain. This significantly reduces BayWa r.e.'s complexity. On top of that, the inherent risk of the business model is reduced as volatile trading cash flows are converted into stable cash flows from energy sales in the IPP business on the basis of long-term contracts.

Energy business segment: Growth in sustainable fuels needs to compensate for shrinking fossil fuel business

The Energy segment benefitted in FY 2022 from the high uncertainty in the European energy markets caused by Russia's invasion of Ukraine. Private and commercial customers stocked up for the upcoming 2022/23 heating season despite high prices. BayWa was able to meet the high demand (particularly for wood pellets) thanks to well-filled inventories. In order to meet future demand for wood pellets, BayWa expanded its storage and distribution facilities. BayWa currently maintains 16 pellet warehouses with a total capacity of 73,000 tonnes of wood pellets. The company also strengthened its logistics capacities with the acquisition of a haulage company in January 2022. In addition, BayWa announced a long-term supply contract for its pellet plant in Heidegrund, Germany, in Q3 2022. However, skyrocketing prices led to demand destruction in FY 2022, resulting in a yoy decline of wood pellet volumes by -8.6%. In the heating oil trade, BayWa recorded a -2.1% decline in volumes due to lower Austrian demand following the ban on oil-powered heating systems in new buildings (from 2020) and existing buildings (from 2021) by the Austrian government. In contrast, the fuel business recorded higher demand, especially prior to the expiry of the temporary fuel tax cut on 31.8.2022. Thus, volumes were up 7.1% yoy. In April 2022, the new subsidiary BayWa Power Liquids GmbH commenced operations. It is a solutions provider for eco-friendly heavy-vehicle mobility and operates BayWa's network of LNG filling stations, which currently has 11 locations. In lubricants, the scarce availability of base oils as a raw material led to higher product prices for motor, hydraulic and gear oils. At the same time, higher energy costs led to temporary AdBlue production stops, especially in the fourth quarter of 2022. Overall, volumes of lubricants and operating resources fell by -9.3% yoy. However, overall volume declines in these product groups were more than offset by significantly higher prices, pushing both sales (+57.1% to EUR 3,344m) and EBIT (+208% to EUR 53.6m) to record levels.

For FY 2023e, the crisis-driven price volatility recorded in 2022 is unlikely to reoccur, thus resulting in lower trading margins for wood pellets, heating oil and – depending on the availability of base oils – most likely also for lubricants. As a consequence of the absence of what we see as windfall profits, EBIT in the Energy business segment is set to decline sharply. Mid-term business development is likely to be marked by declining volumes of crude oil-based products (especially heating oil), while the LNG filling station network for heavy-duty vehicles and the build-up of an electromobility charging structure will have an increasingly positive impact.

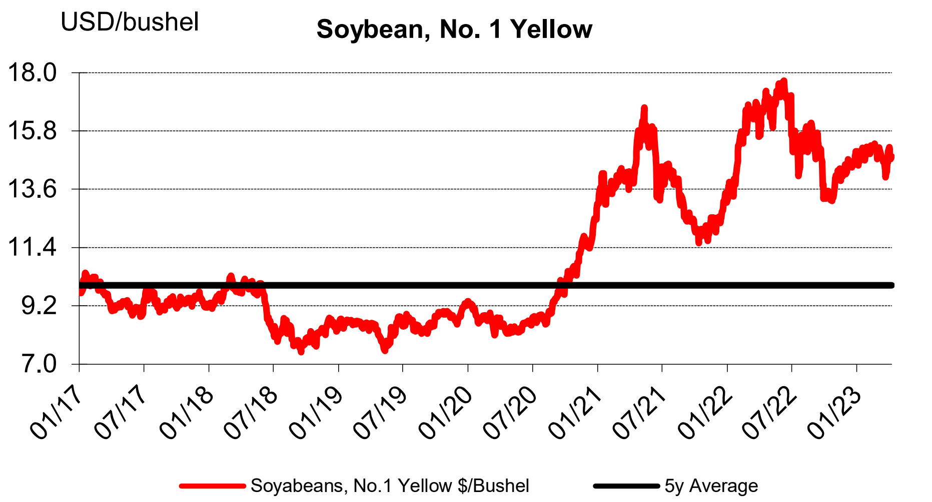
Agriculture division to return to more normal earnings and sales

Cefetra Group segment: Windfall profits of FY 2022 unlikely to reoccur

The Cefetra Group segment acts as a supply-chain manager for agricultural products – from purchasing to logistics to distribution. The main customer groups are grain and oil mills, producers of starch and feedstuff, malt houses and breweries, as well as manufacturers of baked goods, biofuel and spirits.

In 2022, the Cefetra Group's trading environment was shaped by supply insecurity. Lower grain availability as a result of the Russian war against Ukraine and heat waves in parts of Europe and the US led to extreme price increases for grains in some cases, especially in H1 2022. Once Ukraine and Russia had agreed on a grain export deal, prices began to decline from June 2022 onwards. The Cefetra Group was able to benefit substantially from the respective trade opportunities. However, volumes declined by ca. -13% to 16.2m tons, mostly due to weaker feedstuff demand (as a consequence of demand destruction due to high price levels) and limited export volumes from Ukraine. In addition, trade activities were negatively impacted by higher logistics costs. Cefetra Group acquired two granaries in Scotland for around EUR 8.3m in FY 2022, allowing Cefetra Group to expand its customer portfolio and become a key supplier for Scottish whisky producers. Expansion and product diversification of the portfolio in the higher-margin specialties business have evolved into the primary drivers of earnings at Cefetra Group in recent years. Driven by highly favourable markets, sales increased by 22.3% to EUR 6,111m in FY 2022, while EBIT increased by 53.4% to EUR 59.5m.

Soybean price currently ca. 50% ahead of the 5y average price level



Source: Refinitiv Datastream, Warburg Research

Given that soft commodity prices have come down significantly from their peak levels in mid-2022 and market volatility has also decreased significantly since then, we expect Cefetra to return to sales and EBIT levels that are only slightly ahead of the average of the 2017-2021 periods. In the medium term, growth is likely to come predominantly from the specialties business, while the feedstuff business is likely to contract as a consequence of lower pig herds in Central Europe.

