IBU-tec advanced materials AG

Germany - Chemicals/ Specialty Chemicals

HAUCK & AUFHÄUSER
Investment Banking

Buy

Price target: EUR 47.00 (initiation)

Price:	EUR 35.00	**Next result:**	TBD
Bloomberg:	IBU.GR	**Market cap:**	EUR 137.6 m
Reuters:	IBU.DE	**Enterprise Value:**	EUR 155.2 m

27-January-21

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Strong greentech prospects

End 2020, IBU-tec announced it would enter the **fast-growing Li-ion battery materials** market with an own product, **Lithium Ferophosphate (LFP**), which led to a pronounced share price rally. LFP cathodes are **increasingly adopted** by the likes of **Tesla, Varta or VW** for their superior environmental and economic benefits compared to the more commonly used alternatives based on cobalt. The share price reaction hence looks justified considering the ample potential of this product with a **€ 150m p.a. project pipeline and first contracts already signed.**

Ultimately, IBU-tec's battery product is expected to be the key driver behind the recently **released 2025 guidance of € 80m to more than € 100m in sales and a > 20% EBITDA margin** as the company is on course to generate an H&A estimated 57% of group EBITDA with LFP by then**.**

Other greentech products expected to contribute are (1) **tin-based glass coatings**, a niche where the company already commands a 40% European market share, while the last key competitor is retreating and (2) **recycling & services** as companies continue to **outsource risky materials R&D** while seeking to **reduce resource consumption.**

The **ability to cater to the market with green products and services** is the result of a radical transformation kick-started with the IPO in 2107 by an experienced management team:

At the core of IBU-tec's quality stands a unique, patented technology platform for thermal treatment resulting in **superior material consistency**, **homogeneity and processing ease.** In 2018, IBU-tec added a **wet-chemicals know-how** by acquiring BNT Chemicals. It thus expanded the business model beyond services and contract manufacturing by bringing own products such as LFP and glass coatings to the market.

With premium battery material production set to start in Q3 2021, we **estimate 26% average revenue growth and 47% average EBITDA growth into 2025E**. Growth in the highly profitable battery materials business should lift EBITDA margins to above 24%.

Positive newsflow is expected as (1) the cyclical recovery should pick steam in 2021 and (2) significant new customer wins are expected. At the same time, valuation looks still undemanding assuming a successful execution of the strategy, which should even leave room to materially beat the 2025 guidance.

Initiate with **BUY. The PT of € 47 per share is based on a DCF model** (terminal EBIT margin 16%, LT-growth 2%, 7.5% WACC).

Y/E 31.12 (EUR m)	2019	2020E	2021E	2022E	2023E	2024E	2025E
Sales	48.5	32.9	39.6	52.5	69.7	90.2	103.4
Sales growth	49 %	-32 %	20 %	33 %	33 %	29 %	15 %
EBITDA	7.1	4.0	7.9	9.9	14.6	21.2	25.0
EBIT	1.9	-3.3	3.2	4.6	8.7	15.3	18.9
Net income	0.9	-3.5	1.7	2.5	5.3	9.8	12.3
Net debt	14.6	17.6	22.3	26.7	29.7	26.2	17.4
Net gearing	45.7 %	62.0 %	74.2 %	83.5 %	81.2 %	57.5 %	30.7 %
Net Debt/EBITDA	2.0	4.4	2.8	2.7	2.0	1.2	0.7
EPS pro forma	0.22	-0.49	0.42	0.63	1.33	2.45	3.06
CPS	0.03	0.24	0.70	0.05	0.31	1.71	2.97
DPS	0.00	0.00	0.15	0.18	0.20	0.30	0.45
Dividend yield	0.0 %	0.0 %	0.4 %	0.5 %	0.6 %	0.9 %	1.3 %
Gross profit margin	50.9 %	50.7 %	54.0 %	56.2 %	56.4 %	56.6 %	56.8 %
EBITDA margin	14.7 %	12.1 %	19.8 %	18.8 %	21.0 %	23.5 %	24.2 %
EBIT margin	4.0 %	-10.1 %	8.0 %	8.7 %	12.5 %	16.9 %	18.3 %
ROCE	4.1 %	-4.7 %	5.4 %	6.8 %	12.3 %	19.7 %	21.6 %
EV/sales	3.1	4.7	4.0	3.1	2.4	1.8	1.5
EV/EBITDA	21.4	38.9	20.4	16.6	11.4	7.7	6.2
EV/EBIT	78.0	-46.8	50.7	36.0	19.2	10.7	8.2
PER	158.7	-70.3	82.2	54.9	25.8	14.1	11.2
Adjusted FCF yield	1.6 %	1.5 %	2.9 %	3.5 %	5.2 %	7.7 %	9.8 %

Source: Company data, Hauck & Aufhäuser Close price as of: 26.01.2021

Source: Company data, Hauck & Aufhäuser

High/low 52 weeks:	36.80 / 7.70
Price/Book Ratio:	4.9
Relative performance (SDAX):	
3 months	139.2 %
6 months	186.9 %
12 months	103.4 %

Changes in estimates

		Sales	EBIT	EPS
2020	*old:*	32.9	-3.3	-0.49
	Δ	-	-	-
2021	*old:*	39.6	3.2	0.42
	Δ	-	-	-
2022	*old:*	52.5	4.6	0.63
	Δ	-	-	-

Key share data:

Number of shares: (in m pcs)	4.0
Authorised capital: (in € m)	1.5
Book value per share: (in €)	7.1
Ø trading volume: (12 months)	13,736

Major shareholders:

Weitz family	39.7 %
Free Float	31.0 %
Management board (incl. Ulrich Weitz)	29.3 %

Company description:
Specialty chemicals player active both in wet chemistry and thermal processing. The company develops its own high-end specialty materials while also acting as service provider to industry.

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IBU- tec in a nutshell

Overview

With roots dating back to 1885 and based in Weimar, Germany, IBU-tec is a **fully integrated service provider** for specialty materials development from R&D and process engineering all the way through to full-scale production.

Based on a unique combination of wet chemistry and thermal treatment competences the **company is essentially positioned as a specialist for inorganic powder production** both for third parties and with **a growing own product portfolio.**

Following **the acquisition of BNT Chemicals in 2018** for an estimated EV of € 15.4m, IBU-tec's engineering and production know-how uniquely **covers the entire value chain of wet chemistry and thermal treatments.**

This milestone transaction also provided the foundation for the company's transformation from a service provider to a niche, high-end product manufacturer.

While a highly flexible patented production tool supplies a diversified and complex set of end markets, **the company is essentially focused on greentech..."as in":**

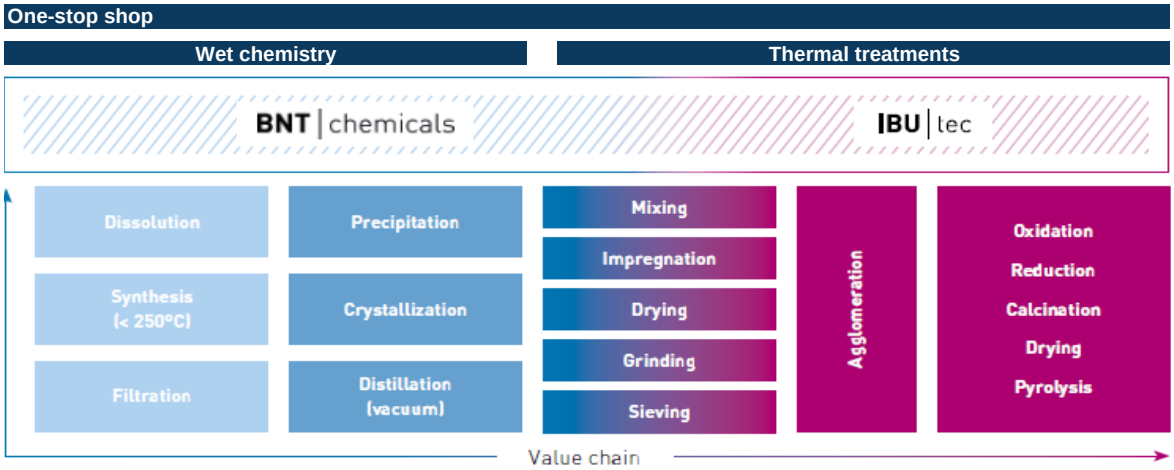
a. **high-end battery materials** used in niche applications, stationary power storage solutions as well as, increasingly, in electric vehicles

b. **glass coatings** fostering the use of recycled glass

c. **catalysts** used to reduce carbon dioxide or nitrogen oxide emissions

d. and last but not least **material recycling** and hence resource preservation

IBU-tec listed on the Scale segment of the Frankfurt stock exchange in in 2017 with a price per share of € 16.50. CEO Ulrich Weitz and the Weitz family are still to date majority shareholders with a combined stake of 69%. Mr. Weitz essentially bought the company in 2000 and has been highly committed since then only diluting his holding with the IPO in 2017. The remaining 29% of shares outstanding are free-float.



Source: Company materials. Hauck & Aufhäuser

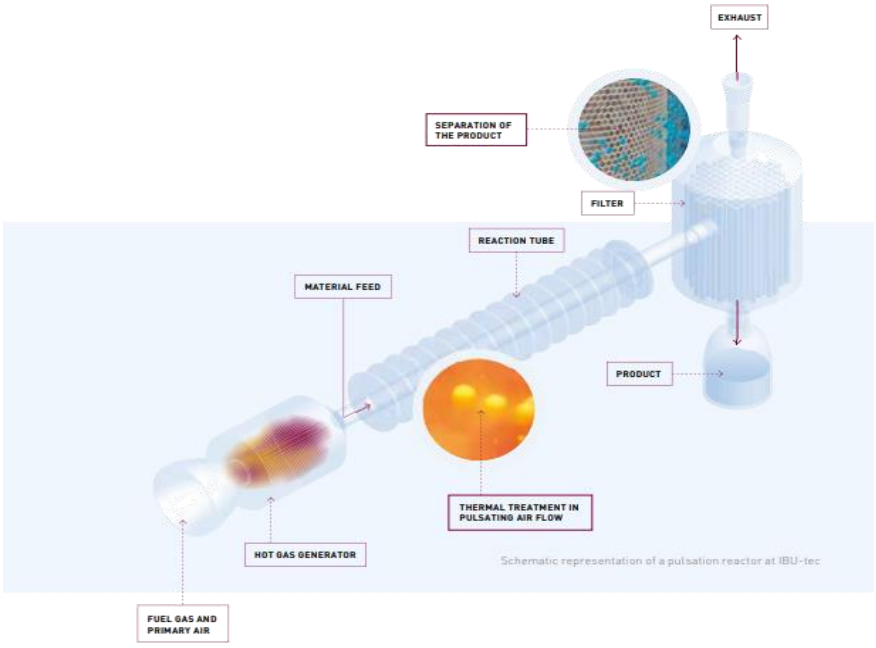
Patented thermal treatment competence

The company's thermal process competence is enshrined in **16 patents with 20 more pending.**

IBU-tec operates eight **pulsation reactors featuring a unique patented technology**. The operational principle of a pulsation reactor is to expose a material to a hot gas for a very short time. To ensure that all of the material reacts with the gas to the same extent, it needs to be dispersed in the gas very homogeneously. To control the reaction time, the reaction then has to be stopped and the material separated from the gas very quickly.

The pulsation reactor is capable of very fast heating and cooling cycles, at frequencies of up to 300 MHz, whereby materials receive a thermal shock resulting in the desired specifications.

