March 14th, 2024
Research comment

SMC Research
Small and Mid Cap Research

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Pyrum Innovations AG

Big leap in sales is drawing near

Rating: Speculative Buy (unchanged) | **Price:** 38.60 € | **Price target:** 62.40 € (prev.: 64.40 €)

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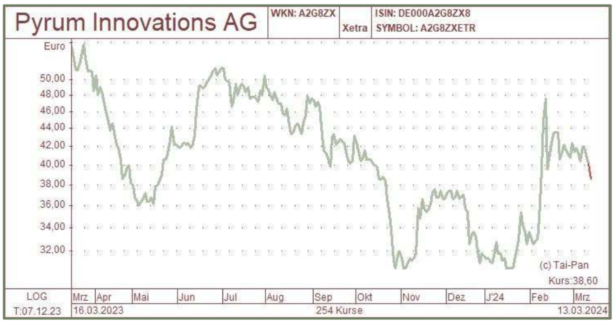
Current business development



Basic data

Based in:	Dillingen / Saar
Sector:	Recycling
Headcount:	71
Accounting:	HGB
Ticker:	PYR:GR
ISIN:	DE000A2G8ZX8
Price:	38.60 Euro
Market segment:	Scale
Number of shares:	3.25 m
Market Cap:	125.6 m Euro
Enterprise Value:	134.7 m Euro
Free Float:	approx. 38 %
Price high/low (12 M):	56.80 / 29.80 Euro
Øturnover (12 M Xetra):	49,500 Euro

FY ends: 31.12.	2023e	2024e	2025e
Sales (m Euro)	1.4	5.0	27.3
EBIT (m Euro)	-8.8	-10.4	12.9
Net profit	-9.2	-11.3	9.8
EpS	-2.82	-3.46	3.00
Dividend per share	0.00	0.00	0.00
Sales growth	43.4%	252.6%	449.8%
Profit growth	-	-	-
PSR	89.18	25.29	4.60
PER	-	-	12.9
PCR	-	-	9.7
EV / EBIT	-	-	10.5
Dividend yield	0.0%	0.0%	0.0%

New production lines are ramping up

Pyrum's sales are still low, but a strong revenue increase is approaching. The first strong impetus in the current year will come from the expansion of the main plant in Dillingen to include production lines two and three. The second reactor has now completed three operating phases, has already reached 80 percent of its rated output and has produced substantial quantities of pyrolysis oil that have met the specifications of the customer BASF. The first 24,000 litres were already delivered to the chemical group in February. Preparations for the test commissioning of the third reactor are now to be completed by the end of this month.

Preparatory work for next plant started

While the two new production lines are expected to reach full capacity this year, Pyrum is already working on the realisation of its next own plant. The development plan for the site in Perl-Besch was approved by the municipality at the beginning of February, allowing the preparation of the construction site to begin. In addition, plant components with longer delivery times have already been ordered. Construction is scheduled to start in the second half of the year and to be completed by the end of 2025. As with the main plant in Dillingen, the processing capacity will also amount to 20,000 tonnes of used tyres.

Another partner for an SPV project

In addition to its own plants, the company is also working on the realisation of plants with partners, where the company generally intends to participate with a minority share in the special purpose vehicles ("SPVs") to be established for the project. Pyrum recently gained a new partner in this context. Together with GreenTech Recycling Tires AB, the construction of a plant in Sweden (with a capacity of 20,000 tonnes) is now being driven forward, although GreenTech still has to secure the financing. Subsequently, Pyrum intends to hold a stake of EUR 3 m in the SPV. Specific planning is due to begin in July and production is scheduled to start in 2027. The consulting contract concluded for this project is already the third, others have been agreed for plants in Greece and the Czech Republic. Pyrum is also working on numerous other projects with partners. The aim is to start the construction of six more plants by the end of 2026 (including the company's own plant in Perl-Besch).

Financing by BASF

The construction of the company's next own plant and the investments in the SPVs will initially require a high level of capital. To cover this requirement, a major financing agreement was concluded with BASF last November, which provides for the payment of EUR 25 m in several instalments depending on the milestones achieved. BASF will double this sum again if Pyrum itself raises a further EUR 50 m.

Sales momentum increases

The progress made ensures that Pyrum's revenue will increase greatly over the next few years. For the current year, we initially anticipate a rise in sales to EUR 5.0 m (see revenue model below) due to the increase in production in Dillingen (sales of EUR 4.5 m) and income from consulting contracts (EUR 0.5 m), although this is not yet sufficient to cover operating costs (EBIT estimate: EUR -10.4 m). Next year, income from plant operation is expected to rise to EUR 10 m, for which the successful expansion of capacities for pelletising recovered carbon black (rCB) represents a key factor. This has yet to be achieved, but the company has recently expressed confidence in this regard.