Agri Trade & Service segment: Prices are off their peaks but still at elevated levels

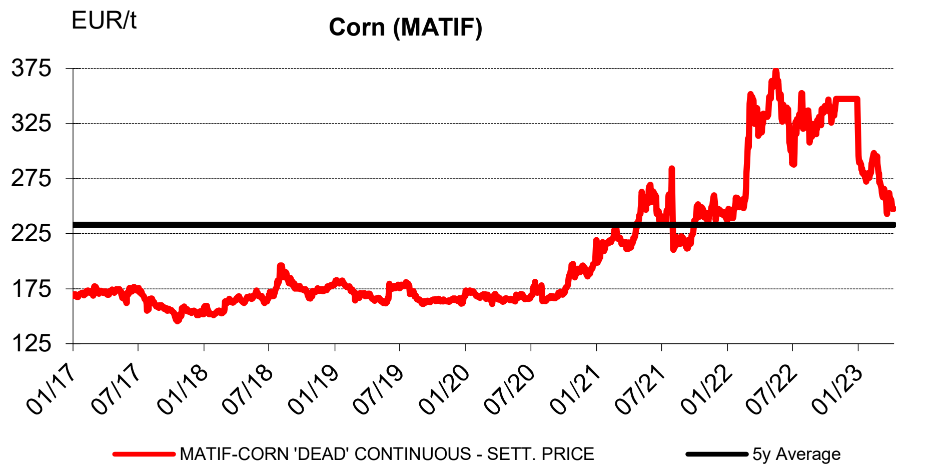
The Agri Trade & Service Segment comprises the agricultural input business, the collecting of agricultural products and grain and oilseed trade activities, primarily in

Germany and Austria. The segment benefitted significantly from rising prices for agricultural products and agricultural inputs, as it was able to market its stored volumes at attractive margins. Product availability was a major success factor for the segment. As supply chains had already been strained before the war in Ukraine, the segment operated on the basis of limited supply and was positioned accordingly. In the agricultural input business, the segment's fertiliser volumes increased by 1.1% yoy to 2.3m tons in FY 2022. Agricultural customers' concerns about possible supply bottlenecks and further increasing prices led to some early stockpiling for the fertiliser season 2023. Pre-buying and high fertiliser prices led to inflated trade margins. Similar to the fertiliser market, customers also had to deal with higher prices and supply issues for crop protection products. Due to its extensive supplier network, the segment was able to expand its market share. In the seed business, the expansion of the product portfolio to include high-margin exclusive varieties (oleaginous fruits) and private brands had a positive effect. The segment's seed volumes increased by 1.7% yoy. In terms of feedstuff, the segment managed to keep its volume on a par with the previous year. In trade involving agricultural products (grain and oilseed), the trading volume was mostly flat at 8.2m tons.

Harvest collection figures for the grain year 2022/23 were roughly on a par with 2021/22 at segment level. Rising prices led to above-average margins in product trading. As a result, the contracts concluded in 2021 were reflected in earnings in FY 2022 and made a major contribution to the positive performance. Sales in the Agri Trade & Service Segment were up by 37.6% to EUR 5,751m. EBIT increased sharply by 751% to EUR 104.7m

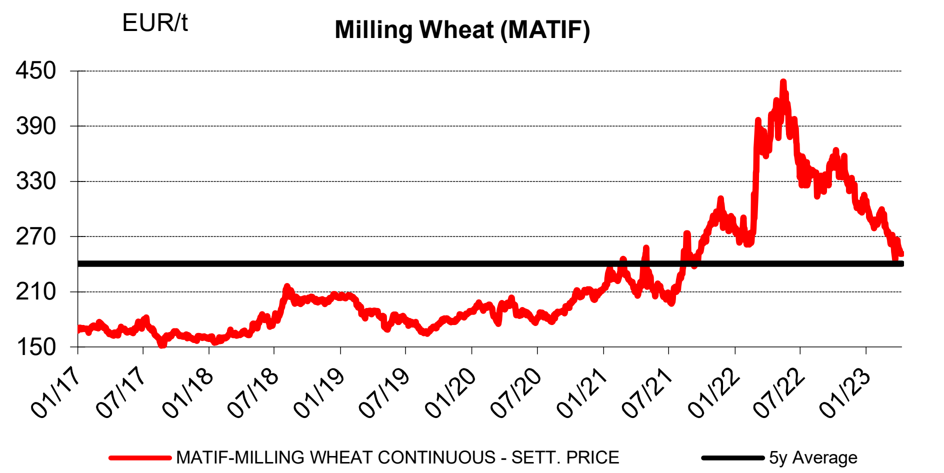
Similar to the development of the Cefetra Group, windfall profits from FY 2022 are unlikely to reoccur in FY 2023e. However, both input (fertiliser, pesticides, seeds) and grain prices continue to hover above their mid-term average levels before FY 2022. As a consequence, we expect EBIT to come down substantially, but to remain well above the average level of the 2017-2021 periods.

European corn prices almost back to their 5-year average…



Source: Refinitiv Datastream, Warburg Research

…and European wheat prices mirroring the development



Source: Refinitiv Datastream, Warburg Research

Agricultural Equipment segment: State subsidies set to expire by the end of FY 2023

The Agricultural Equipment segment sells and services new and used agricultural equipment, e.g. harvesters, tractors and barn equipment. It has the exclusive distribution rights for the brands Claas and Fendt in Germany. The Agricultural Equipment segment sold 5,025 new machines in FY 2022, an increase of 1.0% yoy. Price increases for agricultural machinery announced by manufacturers are likely to have supported demand. In addition, farmers' ongoing willingness to invest was helped by favourable farm income development and the availability of new machinery thanks to manufacturers successively tackling the production backlog caused by component shortages and the Covid lockdown in 2021. On top of that, the investment programme for agriculture "Investitionsprogramm Landwirtschaft" (also known as "Bauernmilliarde") had a supportive effect on demand. At 1,724 tractors, sales of used equipment were down by -18.6% yoy. The service business saw brisk demand for servicing and spare parts in the financial year 2022. The Agricultural Equipment segment generated sales of EUR 2,077m in FY 2022. EBIT increased to EUR 70.2m, +44.4% yoy.