Thermal processing competence - pulsation reactors

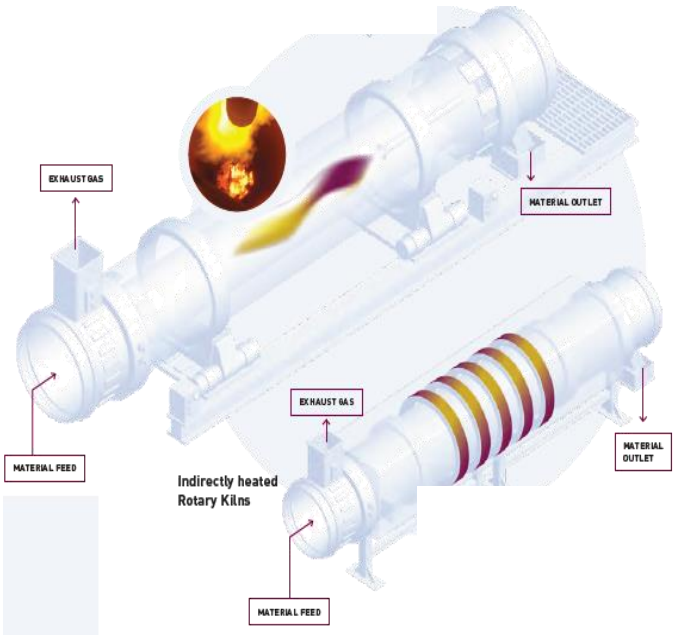


Source: Company data; Hauck & Aufhäuser

These pulsation reactors are complemented by **sixteen rotary kilns** which are furnaces producing temperatures in the 100 – 1500 degree Celsius range that are used for various thermal processing steps (see list in the chart above). A rotary kiln consists of a cylindrical, rotating body mounted between stationary material feed and outlet housings. The constant turning of the kiln body mixes the material, ensuring that it is processed homogeneously. IBU-tec offers a full range of configuration options depending both on the desired material specification or the intent (R&D, trial or full-blown production).

Of the sixteen kilns, twelve provide indirect heat, which makes them better suited for the treatment of very fine powders for example used in the production of battery materials, ceramic materials or polishing agents.

Thermal processing competence - rotary kilns



Source: Company materials. Hauck & Aufhäuser

Main business areas

In 2018, IBU-tec acquired BNT Chemicals thereby expanding into highly complementary wet chemicals processes, enabling IBU-tec to expand both its service offering and its own product portfolio.

BNT brought an existing product portfolio mostly in the niche area of tin-based chemicals and catalysts. Among the key applications are glass coatings ensuring that glass is easily recycled and pharmaceutical additives.

Battery materials – leveraging the thermal treatment competence

IBU-tec is a producer of high-grade LFP lithium-ion phosphate featuring in battery cathodes, which is increasingly considered an alternative to cobalt-based batteries for stationary energy storage, e-mobility as well as other key applications. The company initially developed LFP based materials for BASF in 2010 under license from a Canadian consortium.

The license is expiring mid 2021, paving the way for IBU-tec to start bringing its own product to the market as of Q3 2021 with first contracts already signed.

The thermal treatment competence of the company brings about the homogeneity, consistency and handling ease behind IBU-tec's premium materials.

Glass coatings

BNT is a leader for tin-coatings used in recyclable glass, essentially ensuring that a single glass container can be used up to 20 times and thereby substituting energy-wasting plastic. The company boasts a 40% European market share. Recycled glass reduces the energy requirement for producing a glass bottle. A tin coating applied during the production of a glass bottle, when the glass is melted and formed, ensures increased mechanical strength.

Catalysts

A catalyst is a combination of a carrier and an active components and features in 80% of all products in the chemical industry. Their use results in reduced energy consumption, reduced air pollution and material consumption. IBU-tec produces catalysts used in the production of plastics, adhesives, coatings and paints or cement.

Additives for the pharmaceutical industry

Tin-based catalysts are also supplied to the pharmaceutical industry (e.g. in medication to treat high blood pressure).

Services and recycling

The company's **service offering** to industry was significantly expanded with the addition of wet chemicals processes courtesy of the BNT Chemicals acquisition enabling broader R&D and feasibility studies, in-lab material development, testing and upscaling, all the way to manufacturing services.

Material processing know-how is at the core of **a broad recycling offering**, which is gaining importance given increased environmental awareness and regulation: phosphates recycling for the fertilizer industry, battery materials recycling, recycling of building materials, rare earth recovery.

	BNT Chemicals		IBU tec		Group
	Wet chemistry		Thermal processing		
					
	Battery materials	**Glass coatings**	**Specialty chemicals/catalysts**	**Services and Recycling**	
Products and services	Materials mostly for Lithium ion phosphate ("LFP") batteries and Nickel Manganese ("NM") batteries , including fine particle iron oxide and lithium ferosphosphate.	Monobutyltin trichlorid applied to glass in order to improve strength and render it recyclable	Catalysts featured in bio-ceramics, UV-absorbants, polishing agents, additives in high-performance batteries; tin-based catalysts (e.g. stabilisers for glues and sealants); tin-based catalysts used in the pharma industry (e.g. featured in blood-pressure sinking medications)	R&D, process engineering and scale-up trials on various materials; contract manufacturing; recycling and recovery of tin, nickel and other metals and rare earths	
Estimated capacity /revenue potential	4000 t/ € 45m- € 60m revenue potential	500 t / € 10-15m revenue potential	€ 15-20m revenue potential	€ 15 - € 20m revemue potential	
Sales 2020E (€ m)	2.5	7.0	8.0	15.4	**32.9**
Sales share (estimate)	8%	21%	24%	47%	
Market positions	Ealy mover High-end LFP producer in Europe	40% European market share in glass coatings	Fragmented markets	Fragmented markets	
Customers concentration	Top five cutomers account for 66% of revenues				
Key customers	umicore, BASF, NOVARTIS, SWAROVSKI, VARTA, WACKER, KRONOS				
Competitors	Songwon, Lanxess, PMC, Bodycote, Clariant, Johnson Matthey				
Raw Materials	Lithium, iron, tin				
Employees 2020E	250				
Production footprint					
EBITDA 2020E (€ m)					**4.0**
EBITDA-margin					**12%**

Source: Company data; Hauck & Aufhäuser

Quality

Global unique rotary kiln arsenal and superior patented technology

While rotary kilns are a well-known and established technology, IBU-tec differentiates with a **footprint of 16 furnaces** that supply either direct or indirect heat and come in a broad range of profiles, which is **unique worldwide**.

This provides for a **flexible adaptation to individual customer requirements** be it on the materials front or on the volumes front (small vs. large batches etc.) hence ensuring that customer projects can seamlessly move from the experimental stage, to process engineering, up-scaling and all the way to contract manufacturer, saving customers both time and money.

IBU-tec's eight **pulsation reactors are a patented globally unique technology**. The thermal shock treatments they apply to materials result in powders with above average qualities such as homogeneity as well as high consistency for specific surfaces, specific crystal structure or particle sizes.

The company has invested more than € 45m in its production set up for what are niche markets. One needs to add to this capital outlay over **20 years of material handling experience and knowledge**, which is presumably difficult to replicate overnight for a new entrant.

Moreover, because **pulsation reactors effectively produce near to perfect powders** with extremely low agglomerations, **customers can save on one process step** and they can often do away with the final grinding.

All of the above ensures **that IBU-tec can command and defend premium pricing.**

Competitive services platform

Especially since the addition of BNT Chemicals' wet chemistry lab and process engineering expertise, IBU-tec's unique selling proposition is that of **one-stop shop from R&D all the way to contract manufacturing**, ultimately helping customers reduce R&D and process risks, while quickly helping them come up with incremental production capacities.

Source: Company data; Hauck & Aufhäuser

Surely, R&D projects can also be performed by universities and institutes like Frauenhofer but companies cannot be assured that the IP is protected in an academic environment. IBU-tec on the other hand enters into detailed and stringent confidentiality agreements that are legally binding.

Product lifecycle and process know-how does not stop at contract manufacturing level but, goes one extra turn **to address the recycling of materials** in an effort to help customers preserve resources. Based on this know-how, IBU-tec is able to offer:

- Battery materials recycling which is in high demand considering resource scarcity;
- Tin recycling from intermediary products;
- Phosphor recovery to be resold to the fertilizer industry;
- Precious metals and rare earth recovery from catalyst production and polishing processes.

Operating as one stop shop also ultimately allows IBU-tec to use the finding from contract manufacturing for new research and development assignments hence further growing revenues with key customers.

Furthermore, since with the integration of BNT, **IBU-tec has initiated a transformational change of its approach to business by bringing own products to attractive end markets** with solid potential for highly scalable growth

Early mover in promising LFP battery materials

Lithium iron phosphate ("LFP") batteries: attractive alternative to still now dominant Nickel Manganese Cobalt batteries ("NMC")

Even through there are several types of lithium-ion batteries available, NMC batteries today capture the lion's share of lithium-ion batteries used in EV, as they offer a number of advantages vs. other existing technologies as the chart below shows: they have a relatively high average life, good energy density, are good at conducting electricity with a decent reach and are relatively safe.

The NMC technology currently dominates because electric vehicles today account for the lion's share of lithium-ion battery demand and were en masse early adopters of this" okayish" battery type.

However **NMC-type batteries face a number of disadvantages** which limit their growth potential particularly as lithium-ion batteries find growing areas of applications outside electric vehicles and particularly passenger cars. Their lithium cobalt oxide based battery chemistries are more prone to thermal runaway if overcharged. Cobalt and nickel are increasingly scarce and expensive. Cobalt is also mined in politically volatile regions such as Congo.

These limitations have prompted growing attention in alternatives such as LFP batteries.

Comparison of lithium-ion battery performance

	Energy	Power	Saftey	Life	Cost
LCO - Lithium cobaltite	+++	+++	+	++	+
NCA - Nickel Aluminium Cobalt Oxide	+++	++	-	++	-
LMO - Lithium Manganese Oxide	-	+++	++	-	++
NMC - Nickel Manganese Cobalt	++	++	++	+++	+++
LFP - Lithium Iron Phosphate	++	+++	+++	++	++

Source: Umicore; Hauck & Aufhäuser

Although LFP has 25% less capacity than other lithium batteries due to its operational voltage (3.2 volts vs 3.7 for cobalt-based cathode chemistries), which requires batteries to be bulkier on average, major commercial advantages are that it is cheaper and poses lower safety concerns such as overheating and explosion.

LFP batteries also run on long cycle lifetimes and deliver a wider operating temperature range.

Last but not least, LFP **contains no cobalt or nickel, removing material sourcing and ethical concerns,** thereby significantly contributing **to good ESG rating** both on the resource consumption front and on the social responsibility front.

As a result, leading EV manufacturers, such as Tesla (confirmed for Model 3) and VW (reportedly for ID.1 & ID.2), are moving towards LFP chemistry (see "Theme" section). **Wood Mackenzie for example forecast a 20% LFP market share in the EV-space by 2025**.

Moreover, LFP's specifications are such that it is poised to be increasingly used in specialty applications beyond classical passenger EV, such as wearables and hearing aids or stationary power storage.

It can also be mixed in with NMC type materials to achieve higher performance even in EV batteries.

IBU-tec: Premium LFP producer in Europe for specialty applications

Thanks to its thermal treatment-based fine powder expertise, IBU-tec entered early on in 2010 into a cooperation with BASF for the development of LFP compounds.