First revenue from plant sales in 2025

For 2025, we expect the first revenue from the sale of plant components to SPVs as part of the realisation of the first partner plants. We have factored in EUR 17.3 m from this for next year, meaning that revenue could rise to a total of EUR 27.3 m in 2025, which should allow a significant leap into the profit zone with an EBIT of EUR 12.9 m.

Further sales structure adjusted

While we have not changed our estimates for 2024 and 2025, we have reduced the revenue from the company's next own new plant in 2026, as after the delays in the search for a location, the ramp-up process is not expected to take place until 2026, meaning that we now only expect revenue of EUR 5.6 m (previously EUR 11.2 m) from this plant. We have also shifted the income from Pyrum's other own plants somewhat (in subsequent years), while we have not adjusted the income from SPVs. As a result, our estimated revenue for 2026 is EUR 44.7 m (previously: EUR 50.3 m). By the end of the detailed forecast period, however, we are assuming an acceleration of processes and thus a catch-up movement, so that we then expect revenue to remain unchanged at EUR 83.3 m. Our expected EBIT amounts now to EUR 25.3 m in 2026 (previously: EUR 30.9 m) and EUR 45.4 m in 2030 (unchanged). The margin appears high at first glance, but this results from the fact that we have only factored in the net income from the sale of plant components – the gross proceeds from transitory items may be significantly higher, which will reduce the margin in purely arithmetical terms, but will not affect EBIT.

Revenue model (m Euro)	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Revenue plant Dillingen	1.3	4.5	10.0	10.0	10.0	10.0	10.0	10.0
Further own plants (total number)				*1*	*2*	*3*	*4*	*5*
Revenue further plants				5.6	17.1	29.5	42.7	55.8
SPVs (total number)	*2*	*5*	*8*	*10*	*11*	*12*	*13*	*14*
Revenue sale of plants	0.2	0.5	17.3	27.6	20.7	13.8	6.9	6.9
Other revenue SPVs (maintenance etc.)				1.5	2.4	3.0	3.3	3.6
Plants without SPV (total number)				*1*	*2*	*3*	*4*	*5*
Revenue plants without SPV					6.9	6.9	6.9	6.9
Total revenue	**1.4**	**5.0**	**27.3**	**44.7**	**57.2**	**63.2**	**69.9**	**83.3**

Estimates SMC-Research

m Euro	12 2023	12 2024	12 2025	12 2026	12 2027	12 2028	12 2029	12 2030
Sales	1.4	5.0	27.3	44.7	57.2	63.2	69.9	83.3
Sales growth		252.6%	449.8%	63.9%	27.8%	10.6%	10.5%	19.2%
EBIT margin	-624.4%	-208.5%	47.1%	56.7%	59.0%	55.5%	52.6%	54.5%
EBIT	**-8.8**	**-10.4**	**12.9**	**25.3**	**33.7**	**35.1**	**36.8**	**45.4**
Tax rate	0.0%	0.0%	5.0%	5.0%	15.0%	33.0%	33.0%	33.0%
Adjusted tax payments	0.0	0.0	0.6	1.3	5.1	11.6	12.1	15.0
NOPAT	**-8.8**	**-10.4**	**12.2**	**24.1**	**28.7**	**23.5**	**24.6**	**30.4**
+ Depreciation & Amortisation	2.2	3.5	7.1	10.2	12.7	15.8	18.9	22.0
+ Increase long-term accruals	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.5
+ Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross operating cash flows	-6.4	-6.7	19.6	34.6	41.7	39.7	44.0	52.9
- Increase Net Working Capital	-0.2	-0.3	-1.6	-1.3	-1.7	-1.3	-1.4	-1.7
- Investments in fixed assets	-12.0	-27.6	-40.0	-37.0	-34.0	-34.0	-34.0	-34.0
Free cash flow	**-18.6**	**-34.6**	**-22.0**	**-3.7**	**6.0**	**4.4**	**8.6**	**17.3**

SMC estimation model

The development of the key cash flow figures resulting from our assumptions in the period up to 2030 is shown in the table above; further details on the balance sheet, income statement and cash flow statement can be found in the Annex.