While the Agricultural Equipment segment started off with a significantly higher order backlog than in the previous year, the situation is likely to become more challenging in the second half of 2023. The, Agritechnica fair will be held in November 2023 for the first time since the pandemic. Thus, potential buyers might wait until after the fair before deciding on purchases. Recent price increases by manufacturers might lead to some demand destruction. In the service business, the increasing shortage of skilled workers and the rise in costs for energy, IT, insurance and personnel are likely to have a negative impact. As a consequence of lower demand and higher costs, we expect the segment's EBIT to decline. Demand is set to decline past 2023 as the "Investitionsprogramm Landwirtschaft" is scheduled to be concluded at the end of this year, which is likely to lead to a demand drop in 2024.

Global Produce segment: Held back by sluggish demand

The Global Produce segment is one of the leading single sellers of dessert pome fruit to German wholesalers and retailers in the food industry and a supplier of organic pome fruit. It also provides services for fruit customers in Germany and abroad as a marketer. Global Produce also offers a broad product range from pome fruit to exotic fruits. It is active in the international trade of fresh products through its New Zealand subsidiary T&G Global, which maintains international trade relationships in the Americas, Asia, Australia and Europe. The segment is in the position to provide trading partners with fresh agricultural products all year round. Its majority stake in the Dutch company TFC Holland B.V.

complements the portfolio with exotic fruit specialists, particularly in the market for ready-to-eat products.

In FY 2022, the segment was negatively influenced by a noticeable decline in consumer spending on fruit and vegetables as a consequence of an increase in the cost of living. At the same time, the availability of these goods was high due to stocks from the previous year's harvest. This led to price pressure while energy and logistics costs were rising, which resulted in severe margin pressure. On top of that, T&G Global experienced unfavourable growing conditions due to the La Niña weather pattern, as well as a pandemic-related shortage of harvest workers. This resulted in lower production volumes.

The higher costs of living fuelled a trend towards substituting premium fruit varieties with cheaper regional products. This trend hit the marketing of exotic fruits and hence affected TFC Holland B.V. negatively.

As a consequence, trade margins in the Global Produce segment suffered. This negative effect could not be offset by an increase in apple marketing volumes (+8% yoy). The Global Produce segment generated sales of EUR 921m in FY 2022, down -4.1% yoy. EBIT declined by -50.5% to EUR 21.1m.

The segment's marketing volume of pome fruit, soft and stone fruit, tropical fruit and vegetable fruit is expected to decline year-on-year in 2023. Sales are likely to decline due to the negative impact of a tropical cyclone in New Zealand, which negatively impacted apple orchards, and the sale of the climate-controlled greenhouse in Al Ain (UAE) in July 2022. Demand in Europe is expected to remain sluggish in FY 2023, while costs (especially energy) remain at elevated levels. In the tropical fruit business, BayWa expects the relocation of its Dutch subsidiary TFC Holland B.V. (TFC) in January 2023 to enhance product quality thanks to the deployment of state-of-the-art storage and ripening technologies. Moreover, a (not yet quantified) accounting profit is expected from the sale of the old site. As a consequence, we are looking for a decline in the segment's EBIT in FY 2023. In the medium term, demand for tropical fruits and vegetables is likely to return, bringing margins back to pre-Covid levels.

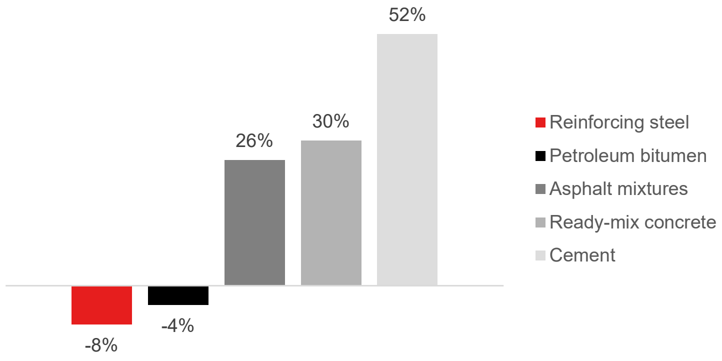
Buildings Materials division: Adverse effects from interest rate hikes are spoiling the party

The Building Materials segment primarily comprises building materials trading activities in southern and eastern Germany as well as Austria. The segment covers the entire range of products and solutions for building materials from civil engineering, structural engineering, construction, renovation, modernisation, gardening and landscaping to solution packages for energy efficiency and healthy building. The BayWa Group is one of Germany's market leaders in the building materials trade, with a total of 125 sites and also ranks among the leading suppliers in Austria with 30 locations. BayWa works with developers on the implementation of projects in Germany. To this end, it enters into joint ventures with construction companies or property developers as a partner and primarily acts as a provider of concepts.

The German construction sector faced a difficult environment in 2022. A positive trend in the industry's indicators during Q1 was followed by a pronounced downturn from April onwards. The negative factors were manifold: International supply-chain problems, a significant hike in already high building materials costs, rising inflation and the upturn in interest rates had an increasingly negative effect.

Building Materials: Huge cost inflation in FY 2022

in EUR m



Source: Warburg Research

Overall, the German construction sector saw a nominal rise in revenues of around 12% yoy. Adjusted for price increases, the number is -5%. Although the supply-chain situation eased and most producer prices for building materials fell in the second half of the year, producer prices for a large number of building materials were still above the previous year's level by the end of 2022. As a consequence, residential construction saw a decline of ca. -4% in real terms in 2022. After adjustments for price changes, commercial construction saw a decline in revenues of around -5% in 2022. Revenues from public-sector construction also decreased in 2022 due to higher building costs, falling by 6% in real terms. Planned investments came up against rocketing construction prices, meaning that many projects were not realised. The German government failed to achieve its investment targets in areas such as infrastructure.