While competing against much larger competitors (e.g. Johnson Matthey, Clariant) **IBU-tec differentiates with a premium product that**

a. is very homogeneous and consistent,

b. is much easier to process,

c. is delivered with a constant level of humidity, a key source of battery performance problems

d. provides overall better electric conductivity.

With its clearly differentiated product, IBU-tec is rather **focusing on high-end niches** such as specialty batteries, (e.g. for hearing aids), energy storage solutions or premium EV batteries (e.g. SUVs or forklift trucks). IBU-tec's premium LFP is also being considered as an additive to NMC type and other more common Li-ion batteries for EVs.

Here, **the local production in Europe** is another key advantage as global cell manufacturers are increasingly ramping up European capacities.

The superior performance of IBU-tec's LFP product is valued and recognized by customers as they are willing **to pay up two to three times as much for IBU-tec LFP grades** than for standard Asian-made materials, which often require additional costly processing steps before being pressed into cathodes.

In order to further improve the margin profile, the company is exploring the building of drying and granulating capacities, process steps which are currently outsourced and which could save it up to € 6 /kg in production costs.

Leader in the glass coating and other niche applications of tin-based expertise

Tin-based specialty chemicals are a 85.000 ton niche, too small to warrant the attention of large specialty chemicals groups.

The company, through BNT Chemicals' tin-based catalyst know-how, is the **leading European producer of a tin-based glass container coating** called MBTC or monobutyltin trichloride with significant capacities. These coatings vastly improve the lifetime of recycled glass and are therefore key to the competitiveness versus plastic.

Despite being a **growing market at a c. 4-5% CAGR**, it remains a niche, hence being neglected by larger players as evidenced by Lanxess selling out its production to an American firm called PMC, which is pulling out of Europe altogether.

As a result, BNT already commanding a 40% European market share for this material, should be able to expand further thereby truly becoming the dominant player in Europe.

Growth

44% average annual EBITDA growth into 2025E

Following the acquisition of BNT Chemicals, which it uniquely combines with a state-of-the art thermal processing know-how, IBU-tec has identified **four major growth areas into 2025E**: battery materials, mostly own LFP production, glass coatings, specialty chemicals/catalysts as well as services and recycling.

The **company is aiming to generate 2025E revenues in the range of € 80m to more than €100m**, representing a CAGR of > 20% with an EBITDA margin in excess of 20% vs an estimated 12% in 2020E.

We are estimating 2025E revenues of € 103.4m, representing an **average 26% annual growth** vs. 2020E. EBITDA is seen to grow an **over-proportional average 47% p.a.** with the margin adding an estimated 12 pts to 24.2% by 20205E.

Earlier this week the **company guided for 2021E revenues of € 37m to € 39m, representing a 20% yoy growth** at the mid-point of the range vs. our 2020E estimates and a 2021E EBITDA margin of 17%-19%, following a FY 2020 in which it suffered a double-whammy: CoV and a substantial fire at BNT Chemicals, which hit late 2019.

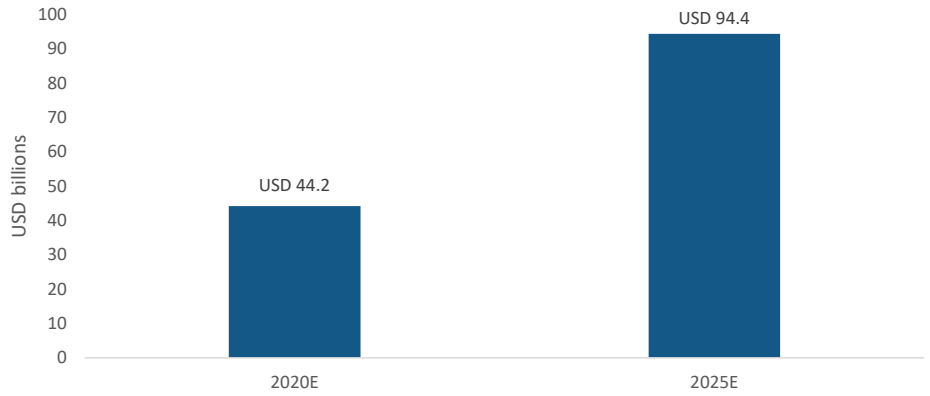
In connection with this accident, the company has recovered € 8.9m in insurance payments in 2020 and 2019, with € 2m more estimated to come in 2021E, and has built prudently solid provisions for the future.

Battery materials: 90% average EBITDA growth into 2025E on existing capacity

In light of the growth in electric mobility and stationary power storage needs, global demand for lithium-ion battery is set to over double to USD 94 billion by 2025E.

As demand from electric vehicles and the stationary storage market both skyrocket, evolving performance priorities will create a demand for different types of batteries used for different applications.

Global lithium-ion battery demand



Source: MarketsandMarkets analysis; Hauck & Aufhäuser

NMC based batteries alone therefore are unlikely to be the sole technology around in light of the many limitations outlined earlier.

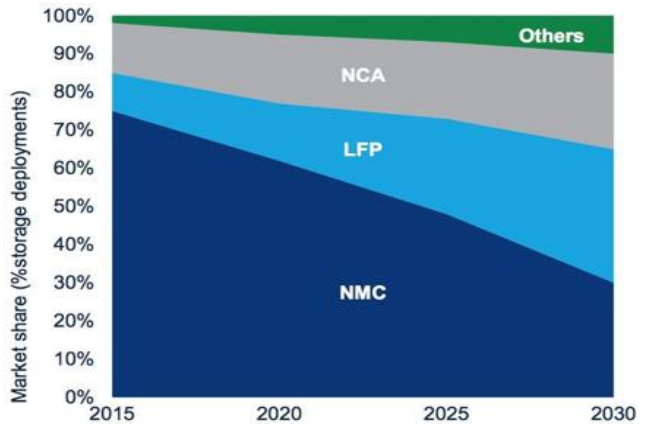
According to research by Wood Mackenzie, **LFP should not only gain in popularity across the board but should even overtake NMC for stationary storage applications for example** with the consulting firm estimating that LFP should grow its market share of the stationary storage market from 10% currently to 30% by the end of this decade.

Moreover, **LFPs are increasingly being sought after because of their long battery life and safety** in the commercial vehicle market including electric forklift trucks as well as hearing aids and wearables.

Most LFPs will also get mixed in with NMC materials in an effort to develop batteries capturing the best of both worlds. **Wood Mackenzie for example forecast a 20% LFP market share in the EV-space by 2025**.

In fact research into making LFP battery packs denser and smaller, indicate they should also soon make their way into passenger EVs.

Growth forecasts by type of lithium - ion battery for storage



Source: Wood Mackenzie; Hauck & Aufhäuser

With that in mind and following the investments made at the Bitterfeld site in 2018 and 2019, IBU-tec **currently has capacity for the production of up 4000 tons of high-end LFP materials**, making it one of the first players with substantial production in Europe.

Beyond this initial tonnage, we understand that **the company is considering expanding capacities to over 10,000 t in light of its current project pipeline and the strong demand it currently faces.**

Interestingly it would take only 12-18 months to expand to over 10,000 tons of capacity given that it would involve simply installing additional machinery in existing halls.

We estimate that the company is investing an estimated €10m in 2021E to accommodate growth across all product areas, to rebuild the BNT Chemicals facility after the fire and on some ancillary M&A integration projects, for now funded with an estimated € 15m of incremental debt.

The 10.000 tons, which could imply incremental capex, yield a revenue potential of € 150m for IBU-tec from battery materials alone, implying material upside to our figures.

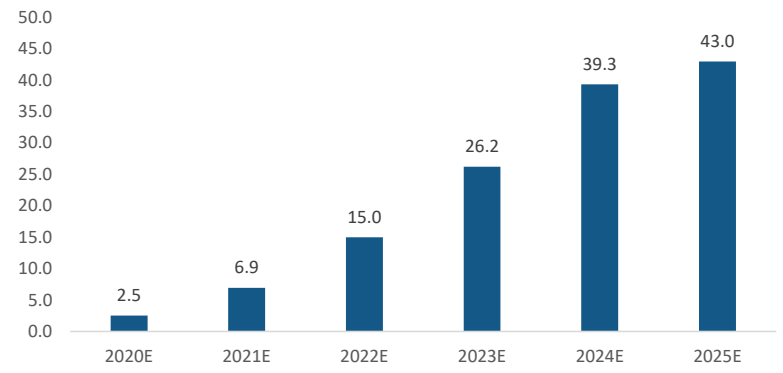
The license to produce LFP, currently owned by a Canadian consortium is set to expire mid 2021 opening up the way for the **IBU-tec's first volumes to hit the market in Q3 2021.**

The company is in **advanced negotiations with a number of customers including in the Far East.** In Germany, according to available public information, it has entered into a research **cooperation with VARTA regarding the development a new iron-based slurry air accumulator for stationary battery storage**. IBU Tec supplies fine particle iron oxide for the iron slurry electrodes. VARTA being a leader in micro-batteries and hearing-aids, we can easily imagine IBU-tec supplying it with own product materials for these applications as well down the line.

Further areas of application for IBU-tec LFP grades includes 3D printing, forklift trucks and marine transportation.

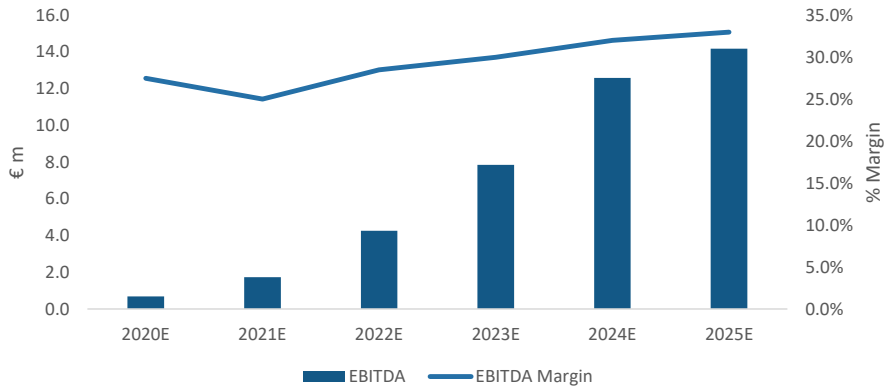
The company is currently estimated to generate already now a high **EBITDA margin slightly of below 30%** on this product. We estimate that it can **ramp up margins to some 32% by 2025E as we assume that operating leverage on some 85% average annual top line growth** is diluted by some price concessions on larger projects and a likely ramp up in structures, particularly sales and marketing.

Battery materials revenues (€ m)



Source: Company data; Hauck & Aufhäuser

Battery materials EBITDA and EBITDA margin



Source: Company data; Hauck & Aufhäuser

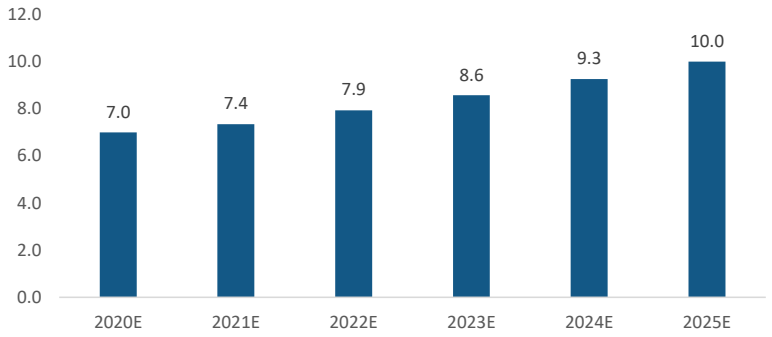
Glass coatings: 24.5% average EBITDA growth into 2025E on existing capacity

According to market research commissioned by the company, there are currently 500 factories worldwide that consume on average 3500t of MBTC for the production of 4.5 million tons of container glass. The market is **growing at 4-5% annual rate** as environmental concerns increasingly speak against PET packaging.