New price target: EUR 62.40

Subsequently, we continue to calculate the terminal value with a fifteen percent discount to the target margin of 2030 and a "perpetual" cash flow growth of 1 percent p.a. The discount rate (WACC) also remains unchanged at 7.2 percent. The adjustment of the model results in a new fair value of EUR 203.1 m or EUR 62.42 per share. From this, we derive EUR 62.40 as the new price target (a sensitivity analysis of the price target can be found in the Annex). The moderate reduction in our price target (previously: EUR 64.40) is due to the slight postponement of income from Pyrum's new own plants from 2026 on. On a scale of 1 (very low) to 6 (very high), we continue to rate the forecast risk of our estimates as clearly above average at five points, since the data on the operation of the industrial plant in its final design is still fairly limited and, in addition, the marketing of the plant to third parties is still in its early stages.

Conclusion

Even if there are occasional delays in various areas – which we consider normal for such an innovative business model – the roll-out of Pyrum's expansion strategy is progressing very well overall. The new production lines at the main plant in Dillingen are currently being ramped up, work has begun on the company's next own plant and, most recently, the consulting contract for a new plant in Sweden has been finalised. The construction of six new production facilities is set to begin by the end of 2026 – an ambitious but achievable goal, especially as the expansion is secured by a major financing agreement with BASF.

As a result, we expect a strong surge in sales in the coming years and a significant leap into the profit zone as early as 2025, when the first substantial revenue can be generated from the sale of system components to the SPVs. Following the delays in the search for a location for the next new plant, we have shifted our sales estimates in this area slightly, which means that our target price has fallen to EUR 62.40 (previously: EUR 64.40). Nevertheless, the share offers a high upside potential of 60 percent thanks to the promising expansion and earnings prospects. We therefore reiterate our "Speculative Buy" rating.

Annex I: SWOT analysis

Strengths

- Patent-protected, innovative solution for scrap tyre recycling and the production of high-quality raw materials (pyrolysis oil, carbon black).
- The plant has been in regular operation since 2020; capacities are currently being tripled.
- Strong focus on R&D with participation in numerous important research projects.
- Strong partners: BASF and Continental are shareholders and close cooperation partners. The chemical group also supports the expansion financially.
- The founders run the company.
- With an equity ratio of 50,5 percent (30.09.), the balance sheet structure remains very sound.

Weaknesses

- Relatively short period of operation of the plant in the final design.
- Revenue has been low so far and was below plan in 2023 as the throughput of the pelletising machine is still too low. At the moment, the company is still operating at a clear loss.
- The construction of the company's own second and third production lines has been somewhat delayed and projects with third parties as well, significantly so. No construction of a plant for third parties has yet been started.
- Major binding funding commitments from project partners are still pending.
- Small team, dependent on key people.

Opportunities

- The strong expansion of the company's own plant in Dillingen will ensure increasing revenue with high margins. Together with partners, numerous other plants are also planned, and the project pipeline is being continuously expanded.
- The sale of plants to third parties provides revenue leverage.
- Due to the great need for efficient scrap tyre recycling, the demand could increase strongly after first successful projects.
- The market environment in the commodities sector is currently comfortable. Especially the demand for carbon black is high, as so far 50 percent of the volume comes from Russia.
- Policy makers are pushing for the development of a circular economy in the tyre industry. By banning the use of scrap tyre granulate for various purposes, the EU is increasing the pressure for recycling. In some countries, thermal recycling is already prohibited as well.

Threats

- The capital requirements for further expansion are now being covered to a large extent by borrowed capital, which increases debt.
- Due to price increases for plant components, the necessary investment sum has increased significantly (but the potential revenue has increased as well).
- Bank financing of new plants is a challenging task due to the still limited database and is also becoming more expensive due to interest rate developments.
- A significant drop in raw material prices, for example in the event of a recession, could reduce revenue (however, a minimum price for pyrolysis oil has been agreed with BASF).
- With advances in recycling, the raw material "used tyres" could become a scarce resource.
- Alternative recycling technologies could prove more efficient.

Annex II: Balance sheet and P&L estimation

Balance sheet estimation

m Euro	2022 act.	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
ASSETS									
I. Total non-current	35.3	45.1	69.2	102.1	128.9	150.2	168.4	183.5	195.5
1. Intangible assets	6.5	5.8	5.1	4.4	3.7	3.0	2.3	1.6	0.9
2. Tangible assets	28.8	36.3	52.1	76.7	98.2	117.2	133.1	145.9	155.6
II. Total current assets	14.5	8.8	7.1	14.4	16.5	25.4	32.4	32.9	41.8
LIABILITIES									
I. Equity	31.9	22.7	11.4	21.2	41.6	66.6	87.2	98.7	115.2
II. Accruals	3.1	3.3	3.5	3.8	4.1	4.5	4.9	5.3	5.9
III. Liabilities									
1. Long-term liabilities	10.4	23.4	55.5	82.7	88.5	91.5	94.4	97.3	100.2
2. Short-term liabilities	4.5	4.6	5.9	8.9	11.3	13.1	14.4	15.2	16.1
TOTAL	**49.9**	**54.0**	**76.4**	**116.6**	**145.5**	**175.6**	**200.9**	**216.5**	**237.4**