The segment's operational development mirrored the market development. The Building Materials segment's sales increased by 12.6% to EUR 2,347m in FY 2022, mainly due to price effects. EBIT fell slightly year-on-year to EUR 70.4m, primarily as a result of lower volumes of building materials and higher investments in the expansion of the segment's private brands.

Although the German construction sector began 2023 with a historically high order backlog, its revenues are expected to decline by -6% to -7% in real terms due to persistently high inflation and the increased cost of construction. As the year progresses, the capacities built up in recent years will no longer be utilised, which should lead to competitive pressure among companies. Demand for renovation work and the return of special depreciation arrangements for the construction of rental apartments should have a positive effect. However, this is unlikely to compensate for the expected fall in investment in new builds. In the commercial sector, revenues are predicted to decrease by between -4% and -6% in real terms in 2023. Revenues in the public sector are expected to fall by between -4.5% and -5% in real terms in 2023.

FY 2023 EBIT in the Building Materials segment is expected to be significantly down yoy. Key reasons are high building material prices as well as a declining willingness to buy property as a consequence of high interest rates. Moreover, inflation-related adjustments to collective bargaining agreements will have to be made, which will lead to higher costs in the segment. Given that high interest rates and structurally higher energy costs are here to stay in Europe for the next few years, EBIT of the segment is likely to remain depressed beyond 2023.

DCF model

Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2034e	2035e	
Sales	22,775	23,429	20,206	20,812	21,436	22,079	22,741	23,424	24,126	24,850	25,596	26,364	26,627	
Sales change	*-15.8 %*	*2.9 %*	*-13.8 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*3.0 %*	*1.0 %*	*1.0 %*
EBIT	328	405	294	375	386	396	405	415	425	436	446	457	461	
EBIT-margin	*1.4 %*	*1.7 %*	*1.5 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.8 %*	*1.7 %*	*1.7 %*	*1.7 %*	
Tax rate (EBT)	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	
NOPAT	233	287	208	266	274	281	288	295	302	309	317	324	328	
Depreciation	379	399	421	455	468	482	497	512	527	543	559	576	582	
in % of Sales	*1.7 %*	*1.7 %*	*2.1 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	*2.2 %*	
Changes in provisions	-44	7	-35	14	15	15	16	16	17	17	18	18	6	
Change in Liquidity from														
- Working Capital	-301	85	-416	124	127	131	135	139	143	148	152	156	54	
- Capex	790	1,000	1,300	312	317	322	332	342	352	363	374	385	389	
Capex in % of Sales	*3.5 %*	*4.3 %*	*6.4 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	
- Other	0	0	-1,200	0	0	0	0	0	0	0	0	0	0	
Free Cash Flow (WACC Model)	79	-392	910	300	313	325	334	342	350	359	368	377	473	282
PV of FCF	76	-360	794	249	247	244	237	231	225	220	214	208	248	3,506
share of PVs	**8.06 %**			**36.65 %**										**55.29 %**

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	77.00 %	Financial Strength	2.00
Cost of debt (after tax)	3.6 %	Liquidity (share)	1.75
Market return	8.25 %	Cyclicality	1.30
Risk free rate	2.75 %	Transparency	1.30
		Others	1.00
WACC	**5.23 %**	**Beta**	**1.47**

Valuation (m)

Present values 2035e	2,834		
Terminal Value	3,506		
Financial liabilities	3,652		
Pension liabilities	552		
Hybrid capital	0		
Minority interest	909		
Market val. of investments	279		
Liquidity	223	No. of shares (m)	34.9
Equity Value	**1,728**	**Value per share (EUR)**	**49.54**

Sensitivity Value per Share (EUR)

		Terminal Growth						
Beta	WACC	0.25 %	0.50 %	0.75 %	**1.00 %**	1.25 %	1.50 %	1.75 %
2.26	6.2 %	6.80	9.55	12.56	15.85	19.47	23.48	27.93
1.87	5.7 %	19.38	22.87	26.72	30.97	35.70	40.98	46.93
1.67	5.5 %	26.54	30.50	34.88	39.75	45.20	51.33	58.29
1.47	5.2 %	34.39	38.91	43.93	**49.54**	55.86	63.03	71.23
1.27	5.0 %	43.06	48.23	54.02	60.53	67.92	76.37	86.13
1.07	4.7 %	52.66	58.62	65.34	72.95	81.66	91.72	103.47
0.68	4.2 %	75.39	83.48	92.74	103.42	115.91	130.68	148.44

		Delta EBIT-margin						
Beta	WACC	-0.8 pp	-0.5 pp	-0.3 pp	**+0.0 pp**	+0.3 pp	+0.5 pp	+0.8 pp
2.26	6.2 %	-52.12	-29.47	-6.81	15.85	38.50	61.16	83.82
1.87	5.7 %	-44.27	-19.19	5.89	30.97	56.05	81.13	106.21
1.67	5.5 %	-39.74	-13.24	13.26	39.75	66.25	92.75	119.25
1.47	5.2 %	-34.71	-6.62	21.46	**49.54**	77.63	105.71	133.79
1.27	5.0 %	-29.08	0.79	30.66	60.53	90.40	120.27	150.14
1.07	4.7 %	-22.74	9.16	41.06	72.95	104.85	136.74	168.64
0.68	4.2 %	-7.26	29.63	66.53	103.42	140.32	177.21	214.11

- The company's beta value reflects limited liquidity (strategic investors hold more than 50% of the shares)
- The reported net debt was adjusted for non-recourse financing (EUR 418m) and readily marketable inventories (EUR 1,209m)
- We are looking for a divestment gain of EUR 1,200m in FY 2025 in the amount
- Capex spending should normalize from 2026e onwards, as the expansion of the IPP business should be concluded by then.