In Europe, where BNT Chemicals dominates the market with a 40% market share, an **average 7% annual growth rate is** expected by 2025E given relatively higher environmental awareness than in the rest of the world and the market consolidating further with the pull-out of an American competitor.

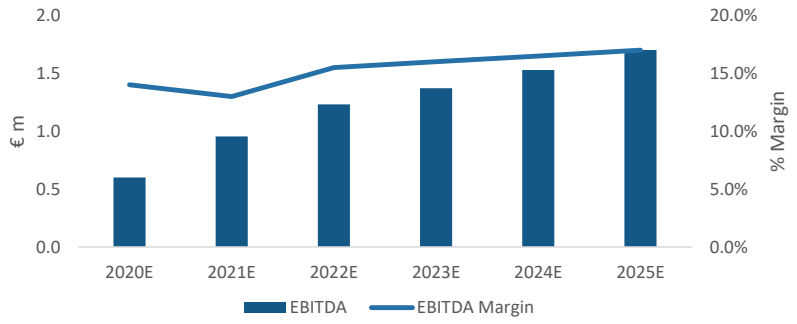
The company is estimated to **generate a 14% EBITDA margin** in the business with some potential for more as it is working on introducing a production process that results in up to 50% more yield.

Glass coatings revenues (€ m)



Source: Company data; Hauck & Aufhäuser

Glass coatings EBITDA and EBITDA margin



Source: Company data; Hauck & Aufhäuser

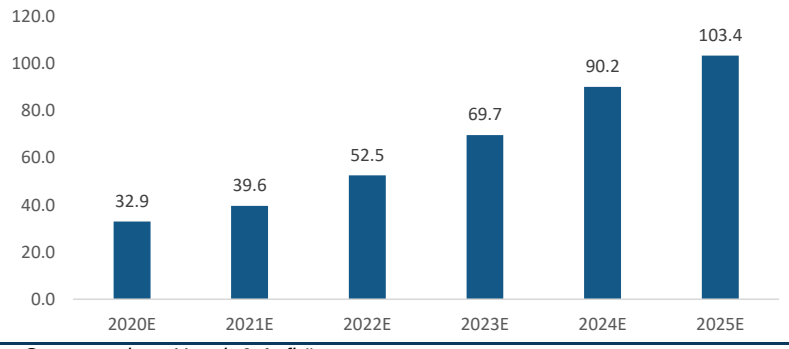
Group average EBITDA growth of 47% p.a. into 2025E

The integration of BNT Chemicals should enable IBU-tec to broaden its services offer to corporates and generate R&D synergies especially in Bitterfeld. The company's recycling offer should also see buoyant demand in years with corporates focusing on preserving resources.

Similarly, the specialty chemicals business should be recovering to pre-CoV levels at top and bottom line with likely synergies from the BNT acquisition further increasing margins.

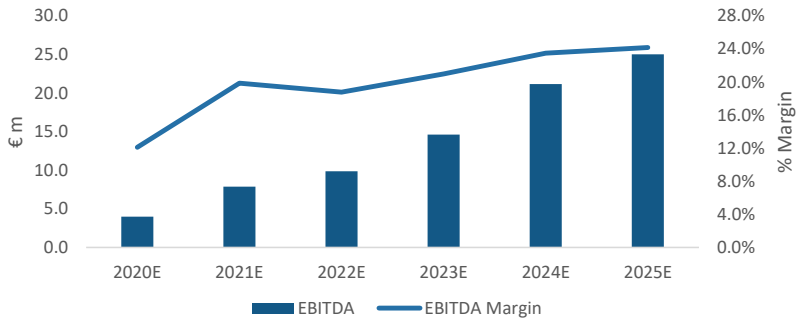
Overall we expect **IBU-tec to generate average revenue growth of 26% and average EBITDA growth of 47% into 2025E with the EBITDA margin gaining + 12 pts in to 24.2%** large part due to a much improved business mix in connection with the growth in the highly profitable battery materials business.

Group revenues (€ m)



Source: Company data; Hauck & Aufhäuser

Group EBITDA and EBITDA margin

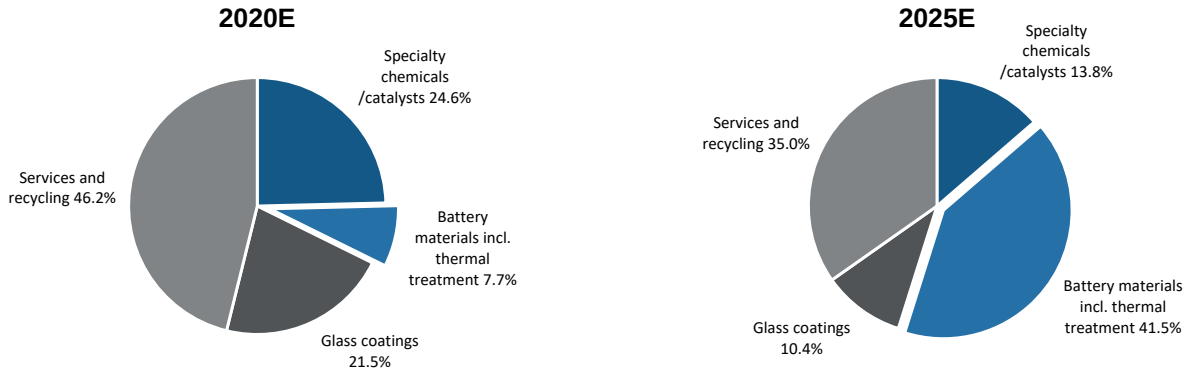


Source: Company data; Hauck & Aufhäuser

The pie charts below show the expected change in the business mix:

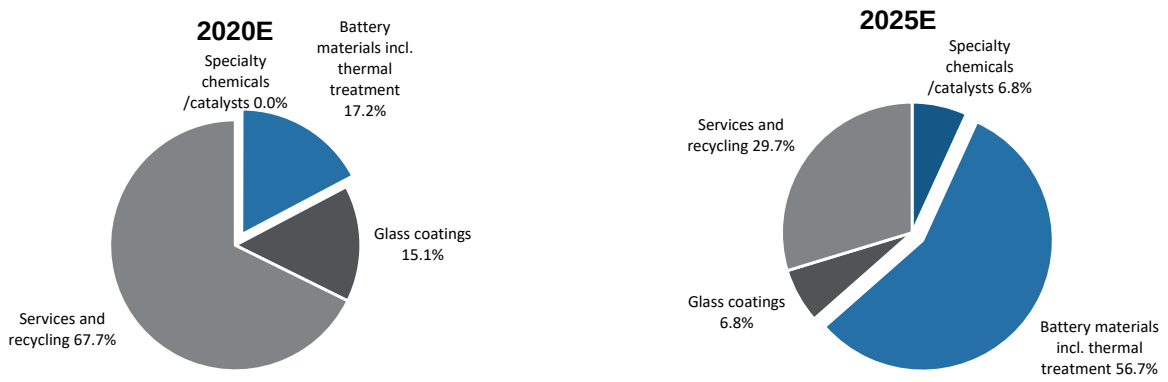
Battery materials should account for an estimated 42% of revenues and 57% of EBITDA by 2025E.

Revenue mix progress



Source: Company data; Hauck & Aufhäuser

EBITDA mix progress



Source: Company data; Hauck & Aufhäuser

Business quality

Balance sheet structure

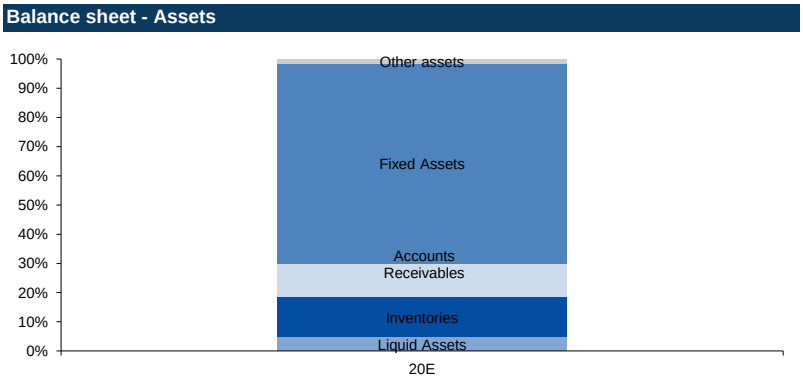
As per FYE 2020E, total assets are expected to amount to € 54.4m, the lion's share of which are fixed assets, particularly property plant and equipment, as expected for such a capital intensive business, amortized over a very long time period of up to 30 years.

Since 2000, the company has invested € 45m including the acquisition of BNT chemicals in 2018, for which the company is estimated to have paid an estimated € 15.4m in including debt.

The goodwill in connection with the acquisition of BNT Chemicals amounts to an estimated € 3m and is assumed to have been slightly impaired in FY 2020 following the fire incident of last 2019.Within those, goodwill in connection with the acquisition of BNT Chemicals amounts to an estimated € 3m. Goodwill is amortized under German HGB accounting standards over a period of 10 years.

Inventories are essentially made up of raw materials (see Company Description) and semi-finished goods. Accounts receivables seem to be recovered over a 50-70 period historically.

Liquid assets are on the thin side at an estimated € 2.7m per FY 2020 as the company is facing moderate to high capital requirements (raw materials build up faced with the internalization of certain processing steps particularly in glass coatings and ongoing capex to get ready for a scale up in own battery materials production per Q3 2021).

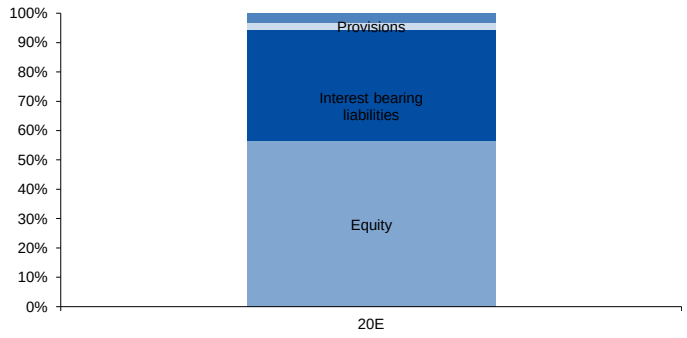


Source: Company data; Hauck & Aufhäuser

The company boasts a very heathy **equity ratio of close to 60% of total assets**, with financial debt estimated to account for the bulk of the rest at approximately € 20m. Debt comprises liabilities secured by property plant and equipment in the amount of approximately € 10m and some € 2.5m in KfW-backed CoV-related relief.

While net debt to EBITDA is high at 4.4x estimated per year end 2020, leverage should be declining to decline 2.7x by 2022E despite ongoing sustained capex investments as the company ramps up the highly profitable battery materials production.