P&L estimation

m Euro	2022 act.	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
Sales	1.0	1.4	5.0	27.3	44.7	57.2	63.2	69.9	83.3
Total output	19.1	15.4	19.8	52.1	69.5	82.0	88.0	94.7	108.1
Gross profit	1.4	1.4	3.1	30.7	46.5	57.3	61.8	66.8	78.6
EBITDA	-5.0	-6.6	-6.9	19.4	34.0	43.6	46.8	50.7	61.5
EBIT	-7.6	-8.8	-10.4	12.9	25.3	33.7	35.1	36.8	45.4
EBT	-7.8	-9.2	-11.2	10.3	21.5	29.6	30.9	32.6	41.0
EAT (before minorities)	-7.8	-9.2	-11.3	9.8	20.3	25.1	20.6	21.7	27.4
EAT	-7.8	-9.2	-11.3	9.8	20.3	25.1	20.6	21.7	27.4
EPS	-2.40	-2.82	-3.46	3.00	6.25	7.71	6.33	6.68	8.42

Annex III: Cash flows estimation and key figures

Cash flows estimation

m Euro	2022 act.	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
CF operating	-6.9	-7.3	-8.8	13.0	25.6	32.2	31.2	35.2	43.6
CF from investments	-20.8	-12.0	-27.6	-40.0	-37.0	-34.0	-34.0	-34.0	-34.0
CF financing	6.0	13.4	33.9	30.5	9.9	7.2	7.4	-2.8	-3.2
Liquidity beginning of year	34.2	12.5	6.8	4.2	7.8	6.3	11.7	16.2	14.6
Liquidity end of year	12.5	6.8	4.2	7.8	6.3	11.7	16.2	14.6	21.0

Key figures

percent	2022 act.	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
Sales growth	6.5%	43.4%	252.6%	449.8%	63.9%	27.8%	10.6%	10.5%	19.2%
EBITDA margin	-512.3%	-468.2%	-139.0%	71.2%	76.0%	76.2%	74.1%	72.6%	73.8%
EBIT margin	-772.4%	-624.4%	-208.5%	47.1%	56.7%	59.0%	55.5%	52.6%	54.5%
EBT margin	-792.0%	-649.7%	-226.0%	37.9%	48.0%	51.7%	48.8%	46.6%	49.3%
Net margin (after minorities)	-795.2%	-651.8%	-226.8%	35.8%	45.5%	43.8%	32.6%	31.1%	32.9%

Annex IV: Sensitivity analysis

	Perpetual cash flows growth				
WACC	**2.0%**	**1.5%**	**1.0%**	**0.5%**	**0.0%**
6.2%	104.85	91.37	80.49	71.53	64.02
6.7%	87.70	77.16	68.48	61.21	55.02
7.2%	73.96	65.55	**62.42**	52.51	47.35
7.7%	62.72	55.90	50.09	45.10	40.75
8.2%	53.39	47.76	42.92	38.71	35.02

Disclaimer

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Charts

The charts were made with Tai-Pan (www.lp-software.de).

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II) Preparation and updating

The present financial analysis was prepared by: Dipl.-Kfm. Holger Steffen

Participants in the preparation of the present financial analysis: -

The present analysis was finished on 13.03.2024 at 18:40 and published on 14.03.2024 at 8:15.

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The price targets published within the assessment are calculated with common methods of financial mathematics, especially with the DCF (discounted cash flow) method, the sum of the parts valuation and a peer group analysis. The valuation methods are affected by economic framework conditions, especially by the development of the interest rates.

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Date	Investment recomm.	Target price	Conflict of interests
07.12.2023	Speculative Buy	64.40 Euro	1), 3)
26.09.2023	Speculative Buy	77.00 Euro	1), 3), 4)
27.06.2023	Speculative Buy	77.00 Euro	1), 3)
06.06.2023	Speculative Buy	77.00 Euro	1), 3)
05.04.2023	Speculative Buy	80.00 Euro	1), 3)
03.02.2023	Speculative Buy	80.00 Euro	1), 3)
05.10.2022	Speculative Buy	86.00 Euro	1), 3)
03.08.2022	Speculative Buy	86.00 Euro	1), 3)
27.06.2022	Speculative Buy	88.00 Euro	1), 3), 4)

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