Free Cash Flow Value Potential

Warburg Research's valuation tool "FCF Value Potential" reflects the ability of the company to generate sustainable free cash flows. It is based on the "FCF potential" - a FCF "ex growth" figure - which assumes unchanged working capital and pure maintenance capex. A value indication is derived via the perpetuity of a given year's "FCF potential" with consideration of the weighted costs of capital. The fluctuating value indications over time add a timing element to the DCF model (our preferred valuation tool).

in EUR m	2019	2020	2021	2022	2023e	2024e	2025e
Net Income before minorities	65	61	129	240	98	131	35
+ Depreciation + Amortisation	215	253	286	355	379	399	421
- Net Interest Income	-109	-104	-106	-185	-240	-270	-294
- Maintenance Capex	204	216	215	231	253	300	351
+ Other	0	0	0	0	0	0	0
= Free Cash Flow Potential	**184**	**203**	**306**	**548**	**464**	**500**	**399**
FCF Potential Yield (on market EV)	3.1 %	3.5 %	4.5 %	6.8 %	5.6 %	5.6 %	4.7 %
WACC	5.23 %	5.23 %	5.23 %	5.23 %	5.23 %	5.23 %	5.23 %
= Enterprise Value (EV)	**5,956**	**5,862**	**6,752**	**8,070**	**8,238**	**8,981**	**8,512**
= Fair Enterprise Value	**3,529**	**3,879**	**5,854**	**10,478**	**8,877**	**9,569**	**7,643**
- Net Debt (Cash)	5,056	5,056	5,056	5,056	5,424	6,151	5,709
- Pension Liabilities	552	552	552	552	508	516	480
- Other	0	0	0	0	0	0	0
- Market value of minorities	909	909	909	909	909	909	909
+ Market value of investments	279	279	279	279	279	279	279
= Fair Market Capitalisation	**n.a.**	**n.a.**	**n.a.**	**4,239**	**2,314**	**2,271**	**823**
Number of shares, average	35	35	36	36	36	36	37
= Fair value per share (EUR)	**n.a.**	**n.a.**	**n.a.**	**118.21**	**64.13**	**62.56**	**22.53**
premium (-) / discount (+) in %					68.6 %	64.4 %	-40.8 %

Sensitivity Fair value per Share (EUR)

	8.23 %	n.a.	n.a.	n.a.	11.98	n.a.	n.a.	n.a.
	7.23 %	n.a.	n.a.	n.a.	38.39	n.a.	n.a.	n.a.
	6.23 %	n.a.	n.a.	n.a.	73.28	25.46	21.05	n.a.
WACC	**5.23 %**	**n.a.**	**n.a.**	**n.a.**	**118.21**	**64.13**	**62.56**	**22.53**
	4.23 %	n.a.	n.a.	28.68	192.63	126.57	130.03	75.45
	3.23 %	n.a.	n.a.	93.02	307.80	224.14	235.21	159.46
	2.23 %	58.71	82.25	215.19	526.46	409.40	434.89	318.96

- Historical volatility of the value indication is due to cyclical operative development, portfolio changes.

Valuation

	2019	2020	2021	2022	2023e	2024e	2025e
Price / Book	1.3 x	1.9 x	1.8 x	1.6 x	1.4 x	1.4 x	0.7 x
Book value per share ex intangibles	8.66	2.72	7.96	15.07	14.96	15.37	47.62
EV / Sales	0.3 x	0.3 x	0.3 x	0.3 x	0.4 x	0.4 x	0.4 x
EV / EBITDA	20.0 x	12.6 x	12.1 x	10.1 x	11.7 x	11.2 x	11.9 x
EV / EBIT	72.1 x	27.7 x	25.0 x	18.3 x	25.2 x	22.2 x	29.0 x
EV / EBIT adj.*	72.1 x	27.7 x	25.0 x	18.3 x	25.2 x	22.2 x	29.0 x
P / FCF	n.a.	2.2 x	n.a.	n.a.	n.a.	n.a.	0.8 x
P / E	31.9 x	41.4 x	22.7 x	9.9 x	56.6 x	32.4 x	1.1 x
P / E adj.*	31.9 x	41.4 x	22.7 x	9.9 x	56.6 x	32.4 x	120.6 x
Dividend Yield	3.8 %	3.6 %	2.8 %	2.8 %	3.0 %	3.2 %	3.2 %
FCF Potential Yield (on market EV)	3.1 %	3.5 %	4.5 %	6.8 %	5.6 %	5.6 %	4.7 %

*Adjustments made for: Restructuring costs, value adjustments, one-off earnings/losses