Balance sheet - Liabilities

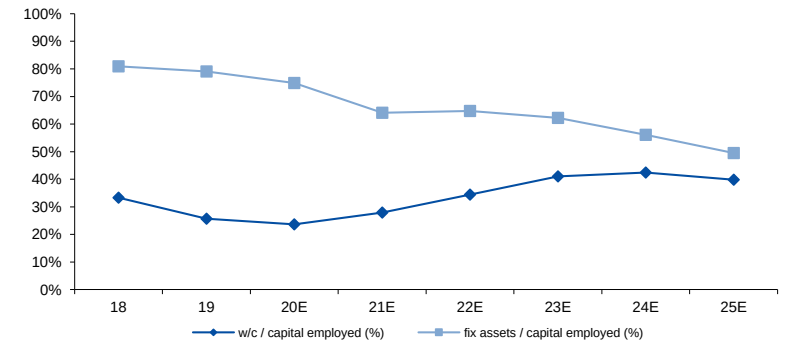


Source: Company data; Hauck & Aufhäuser

As the company ramps up own-production vs. being just a service provider in the years ahead, the mix between fixed assets and working capital will evolve with working capital set to be grabbing a larger share from an estimated 25% historically to close to 40%by 2025E, although management expects to become more efficient in working capital management.

Capital intensity will still remain relatively high though 2025E at around 60% ensuring tangible entry barriers for the business.

Capital employed

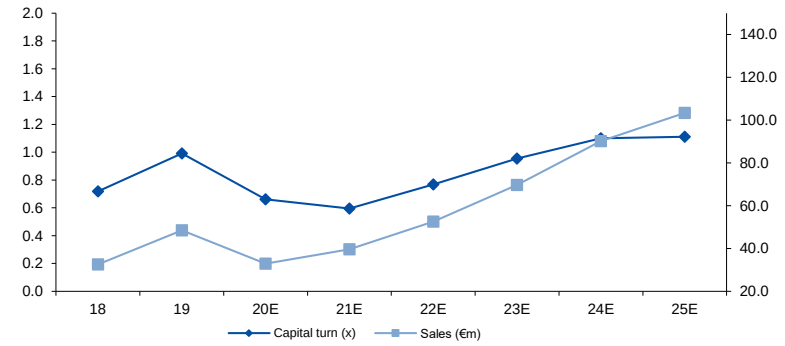


Source: Company data; Hauck & Aufhäuser

FY 2018 figures include at most 6 months of BNT Chemicals profits, explaining why capital turn jumps to slightly above 1x in 2019, first year of full-year consolidation. The CoV crisis coupled with the effects of the arson at BNT Chemicals in December 2020 will affect capital turn in 2020, before a recovery begins and **capital turn climbing at around a 1.2x by 2025E.**

The flattish curve in the early years of this progression is explaining by on-going capital requirements for growth.

Capital employed turnover and sales (€ m)



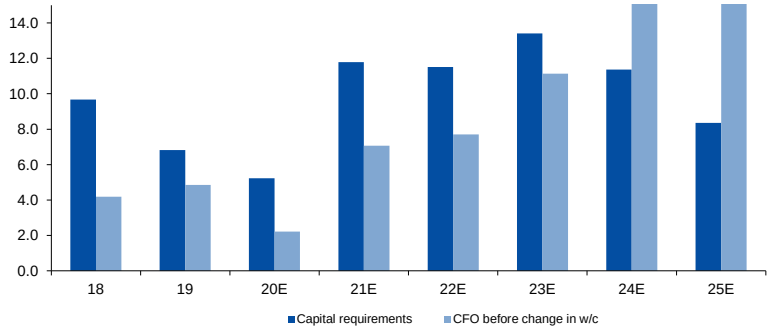
Source: Company data; Hauck & Aufhäuser

Capital requirements should remain demanding as seen by the chart below at least until FY 2023E as the company ramps up own-production (e.g. increase in glass coating volumes after a key European competitor pulled out of the market) and continues investing in its production plant.

In 2018, on top of acquiring BNT Chemicals the company bought its second production site in Bitterfeld where BNT is also located, near Weimar for € 7.5m.

The company could be expanding capacities further, notably to increase battery materials production capacities to 10.000 tons up from 4.000 tons currently.

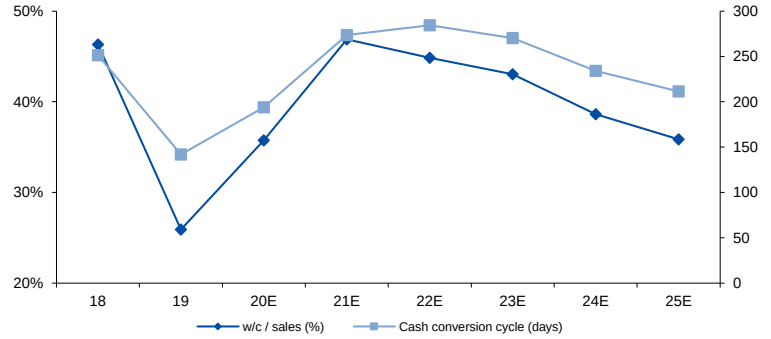
Capital requirements and CFO before changes in w/c



Source: Company data; Hauck & Aufhäuser

The working capital intensity of the business should remain stable going forward. In 2018 to 2020 the picture is biased by the consolidation of BNT for 6 months in 2018 and the CoV crisis hitting in 2020. Management could be launching initiatives to improve the wc/sales ratio though, which looks currently high at 35-45% on average.

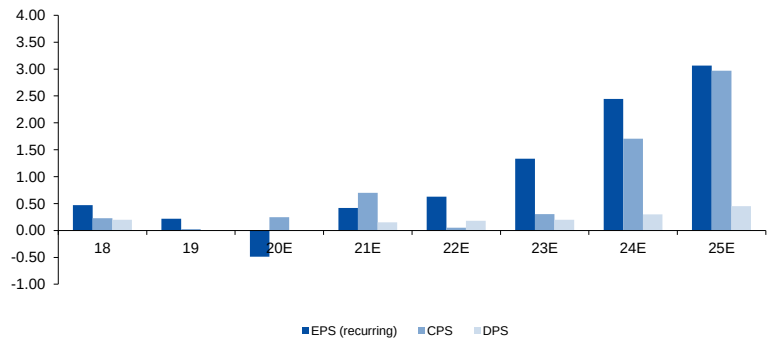
Cash flow analysis



Source: Company data; Hauck & Aufhäuser

The company should be clearly dedicating cash flow to fund growth in the immediate future. The company is however owner-managed and a dividend policy is in place amounting to € 0.15 per share plus a bonus dividend in good years.

DPS/CPS/EPS

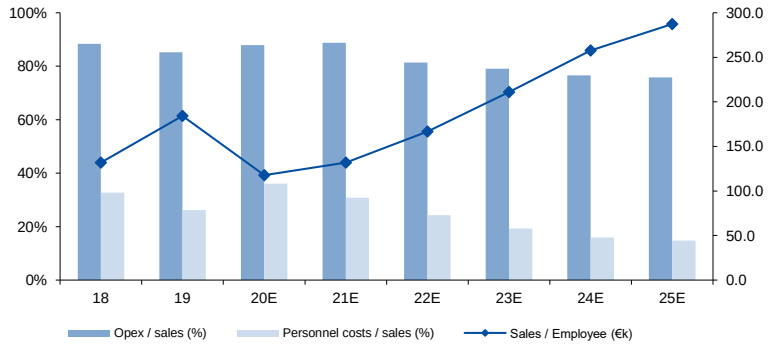


Source: Company data; Hauck & Aufhäuser

IBU-tec boasts a **strong degree of operating leverage**. On average over the 2020E-2025E period, the gross profit margin is expected at 56%, courtesy of pricing power on premium proprietary products or large market shares in niche products where competitors are withdrawing.

The EBIT margin is expected to reach on average 5.7% adjusting for the impairments we are assuming in 2020. All in all, however, operating leverage is estimated at close to 10x which looks set to drive the EBIT margin to 18% by 2025E.

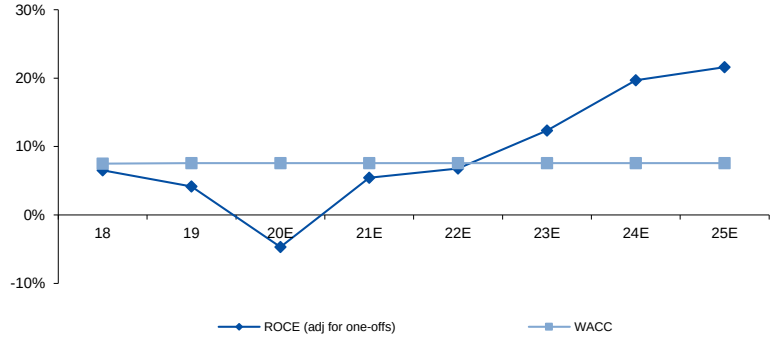
Cost base and leverage



Source: Company data; Hauck & Aufhäuser

Following the initial of investment into growth, ROCEs should be exceeding a calculated WACC of 7.5% and start generating value in 2022E according to our estimates. ROCEs should then quickly increase to very attractive levels as both the opex and the capex cycles subside.

Returns



Source: Company data; Hauck & Aufhäuser

Valuation

We value IBU-tec with a DCF and derive a **fair value per share of € 47.** On this basis, **we rate the company a BUY.** We however conducted a FCFY analysis and a peer group analysis in order to further support the DCF method.

DCF yields fair value of € 47 per share, 37% upside

The key assumptions of our model are:

- **Terminal EBIT margin:** The terminal year EBIT margin of 16% vs. an estimated 17% in 2024E and 18% in 2025E reflecting some competitive pressure eventually.
- **Terminal growth:** A terminal year growth rate of 2%
- **WACC:** A WACC of 7.5% (1.0% risk free rate, 6% equity risk premium, 1.2 beta to reflect the start-up nature of nascent business accounting for the bulk of growth going forward.).

DCF (EUR m) (except per share data and beta)	2021E	2022E	2023E	2023E	2024E	2025E	2026E	2027E	Terminal value
NOPAT	2.1	3.1	5.9	10.4	12.9	13.9	14.8	20.0	18.8
Depreciation	4.7	5.3	5.9	5.9	6.1	6.4	6.5	7.0	7.0
Increase/decrease in working capital	-1.8	-4.5	-6.4	-4.9	-2.3	-3.6	-3.0	-2.5	-1.6
Increase/decrease in long-term provisions and accruals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capex	-10.0	-7.0	-7.0	-6.5	-6.1	-6.4	-6.5	-7.0	-7.0
Acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital increase	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash flow	**-4.9**	**-3.1**	**-1.6**	**4.9**	**10.6**	**10.4**	**11.8**	**17.5**	**17.2**
Present value	-4.6	-2.7	-1.3	3.7	7.4	6.7	7.1	9.9	179.7
WACC	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.5%

DCF per share derived from	
Total present value	206
thereof terminal value	87%
Net debt (net cash) at start of year	18
Financial assets	0
Provisions and off balance sheet debt	0
Equity value	188
No. of shares outstanding	4.0
Discounted cash flow per share	**47.1**
upside/(downside)	**37%**
Share price	**34.40**

DCF avg. growth and earnings assumptions	
Short term growth (2019-2022)	2.7%
Medium term growth (2022 - 2027)	18.3%
Long term growth (2027 - infinity)	2.0%
Terminal year EBIT margin	16.0%

WACC derived from	
Cost of borrowings before taxes	2.5%
Tax rate	32.0%
Cost of borrowings after taxes	1.7%
Required return on invested capital	8.2%
Risk premium	6.0%
Risk-free rate	1.0%
Beta	1.2x

Sensitivity analysis DCF

WACC \ Long term growth	1.0%	1.5%	2.0%	2.5%	3.0%
8.5%	32.3	34.6	37.3	40.4	44.1
8.0%	35.8	38.5	41.8	45.6	50.2
7.5%	39.8	43.1	47.1	51.8	57.6
7.0%	44.6	48.6	53.5	59.5	67.0
6.5%	50.2	55.3	61.5	69.2	79.1

Sensitivity analysis DCF

WACC \ EBIT margin terminal year	14.0%	15.0%	16.0%	17.0%	18.0%
8.5%	32.5	34.9	37.3	39.7	42.1
8.0%	36.3	39.1	41.8	44.5	47.2
7.5%	41.0	44.0	47.1	50.1	53.2
7.0%	46.5	50.0	53.5	57.0	60.5
6.5%	53.4	57.4	61.5	65.5	69.5

Source: Company data; Hauck & Aufhäuser

FCFY 2025E yields a fair value of € 46 per share

Due to the fact that companies rarely bear sufficient resemblance to peers in terms of geographical exposure, size or competitive strength an Adjusted Free Cash Flow analysis (Adjusted FCF) has been conducted.