Consolidated profit & loss

In EUR m	2019	2020	2021	2022	2023e	2024e	2025e
Sales	**17,059**	**17,155**	**19,839**	**27,062**	**22,775**	**23,429**	**20,206**
Change Sales yoy	2.6 %	0.6 %	15.6 %	36.4 %	-15.8 %	2.9 %	-13.8 %
Increase / decrease in inventory	237	172	945	404	0	0	0
Own work capitalised	0	0	0	0	0	0	0
Total Sales	**17,296**	**17,328**	**20,784**	**27,465**	**22,775**	**23,429**	**20,206**
Material expenses	15,513	15,336	18,457	24,581	20,106	20,645	17,821
Gross profit	**1,783**	**1,992**	**2,327**	**2,884**	**2,668**	**2,784**	**2,385**
Gross profit margin	*10.5 %*	*11.6 %*	*11.7 %*	*10.7 %*	*11.7 %*	*11.9 %*	*11.8 %*
Personnel expenses	1,082	1,185	1,321	1,510	1,482	1,504	1,277
Other operating income	226	353	404	493	409	420	363
Other operating expenses	629	695	855	1,072	889	896	755
Unfrequent items	0	0	0	0	0	0	0
EBITDA	**297**	**465**	**556**	**796**	**707**	**804**	**715**
Margin	*1.7 %*	*2.7 %*	*2.8 %*	*2.9 %*	*3.1 %*	*3.4 %*	*3.5 %*
Depreciation of fixed assets	215	253	286	355	379	399	421
EBITA	**83**	**212**	**270**	**441**	**328**	**405**	**294**
Amortisation of intangible assets	-22	-21	-23	-30	-53	9	-43
Goodwill amortisation	0	0	0	0	0	0	0
EBIT	**83**	**212**	**270**	**441**	**328**	**405**	**294**
Margin	*0.5 %*	*1.2 %*	*1.4 %*	*1.6 %*	*1.4 %*	*1.7 %*	*1.5 %*
EBIT adj.	**83**	**212**	**270**	**441**	**328**	**405**	**294**
Interest income	13	15	16	18	15	18	19
Interest expenses	122	119	122	202	255	288	313
Other financial income (loss)	106	3	-3	63	50	50	50
EBT	**79**	**111**	**161**	**320**	**137**	**185**	**50**
Margin	*0.5 %*	*0.6 %*	*0.8 %*	*1.2 %*	*0.6 %*	*0.8 %*	*0.2 %*
Total taxes	14	50	32	80	40	54	14
Net income from continuing operations	**65**	**61**	**129**	**240**	**98**	**131**	**35**
Income from discontinued operations (net of tax)	0	0	0	0	0	0	0
Net income before minorities	**65**	**61**	**129**	**240**	**98**	**131**	**35**
Minority interest	37	38	71	84	73	89	-1,176
Net income	**28**	**24**	**58**	**155**	**24**	**43**	**1,212**
Margin	*0.2 %*	*0.1 %*	*0.3 %*	*0.6 %*	*0.1 %*	*0.2 %*	*6.0 %*
Number of shares, average	35	35	36	36	36	36	37
EPS	**0.79**	**0.67**	**1.62**	**4.33**	**0.67**	**1.17**	**33.17**
EPS adj.	0.79	0.67	1.62	4.33	0.67	1.17	0.32

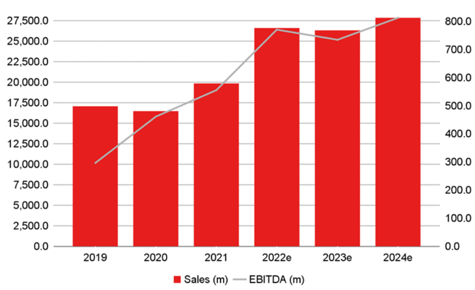
*Adjustments made for: Restructuring costs, value adjustments, one-off earnings/losses

Guidance: FY 2023: operating result EUR 320-370m

Financial Ratios

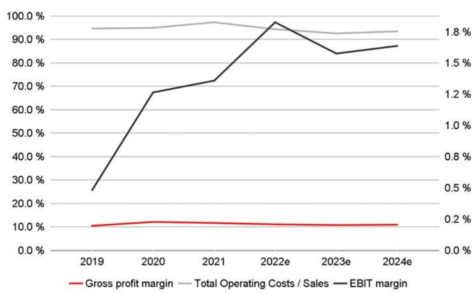
	2019	2020	2021	2022	2023e	2024e	2025e
Total Operating Costs / Sales	94.6 %	93.4 %	97.3 %	94.8 %	92.2 %	91.9 %	91.9 %
Operating Leverage	-18.1 x	277.2 x	1.7 x	1.7 x	1.6 x	8.2 x	2.0 x
EBITDA / Interest expenses	2.4 x	3.9 x	4.6 x	3.9 x	2.8 x	2.8 x	2.3 x
Tax rate (EBT)	17.8 %	44.9 %	19.8 %	25.1 %	29.0 %	29.0 %	29.0 %
Dividend Payout Ratio	49.5 %	55.5 %	28.0 %	17.3 %	41.1 %	32.0 %	119.3 %
Sales per Employee	905,900	828,083	934,267	1,213,915	991,860	990,632	829,449

Sales, EBITDA
in EUR m



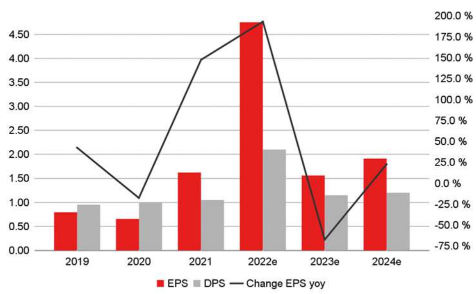
Source: Warburg Research

Operating Performance
in %



Source: Warburg Research

Performance per Share



Source: Warburg Research

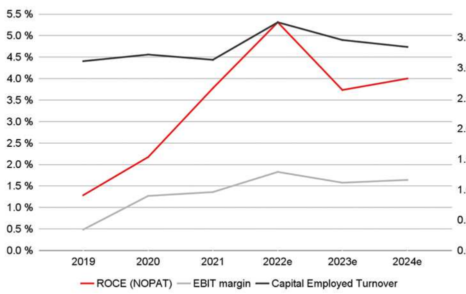
Consolidated balance sheet

In EUR m	2019	2020	2021	2022	2023e	2024e	2025e
Assets							
Goodwill and other intangible assets	404	437	435	459	443	428	415
thereof other intangible assets	157	182	167	164	147	132	119
thereof Goodwill	247	254	267	296	296	296	296
Property, plant and equipment	2,066	2,469	2,553	3,058	3,585	4,301	5,293
Financial assets	208	244	243	279	299	320	341
Other long-term assets	0	0	0	0	0	0	0
Fixed assets	**2,678**	**3,150**	**3,230**	**3,796**	**4,327**	**5,049**	**6,050**
Inventories	3,286	2,939	4,213	4,757	4,454	4,540	4,123
Accounts receivable	1,204	1,116	1,355	1,833	1,543	1,587	1,369
Liquid assets	231	170	400	223	227	238	284
Other short-term assets	1,448	1,464	2,573	2,368	2,118	2,158	1,960
Current assets	**6,170**	**5,689**	**8,542**	**9,180**	**8,342**	**8,523**	**7,736**
Total Assets	**8,848**	**8,839**	**11,771**	**12,976**	**12,669**	**13,573**	**13,786**
Liabilities and shareholders' equity							
Subscribed capital	90	91	91	92	92	92	93
Capital reserve	74	53	75	109	107	107	247
Retained earnings	451	323	458	663	650	652	1,505
Other equity components	93	66	94	136	134	134	309
Shareholders' equity	708	533	718	1,000	983	986	2,154
Minority interest	631	621	1,098	909	940	992	972
Total equity	**1,339**	**1,154**	**1,816**	**1,909**	**1,923**	**1,979**	**3,126**
Provisions	1,084	1,170	1,227	1,154	1,046	1,064	978
thereof provisions for pensions and similar obligations	767	801	736	552	508	516	480
Financial liabilities (total)	3,615	3,331	4,185	5,279	5,651	6,390	5,993
Short-term financial liabilities	2,314	2,217	1,467	1,719	2,487	3,185	3,083
Accounts payable	1,056	972	1,361	1,840	1,549	1,593	1,374
Other liabilities	1,754	2,434	3,182	2,795	2,499	2,547	2,314
Liabilities	**7,509**	**7,908**	**9,955**	**11,067**	**10,746**	**11,594**	**10,659**
Total liabilities and shareholders' equity	**8,848**	**9,061**	**11,771**	**12,976**	**12,669**	**13,573**	**13,786**

Financial Ratios

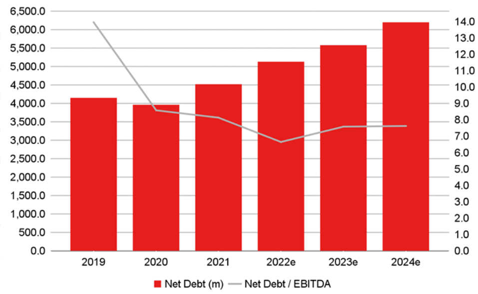
	2019	2020	2021	2022	2023e	2024e	2025e
Efficiency of Capital Employment							
Operating Assets Turnover	3.1 x	3.1 x	2.9 x	3.5 x	2.8 x	2.7 x	2.1 x
Capital Employed Turnover	3.1 x	3.4 x	3.1 x	3.6 x	2.9 x	2.7 x	2.2 x
ROA	1.0 %	0.8 %	1.8 %	4.1 %	0.6 %	0.8 %	20.0 %
Return on Capital							
ROCE (NOPAT)	1.3 %	2.2 %	3.8 %	4.8 %	3.0 %	3.5 %	2.3 %
ROE	3.7 %	3.8 %	9.2 %	18.1 %	2.4 %	4.3 %	77.2 %
Adj. ROE	3.7 %	3.8 %	9.2 %	18.1 %	2.4 %	4.3 %	0.7 %
Balance sheet quality							
Net Debt	4,150	3,963	4,520	5,608	5,933	6,667	6,190
Net Financial Debt	3,384	3,162	3,784	5,056	5,424	6,151	5,709
Net Gearing	309.9 %	343.5 %	248.9 %	293.8 %	308.4 %	337.0 %	198.0 %
Net Fin. Debt / EBITDA	1138.5 %	679.6 %	680.9 %	635.5 %	767.7 %	765.4 %	798.7 %
Book Value / Share	20.1	15.1	20.1	27.9	27.2	27.2	59.0
Book value per share ex intangibles	8.7	2.7	8.0	15.1	15.0	15.4	47.6

ROCE Development



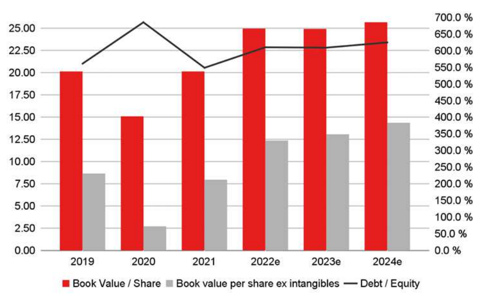
Source: Warburg Research

Net debt
in EUR m



Source: Warburg Research

Book Value per Share
in EUR



Source: Warburg Research

Consolidated cash flow statement

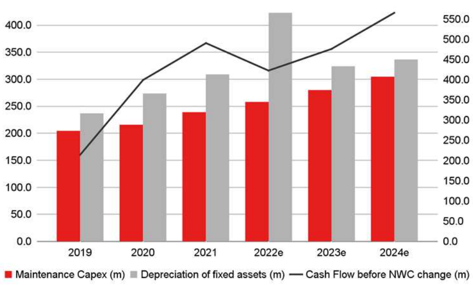
In EUR m	2019	2020	2021	2022	2023e	2024e	2025e
Net income	65	61	129	240	98	131	35
Depreciation of fixed assets	237	274	309	384	432	390	464
Amortisation of goodwill	0	0	0	0	0	0	0
Amortisation of intangible assets	-22	-21	-23	-30	-53	9	-43
Increase/decrease in long-term provisions	-22	-21	-23	-30	-53	9	-43
Other non-cash income and expenses	-43	107	99	131	0	0	0
Cash Flow before NWC change	**214**	**401**	**491**	**696**	**424**	**539**	**414**
Increase / decrease in inventory	-318	-230	-2,198	-1,086	302	-85	416
Increase / decrease in accounts receivable	41	506	1,042	-76	540	-85	416
Increase / decrease in accounts payable	62	35	112	126	-54	9	-43
Increase / decrease in other working capital positions	-23	-33	-31	4	-587	92	-453
Increase / decrease in working capital (total)	-239	276	-1,075	-1,033	202	-69	337
Net cash provided by operating activities [1]	**-25**	**678**	**-584**	**-337**	**625**	**470**	**751**
Investments in intangible assets	0	0	0	0	0	0	0
Investments in property, plant and equipment	-292	-332	-239	-379	-790	-1,000	-1,300
Payments for acquisitions	20	-14	-70	-30	0	0	2,250
Financial investments	25	15	22	20	20	21	22
Income from asset disposals	157	85	112	109	100	100	100
Net cash provided by investing activities [2]	**-149**	**-251**	**-197**	**-293**	**-710**	**-921**	**1,028**
Change in financial liabilities	493	-247	666	1,127	373	738	-396
Dividends paid	-62	-60	-68	-125	-85	-78	-88
Purchase of own shares	0	0	0	0	0	0	0
Capital measures	5	5	593	-274	2	2	2
Other	-154	-181	-183	-277	0	0	0
Net cash provided by financing activities [3]	**283**	**-483**	**1,009**	**451**	**289**	**662**	**-482**
Change in liquid funds [1]+[2]+[3]	**108**	**-53**	**226**	**-181**	**205**	**211**	**1,297**
Effects of exchange-rate changes on cash	1	-3	3	2	0	0	0
Cash and cash equivalent at end of period	231	170	400	223	227	238	284