The main driver of this model is the level of return available to a *controlling* investor, influenced by the cost of that investors' capital (opportunity costs) and the purchase price – in this case the enterprise value of the company.

Here, the adjusted FCF yield is used as a proxy for the required return and is defined as EBITDA less minority interest, taxes and investments required to maintain existing assets (maintenance capex).

Simply put, the model assumes that investors require companies to generate a minimum return on the investor's purchase price. The required after tax return equals the model's **hurdle rate of 7.5%.** Anything less suggests the stock is expensive; anything more suggests the stock is cheap.

The model a fair value of **€ 46 per share** on FCFY2025E a time horizon more adequately reflecting the execution of the company's growth strategy.

FCF yield, year end Dec. 31	2019	2020E	2021E	2022E	2023E	2024E	2025E
EBITDA	**7.1**	**4.0**	**7.9**	**9.9**	**14.6**	**21.2**	**25.0**
- Maintenance capex	4.1	2.0	2.5	3.0	3.5	4.0	4.2
- Minorities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- tax expenses	0.6	-0.3	0.8	1.2	2.5	4.6	5.8
= Adjusted Free Cash Flow	**2.4**	**2.3**	**4.6**	**5.7**	**8.6**	**12.6**	**15.0**
Actual Market Cap	**137.6**	**137.6**	**137.6**	**137.6**	**137.6**	**137.6**	**137.6**
+ Net debt (cash)	14.6	17.6	22.3	26.7	29.7	26.2	17.4
+ Pension provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Off balance sheet financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Adjustments prepayments	0.1	0.1	0.1	0.1	0.1	0.1	0.1
- Financial assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Dividend payment	-0.8	0.0	0.0	-0.6	-0.7	-0.8	-1.2
EV Reconciliations	*13.8*	*17.7*	*22.4*	*26.2*	*29.1*	*25.5*	*16.3*
= Actual EV'	**151.4**	**155.3**	**160.0**	**163.8**	**166.7**	**163.1**	**153.9**
Adjusted Free Cash Flow yield	**1.6%**	**1.5%**	**2.9%**	**3.5%**	**5.2%**	**7.7%**	**9.8%**
Sales	**48.5**	**32.9**	**39.6**	**52.5**	**69.7**	**90.2**	**103.4**
Actual EV/sales	3.1x	4.7x	4.0x	3.1x	2.4x	1.8x	1.5x
Hurdle rate	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
FCF margin	4.9%	6.9%	11.5%	10.8%	12.4%	13.9%	14.5%
Fair EV/sales	0.7x	0.9x	1.5x	1.4x	1.6x	1.9x	1.9x
Fair EV	**31.7**	**30.5**	**60.9**	**75.9**	**114.8**	**167.5**	**200.1**
- EV Reconciliations	*13.8*	*17.7*	*22.4*	*26.2*	*29.1*	*25.5*	*16.3*
Fair Market Cap	**17.9**	**12.8**	**38.5**	**49.7**	**85.8**	**142.1**	**183.9**
No. of shares (million)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Fair value per share	**4.5**	**3.2**	**9.6**	**12.4**	**21.4**	**35.5**	**46.0**
Premium (-) / discount (+) in %	**-87.0%**	**-90.7%**	**-72.0%**	**-63.9%**	**-37.7%**	**3.2%**	**33.6%**

Sensitivity analysis fair value								
Hurdle rate	7.5%	4.5	3.2	9.6	12.4	21.4	35.5	46.0
	10.0%	2.5	1.3	5.8	7.7	14.3	25.0	33.5
	12.5%	1.3	0.2	3.5	4.8	10.0	18.8	26.0
	15.0%	0.5	-0.6	2.0	2.9	7.1	14.6	21.0

Source: Company data; Hauck & Aufhäuser

Peer group analysis

Considering that battery materials account for a growing and significant share of group EBITDA by 2025E, we chose a peer group of companies that are either high-end specialty chemicals providers with a greentech angle and with a similar product portfolio to IBU-tec's or that are simply producing Li-ion battery materials themselves.

Johnson Matthey is a specialty chemicals company that manufactures catalysts, pharmaceutical materials and pollution control systems. The company refines platinum, gold and silver and produces color and coating materials for various industries. Johnson Matthey is also heavily investing in its cathode battery materials business for the future.

Clariant is a global specialty chemicals company serving diverse end markets. Products and services are grouped into four business areas: car chemicals, catalysts and energy, natural resources and plastics and coatings. The company is also developing battery cathode materials. Around 40% of sales are generated in Europe.

PQ Holdings is a provider of catalysts, specialty materials and chemicals and of services that enable environmental improvements and increase safety. It manufactures specialty inorganic performance chemicals, specialty catalysts and specialty glass materials. The key revenue driver is the performance materials and chemicals segment with produces silicates and other specialty materials.

Albermarle is the world's largest lithium producer. The company produces its lithium from salt brine deposits in Chile and the USA and from its hard rock joint venture mines in Australia. The company is also a global leader in the production of bromine, used in flame retardants and oil refining catalysts.

Livent is a pure-play lithium producer formed when FMC spun off its lithium business in October 2018. The company's low-cost lithium carbonate production comes from brine resources in Argentina. Livent also operates downstream lithium hydroxide conversion plants in the USA and China.

MP Materials Corp produces and markets rare earth specialty chemicals. The company is building a full integrated supply chain for high strength permanent magnets for the electrification and sustainability industries.

Looking at **EV/EBITDA multiples**, **the average 2021-2023E implied value per share for IBU-tec is € 51.6 per share**.

If one **also includes EV/EBIT multiples** the picture looks less attractive compared to much larger peers with higher degrees of "maturity". The **implied fair value per share for IBU-tec is € 43.5.**

IBU-tec is largely a "start-up" especially when it comes to own products and is still in an expanding capex cycle, meaning that depreciation is still over-proportionally high and is not leveraged even in 2023E with its potential revenue level. The discount relative to peers should expand as the company reaches its true earnings power.

IBU-TEC	Price	Currency	Market Cap	EV/Sales 21E (x)	EV/Sales 22E (x)	EV/Sales 23E (x)	EV/EBITDA 21E (x)	EV/EBITDA 22E (x)	EV/EBITDA 23E (x)	EV/EBIT 21E (x)	EV/EBIT 22E (x)	EV/EBIT 23E (x)
JOHNSON MATTHEY	29.1	GBP	5,637	1.8	1.6	1.5	10.9	9.3	8.3	15.6	12.6	11.7
CLARIANT AG	19.1	CHF	6,344	1.9	1.8	1.8	11.9	10.8	10.6	19.3	17.8	18.2
PQ GROUP HOLDINGS Inc	14.8	USD	2,023	3.3	3.1	3.1	10.7	9.3	8.9	21.5	21.2	13.5
ALBERMARLE CORP	177.6	USD	18,913	6.2	5.5	4.9	23.5	19.4	16.6	32.8	25.9	n.a.
LIVENT CORP	22.2	USD	3,248	9.7	8.0	7.0	53.6	32.7	23.4	92.2	46.2	31.3
MP MATERIALS CORP	32.3	USD	5,038	37.8	20.1	14.5	76.7	43.5	22.9	124.5	60.9	25.9
IBU-TEC	**34.0**	**EUR**	**136**	**4.0**	**3.1**	**2.4**	**20.4**	**16.6**	**11.4**	**50.7**	**36.0**	**19.2**
average(peer group)				**10.1**	**6.7**	**5.5**	**31.2**	**20.8**	**15.1**	**51.0**	**30.8**	**20.1**
Premium+/discount- in (%)				-60%	-53%	-56%	-35%	-20%	-24%	-1%	17%	-5%
Implied fair value per share				**95.7**	**83.6**	**90.7**	**56.9**	**47.0**	**50.8**	**35.8**	**30.7**	**39.5**

Source: Bloomberg; FactSet; Hauck & Aufhäuser

Theme

LFP is gaining in visibility and acceptance

Although we highlighted that IBU-tec's premium LFP materials are meant for niche applications and not for mass-use in EV per se, LFP chemistries as such are increasingly considered for EV batteries, given that they overall cheaper than Cobalt and Nickel based alternatives. The latter are plagued by raw materials scarcity issues and ethical concerns given their mining in politically volatile regions.

With batteries making up 25% of the cost of an electric vehicles, it is crucial to bring prices down in order make EVs accessible to the broader masses and reach emissions reduction targets.

With this in mind, **Tesla is producing its Model 3 in China with CATL-supplied LFP batteries** that are 25% cheaper than standard cobalt based batteries, granted with some teething problems reported in the press and that are common at such early stages. Tesla also announced that the site in Berlin designed to produce eventually 500 000 EV annually will also host the largest battery factory in the world with a capacity of 100 GWh.

Elon Musk announced that the batteries made Germany will be considerably cheaper enabling the company to offer mass-market EVs with a price tag of EUR 20 000 and under, such as the Model 2 which should be released during the next three years.

Similarly, **VW has announced that it will be designing its SMALL BEV EV platform including the ID.1 and ID.2 vehicles with cobalt-free LFP batteries**, largely in order to make the cars affordable for the masses. With cobalt currently costing around € 14.000 per ton and Cobalt costing around € 27.000 per ton, the car manufacturer is hoping to cut costs by around 20% thanks to LFP.

Valuing the 10,000 ton scenario

With EV manufacturers quickly adopting the LFP chemistry, IBU-tec's target of **generating demand for 10,000 tons of capacities** on battery materials looks reasonable (only 2,000t - 4,000t reflected in the guidance). At € 15/kg and assuming a 32% margin in line with what we expect by 2025E, that opportunity alone should be worth some **€ 120 per share, back of the envelope and using our FCFY template**.

Company Background

Company history

The table below outlines the major milestones in company history.

Major milestones in company history

1885	Founded as a decorative stone manufacturer: drying, crushing and grinding early on part of company DNA
1948-1974	Lime and travertine businesss nationalised in former GDR
1975	Conversion into R&D center, first rotary kiln: analysis, trials, measurements know-how
1993	Post German reunification: privatisation and re-incorporation
2001	Current CEO Ulrich Weitz takes over the company, catalyst research begins
2005-2009	Patenting of the manufacturing processes for very fine powders in pulsation reactor
2016	Addition of equipment and client options
2017	IPO
2018	Acquisition of BNT Chemicals

Source: Company data; Hauck & Aufhäuser

Management board

Ulrich Weitz, CEO. Mr. Weitz bought the company in 2000. He is both responsible for the IBU-tec Group and is managing director for BNT Chemicals GmbH. Having studied mechanical engineering, he began his career with OTIS, the elevator manufacturer, in Paris and held management positions in quality control, design and production. Mr. Weitz then moved to Winkler & Dünnebier AG, a machine and automation provider for the mail & postal as well as for the tissue & hygiene industries where he held the position of plant manager leading a team of over 750 employees. Mr. Weitz and his a family are majority shareholder of IBU-tec.

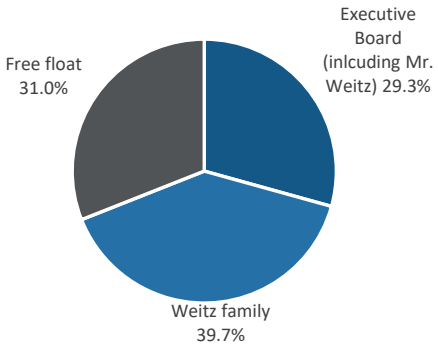
Jörg Leinenbach, CFO. Mr. Leinenbach joined IBU-tec as CFO in January 2015 and currently heads finance while also being responsible for all value-adding operative processes. After studying business administration at the University of Saarland with an emphasis on auditing, taxation and tax law, he worked for Prego Services, an IT services company focused on personnel, procurement and power management, as a division manager in commercial management. Throughout his professional career, he has held various management positions in accounting, controlling and investment management.

Dr. Arndt Schlosser, CSO. Dr. Schlosser joined the company as CSO in May 2020. He is responsible for sales, business development and the technology division. He graduated from the Justus von Liebig University in Giessen with a PhD in physical chemistry. After graduation, he started his professional career at Wacker Chemie and held positions in marketing & sales, planning and research, as well as quality management. Prior to joining IBU-tec, Dr. Schlosser worked as a Business Team Manager in Wacker's silicone division.

Shareholder structure

Following the IPO in 2017, the Weitz family is still subject to a lock-up ending December 2023.

Shareholder structure



Source: Company data; Hauck & Aufhäuser

Investment risks

Here are the main risks associated with the execution of the company's growth strategy:

- Prolonged macro-economic turmoil which could affect demand for specialty chemicals and services
- Production risks affecting the company's ability to supply customers especially with its key product going forward: LFP battery materials
- Supply chain disruptions affecting the sourcing of key raw materials such as tin, lithium, phosphates or oxides
- Pricing shocks on key raw materials
- Financing risks with the company unable to secure funding for its expansion plans

Financials

Profit and loss (EUR m)	2019	2020E	2021E	2022E	2023E	2024E	2025E
Net sales	**48.5**	**32.9**	**39.6**	**52.5**	**69.7**	**90.2**	**103.4**
Sales growth	*48.8 %*	*-32.0 %*	*20.1 %*	*32.8 %*	*32.6 %*	*29.4 %*	*14.7 %*
Increase/decrease in finished goods and work-in-process	-0.1	0.0	3.4	0.1	0.1	0.1	0.0
Total sales	**48.4**	**32.9**	**43.0**	**52.6**	**69.7**	**90.2**	**103.4**
Other operating income	2.2	9.0	0.8	0.5	0.5	0.5	0.6
Material expenses	23.7	16.3	19.8	23.1	30.4	39.1	44.7
Personnel expenses	12.7	11.9	12.2	12.7	13.4	14.3	15.3
Other operating expenses	7.0	9.8	4.0	7.5	11.8	16.1	19.0
Total operating expenses	41.3	29.0	35.1	42.8	55.1	69.0	78.4
EBITDA	**7.1**	**4.0**	**7.9**	**9.9**	**14.6**	**21.2**	**25.0**
Depreciation	5.2	5.8	4.7	5.3	5.9	5.9	6.1
EBITA	**1.9**	**-1.8**	**3.2**	**4.6**	**8.7**	**15.3**	**18.9**
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Impairment charges	0.0	1.5	0.0	0.0	0.0	0.0	0.0
EBIT (inc revaluation net)	**1.9**	**-3.3**	**3.2**	**4.6**	**8.7**	**15.3**	**18.9**
Interest income	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest expenses	0.4	0.4	0.7	0.9	0.9	0.9	0.9
Other financial result	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial result	-0.4	-0.4	-0.7	-0.9	-0.9	-0.9	-0.9
Recurring pretax income from continuing operations	**1.5**	**-3.8**	**2.5**	**3.7**	**7.8**	**14.4**	**18.0**
Extraordinary income/loss	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings before taxes	**1.5**	**-3.8**	**2.5**	**3.7**	**7.8**	**14.4**	**18.0**
Taxes	0.7	-0.3	0.8	1.2	2.5	4.6	5.8
Net income from continuing operations	**0.9**	**-3.5**	**1.7**	**2.5**	**5.3**	**9.8**	**12.3**
Result from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income	**0.9**	**-3.5**	**1.7**	**2.5**	**5.3**	**9.8**	**12.3**
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit (reported)	**0.9**	**-3.5**	**1.7**	**2.5**	**5.3**	**9.8**	**12.3**
Average number of shares	4.0	4.0	4.0	4.0	4.0	4.0	4.0
EPS reported	**0.22**	**-0.86**	**0.42**	**0.63**	**1.33**	**2.45**	**3.06**

Profit and loss (common size)	2019	2020E	2021E	2022E	2023E	2024E	2025E
Net sales	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**
Increase/decrease in finished goods and work-in-process	neg.	0.0 %	8.6 %	0.2 %	0.1 %	0.1 %	0.0 %
Total sales	**99.9 %**	**100.0 %**	**108.6 %**	**100.2 %**	**100.1 %**	**100.1 %**	**100.0 %**
Other operating income	4.5 %	27.3 %	2.0 %	1.0 %	0.7 %	0.6 %	0.6 %
Material expenses	49.0 %	49.3 %	49.9 %	43.9 %	43.6 %	43.4 %	43.2 %
Personnel expenses	26.2 %	36.0 %	30.8 %	24.3 %	19.3 %	15.9 %	14.8 %
Other operating expenses	14.4 %	29.8 %	10.0 %	14.2 %	16.9 %	17.8 %	18.4 %
Total operating expenses	85.2 %	87.9 %	88.7 %	81.4 %	79.1 %	76.6 %	75.8 %
EBITDA	**14.7 %**	**12.1 %**	**19.8 %**	**18.8 %**	**21.0 %**	**23.5 %**	**24.2 %**
Depreciation	10.7 %	17.6 %	11.9 %	10.1 %	8.5 %	6.5 %	5.9 %
EBITA	**4.0 %**	**neg.**	**8.0 %**	**8.7 %**	**12.5 %**	**16.9 %**	**18.3 %**
Amortisation of goodwill	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Amortisation of intangible assets	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Impairment charges	0.0 %	4.6 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
EBIT (inc revaluation net)	**4.0 %**	**neg.**	**8.0 %**	**8.7 %**	**12.5 %**	**16.9 %**	**18.3 %**
Interest income	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Interest expenses	0.8 %	1.3 %	1.8 %	1.7 %	1.3 %	1.0 %	0.9 %
Other financial result	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Financial result	neg.	neg.	neg.	neg.	neg.	neg.	neg.
Recurring pretax income from continuing operations	**3.2 %**	**neg.**	**6.2 %**	**7.0 %**	**11.3 %**	**16.0 %**	**17.4 %**
Extraordinary income/loss	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Earnings before taxes	**3.2 %**	**neg.**	**6.2 %**	**7.0 %**	**11.3 %**	**16.0 %**	**17.4 %**
Tax rate	41.8 %	8.0 %	32.0 %	32.0 %	32.0 %	32.0 %	32.0 %
Net income from continuing operations	**1.8 %**	**neg.**	**4.2 %**	**4.8 %**	**7.7 %**	**10.9 %**	**11.9 %**
Income from discontinued operations (net of tax)	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Net income	**1.8 %**	**neg.**	**4.2 %**	**4.8 %**	**7.7 %**	**10.9 %**	**11.9 %**
Minority interest	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Net profit (reported)	**1.8 %**	**neg.**	**4.2 %**	**4.8 %**	**7.7 %**	**10.9 %**	**11.9 %**

Source: Company data, Hauck & Aufhäuser

Balance sheet (EUR m)	2019	2020E	2021E	2022E	2023E	2024E	2025E
Intangible assets	**4.9**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**
Property, plant and equipment	33.8	34.0	39.3	41.0	42.1	42.7	42.7
Financial assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIXED ASSETS	**38.6**	**37.3**	**42.6**	**44.3**	**45.4**	**46.0**	**46.0**
Inventories	8.9	7.3	13.2	16.4	20.5	22.5	23.0
Accounts receivable	6.6	6.3	7.6	10.1	13.4	17.3	19.8
Other current assets	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Liquid assets	0.7	2.6	12.9	8.5	5.5	9.1	17.9
Deferred taxes	0.6	0.6	0.0	0.0	0.0	0.0	0.0
Deferred charges and prepaid expenses	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CURRENT ASSETS	17.0	17.1	33.9	35.3	39.7	49.2	61.0
TOTAL ASSETS	**55.6**	**54.4**	**76.5**	**79.7**	**85.1**	**95.2**	**107.0**
SHAREHOLDERS EQUITY	31.9	28.4	30.1	32.0	36.6	45.6	56.6
MINORITY INTEREST	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other provisions	1.7	1.2	1.2	1.2	1.2	1.2	1.2
Non-current liabilities	**1.7**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
short-term liabilities to banks	15.3	20.3	35.3	35.3	35.3	35.3	35.3
Accounts payable	2.9	1.8	2.2	2.9	3.8	4.9	5.7
Advance payments received on orders	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other liabilities (incl. from lease and rental contracts)	3.7	2.5	2.6	2.6	2.6	2.6	2.6
Deferred taxes	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Deferred income	0.0	0.0	5.0	5.5	5.4	5.4	5.4
Current liabilities	**22.1**	**24.8**	**45.3**	**46.5**	**47.3**	**48.4**	**49.2**
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	**55.6**	**54.4**	**76.5**	**79.6**	**85.1**	**95.2**	**107.0**

Balance sheet (common size)	2019	2020E	2021E	2022E	2023E	2024E	2025E
Intangible assets	**8.8 %**	**6.2 %**	**4.4 %**	**4.2 %**	**4.0 %**	**3.6 %**	**3.2 %**
Property, plant and equipment	60.7 %	62.4 %	51.3 %	51.4 %	49.4 %	44.8 %	39.9 %
Financial assets	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
FIXED ASSETS	**69.4 %**	**68.7 %**	**55.7 %**	**55.7 %**	**53.4 %**	**48.4 %**	**43.0 %**
Inventories	16.0 %	13.5 %	17.2 %	20.6 %	24.1 %	23.7 %	21.5 %
Accounts receivable	11.9 %	11.6 %	9.9 %	12.7 %	15.7 %	18.2 %	18.5 %
Other current assets	0.0 %	0.0 %	0.0 %	0.1 %	0.1 %	0.1 %	0.1 %
Liquid assets	1.3 %	4.9 %	16.9 %	10.7 %	6.5 %	9.5 %	16.7 %
Deferred taxes	1.1 %	1.1 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Deferred charges and prepaid expenses	0.3 %	0.3 %	0.2 %	0.2 %	0.2 %	0.2 %	0.2 %
CURRENT ASSETS	30.5 %	31.4 %	44.3 %	44.4 %	46.6 %	51.7 %	57.0 %
TOTAL ASSETS	**100.0 %**	**100.1 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**
SHAREHOLDERS EQUITY	57.3 %	52.3 %	39.3 %	40.2 %	43.0 %	47.9 %	53.0 %
MINORITY INTEREST	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Long-term debt	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Provisions for pensions and similar obligations	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Other provisions	3.1 %	2.2 %	1.5 %	1.5 %	1.4 %	1.2 %	1.1 %
Non-current liabilities	**3.1 %**	**2.2 %**	**1.5 %**	**1.5 %**	**1.4 %**	**1.2 %**	**1.1 %**
short-term liabilities to banks	27.4 %	37.3 %	46.1 %	44.3 %	41.4 %	37.0 %	33.0 %
Accounts payable	5.2 %	3.3 %	2.8 %	3.6 %	4.5 %	5.2 %	5.3 %
Advance payments received on orders	0.1 %	0.1 %	0.1 %	0.1 %	0.1 %	0.1 %	0.1 %
Other liabilities (incl. from lease and rental contracts)	6.6 %	4.6 %	3.4 %	3.3 %	3.1 %	2.7 %	2.4 %
Deferred taxes	0.3 %	0.3 %	0.2 %	0.2 %	0.2 %	0.2 %	0.2 %
Deferred income	0.0 %	0.0 %	6.5 %	6.9 %	6.3 %	5.7 %	5.0 %
Current liabilities	**39.6 %**	**45.6 %**	**59.1 %**	**58.4 %**	**55.6 %**	**50.9 %**	**46.0 %**
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**