Financial Ratios

	2019	2020	2021	2022	2023e	2024e	2025e
Cash Flow							
FCF	-174	426	-781	-630	-85	-451	1,779
Free Cash Flow / Sales	-1.0 %	2.5 %	-3.9 %	-2.3 %	-0.4 %	-1.9 %	8.8 %
Free Cash Flow Potential	184	203	306	548	464	500	399
Free Cash Flow / Net Profit	-623.7 %	1791.2 %	-1350.7 %	-405.6 %	-350.1 %	-1057.4 %	146.9 %
Interest Received / Avg. Cash	7.2 %	7.2 %	5.5 %	5.7 %	6.6 %	7.8 %	7.3 %
Interest Paid / Avg. Debt	3.6 %	3.4 %	3.2 %	4.3 %	4.7 %	4.8 %	5.0 %
Management of Funds							
Investment ratio	1.7 %	1.9 %	1.2 %	1.4 %	3.5 %	4.3 %	6.4 %
Maint. Capex / Sales	1.2 %	1.3 %	1.1 %	0.9 %	1.1 %	1.3 %	1.7 %
Capex / Dep	136.1 %	131.1 %	83.5 %	106.9 %	208.4 %	250.7 %	308.5 %
Avg. Working Capital / Sales	18.8 %	19.0 %	18.4 %	16.5 %	20.2 %	19.2 %	21.4 %
Trade Debtors / Trade Creditors	114.1 %	114.8 %	99.6 %	99.6 %	99.6 %	99.6 %	99.6 %
Inventory Turnover	4.7 x	5.2 x	4.4 x	5.2 x	4.5 x	4.5 x	4.3 x
Receivables collection period (days)	26	24	25	25	25	25	25
Payables payment period (days)	25	23	27	27	28	28	28
Cash conversion cycle (Days)	78	71	81	68	77	77	81

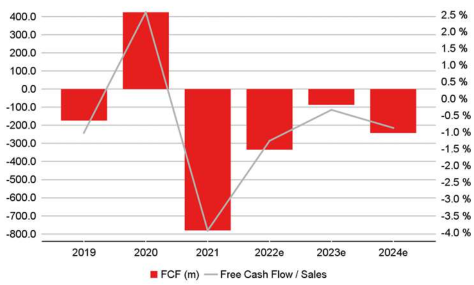
CAPEX and Cash Flow

in EUR m



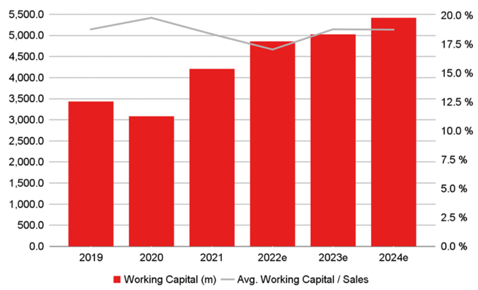
Source: Warburg Research

Free Cash Flow Generation



Source: Warburg Research

Working Capital



Source: Warburg Research

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BayWa	4	http://www.mmwarburg.com/disclaimer/disclaimer_en/DE0005194062.htm

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-H-	**Hold:**	The price of the analysed financial instrument is expected to remain mostly flat over the next 12 months.
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"-"	**Rating suspended:**	The available information currently does not permit an evaluation of the company.

WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING

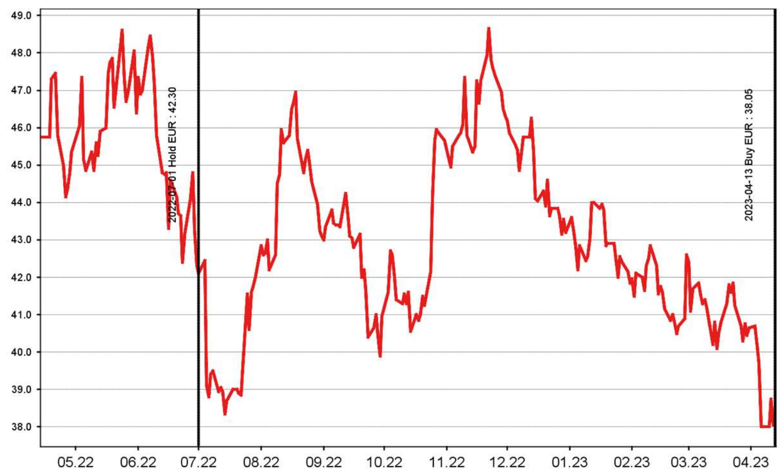
Rating	Number of stocks	% of Universe
Buy	159	74
Hold	46	21
Sell	7	3
Rating suspended	3	1
Total	**215**	**100**

WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING …

… taking into account only those companies which were provided with major investment services in the last twelve months.

Rating	Number of stocks	% of Universe
Buy	43	83
Hold	8	15
Sell	0	0
Rating suspended	1	2
Total	**52**	**100**

PRICE AND RATING HISTORY BAYWA AS OF 13.04.2023



Markings in the chart show rating changes by Warburg Research GmbH in the last 12 months. Every marking details the date and closing price on the day of the rating change.

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