Source: Company data, Hauck & Aufhäuser

Cash flow statement (EUR m)	2019	2020E	2021E	2022E	2023E	2024E	2025E
Net profit/loss	0.9	-3.5	1.7	2.5	5.3	9.8	12.3
Depreciation of fixed assets (incl. leases)	5.2	5.8	4.7	5.3	5.9	5.9	6.1
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Others	-1.2	-1.6	0.7	-0.1	-0.1	0.0	0.0
Cash flow from operations before changes in w/c	4.8	2.2	7.1	7.7	11.1	15.7	18.4
Increase/decrease in inventory	0.0	1.6	-5.9	-3.2	-4.1	-2.1	-0.4
Increase/decrease in accounts receivable	4.3	0.3	-1.3	-2.5	-3.3	-3.9	-2.5
Increase/decrease in accounts payable	-5.0	-1.1	5.4	1.2	0.9	1.1	0.7
Increase/decrease in other working capital positions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Increase/decrease in working capital	-0.6	0.8	-1.8	-4.5	-6.4	-4.9	-2.3
Cash flow from operating activities	**4.2**	**3.0**	**5.3**	**3.2**	**4.7**	**10.8**	**16.1**
CAPEX	6.2	6.0	10.0	7.0	7.0	6.5	6.1
Payments for acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial investments	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Income from asset disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash flow from investing activities	**-7.2**	**-6.0**	**-10.0**	**-7.0**	**-7.0**	**-6.5**	**-6.1**
Cash flow before financing	-3.0	-3.0	-4.7	-3.8	-2.3	4.3	10.0
Increase/decrease in debt position	3.9	5.0	15.0	0.0	0.0	0.0	0.0
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividends paid	0.8	0.0	0.0	0.6	0.7	0.8	1.2
Others	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Effects of exchange rate changes on cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash flow from financing activities	**3.3**	**5.0**	**15.0**	**-0.6**	**-0.7**	**-0.8**	**-1.2**
Increase/decrease in liquid assets	0.3	2.0	10.3	-4.4	-3.0	3.5	8.8
Liquid assets at end of period	**0.7**	**2.6**	**12.9**	**8.5**	**5.5**	**9.1**	**17.9**

Source: Company data, Hauck & Aufhäuser

Regional split (EUR m)	2019	2020E	2021E	2022E	2023E	2024E	2025E
Domestic	14.3	16.0	20.0	24.1	28.9	0.0	0.0
yoy change	13.8 %	12.0 %	25.0 %	20.0 %	20.0 %	n/a	n/a
Rest of Europe	4.0	12.0	7.7	5.5	7.4	0.0	0.0
yoy change	15.4 %	199.4 %	-35.6 %	-28.9 %	35.0 %	n/a	n/a
NAFTA	30.1	4.9	11.8	23.0	33.4	0.0	0.0
yoy change	1721.2 %	-83.7 %	140.8 %	94.9 %	45.1 %	n/a	n/a
Asia Pacific	0.0	0.0	0.0	0.0	0.0	0.0	0.0
yoy change	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rest of world	0.0	0.0	0.0	0.0	0.0	0.0	0.0
yoy change	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TTL	**48.5**	**32.9**	**39.6**	**52.5**	**69.7**	**90.2**	**0.0**
yoy change	173.5 %	-32.0 %	20.1 %	32.8 %	32.6 %	29.4 %	n/a

Source: Company data, Hauck & Aufhäuser

Key ratios (EUR m)	2019	2020E	2021E	2022E	2023E	2024E	2025E
P&L growth analysis							
Sales growth	48.8 %	-32.0 %	20.1 %	32.8 %	32.6 %	29.4 %	14.7 %
EBITDA growth	9.4 %	-38.8 %	10.3 %	147.6 %	86.1 %	114.5 %	71.0 %
EBIT growth	-33.8 %	-212.4 %	61.8 %	-237.9 %	176.4 %	234.1 %	116.8 %
EPS growth	-53.9 %	-284.0 %	93.0 %	-172.5 %	218.6 %	290.0 %	129.9 %
Efficiency							
Total operating costs / sales	85.2 %	87.9 %	88.7 %	81.4 %	79.1 %	76.6 %	75.8 %
Sales per employee	184.2	117.7	131.9	166.8	211.1	257.6	287.3
EBITDA per employee	27.1	14.2	26.2	31.3	44.3	60.5	69.5
Balance sheet analysis							
Avg. working capital / sales	28.5 %	40.8 %	39.3 %	33.6 %	34.8 %	32.4 %	32.4 %
Inventory turnover (sales/inventory)	5.5	4.5	3.0	3.2	3.4	4.0	4.5
Trade debtors in days of sales	49.8	70.0	70.0	70.0	70.0	70.0	70.0
A/P turnover [(A/P*365)/sales]	21.8	20.0	20.0	20.0	20.0	20.0	20.0
Cash conversion cycle (days)	141.9	193.9	273.7	284.3	270.2	234.1	211.5
Cash flow analysis							
Free cash flow	-2.0	-3.0	-4.7	-3.8	-2.3	4.3	10.0
Free cash flow/sales	-4.1 %	-9.2 %	-11.9 %	-7.2 %	-3.3 %	4.8 %	9.7 %
FCF / net profit	neg.	neg.	neg.	neg.	neg.	44.2 %	81.6 %
Capex / depn	138.8 %	82.2 %	212.8 %	132.1 %	118.6 %	110.2 %	100.0 %
Capex / maintenance capex	9.8 %	300.0 %	400.0 %	233.3 %	200.0 %	162.5 %	144.2 %
Capex / sales	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Security							
Net debt	14.6	17.6	22.3	26.7	29.7	26.2	17.4
Net Debt/EBITDA	2.0	4.4	2.8	2.7	2.0	1.2	0.7
Net debt / equity	0.5	0.6	0.7	0.8	0.8	0.6	0.3
Interest cover	4.7	0.0	4.5	5.2	9.9	17.3	21.5
Dividend payout ratio	0.0 %	0.0 %	35.9 %	28.7 %	15.0 %	12.3 %	14.7 %
Asset utilisation							
Capital employed turnover	1.0	0.7	0.6	0.8	1.0	1.1	1.1
Operating assets turnover	1.0	0.7	0.7	0.8	1.0	1.2	1.3
Plant turnover	1.4	1.0	1.0	1.3	1.7	2.1	2.4
Inventory turnover (sales/inventory)	5.5	4.5	3.0	3.2	3.4	4.0	4.5
Returns							
ROCE	4.1 %	-4.7 %	5.4 %	6.8 %	12.3 %	19.7 %	21.6 %
ROE	2.7 %	-12.2 %	5.6 %	7.8 %	14.6 %	21.5 %	21.6 %
Other							
Interest paid / avg. debt	3.1 %	2.8 %	2.7 %	3.2 %	2.5 %	2.5 %	2.5 %
No. employees (average)	263	280	300	315	330	350	360
Number of shares	4.0	4.0	4.0	4.0	4.0	4.0	4.0
DPS	0.0	0.0	0.2	0.2	0.2	0.3	0.5
EPS reported	0.22	-0.86	0.42	0.63	1.33	2.45	3.06
Valuation ratios							
P/BV	4.3	4.8	4.6	4.3	3.8	3.0	2.4
EV/sales	3.1	4.7	4.0	3.1	2.4	1.8	1.5
EV/EBITDA	21.4	38.9	20.4	16.6	11.4	7.7	6.2
EV/EBITA	78.0	-85.6	50.7	36.0	19.2	10.7	8.2
EV/EBIT	78.0	-46.8	50.7	36.0	19.2	10.7	8.2
EV/FCF	-77.3	-51.4	-34.0	-43.3	-73.5	37.9	15.5
Adjusted FCF yield	1.6 %	1.5 %	2.9 %	3.5 %	5.2 %	7.7 %	9.8 %
Dividend yield	0.0 %	0.0 %	0.4 %	0.5 %	0.6 %	0.9 %	1.3 %

Source: Company data, Hauck & Aufhäuser

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Company	Disclosure
IBU-tec advanced materials AG	3, 8

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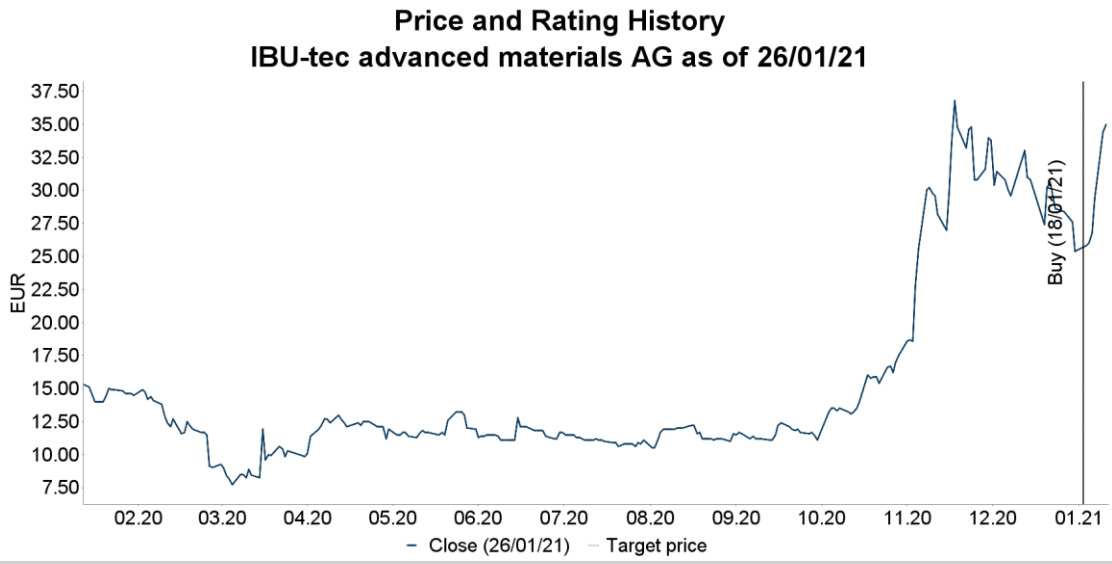

Initiation coverage
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Company	Date	Analyst	Rating	Target price	Close

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