

ITM Power Plc

United Kingdom / Alternative Energy

London

Bloomberg: ITM LN

ISIN: GB00B0130H42

Update

RATING**PRICE TARGET**

Return Potential

Risk Rating

NOT RATED**N.A.**

N.A.

High

PANDEMIC TO ACCELERATE THE HYDROGEN ECONOMY

Despite the pandemic and the unfolding global recession, which looks set to be the most severe since World War II, the share price of ITM Power has rocketed to new highs. The market capitalisation has reached GBP 1.4bn, which is certainly eye-popping for a company with sales of GBP 3m in FY 2020. Investors expect government stimulus packages at the national and EU level to support green hydrogen technologies and infrastructure. This could accelerate the establishment of a decarbonised energy system based on green power and hydrogen. Green hydrogen and hydrogen-based fuels can jump in where green power is viewed as an insufficient solution, be it in heavy transport, heat, or industrial processes. The German government is leading the pack and, as part of its stimulus program, has announced a national hydrogen strategy to build 5 GW in hydrogen production capacity by 2030. It also plans to forge partnerships with other countries with favourable hydrogen production conditions to establish local "made in Germany" hydrogen production capacities to export hydrogen to Germany. The German government plans to spend €9bn to implement its hydrogen strategy. ITM looks set to be one of the prime beneficiaries of the emerging hydrogen economy. The company's newsflow in recent months has been very positive with many new projects announced. The order backlog has reached a record level of GBP 52.4m (27 January 2020: GBP 42.4m), comprising GBP 21.8m of projects under contract and GBP 30.6m of awards in the final stages of negotiation. The tender opportunity pipeline increased to GBP 263m (27 January: GBP 248m), comprising 32 active commercial tender responses over the last 12 months. Preliminary FY 2020 figures were below our forecasts due to covid-19-related delays and lower grants. The pandemic is also delaying the completion of the new production site, which is now scheduled for Q4 instead of August. We continue to believe that ITM is well on track to become a global leader in the rapidly growing hydrogen economy. In the past, we used a DCF model to value ITM. We now refrain from rating the company and do not provide a price target.

(p.t.o.)

FINANCIAL HISTORY & PROJECTIONS

	2017	2018	2019	2020E	2021E	2022E
Total income (GBP m)	9.23	14.10	17.56	7.00	28.31	56.57
Revenue (GBP m)	2.42	3.28	4.59	3.00	21.34	50.57
Y-o-y growth	n.a.	35.9%	39.8%	-34.6%	611.3%	137.0%
EBIT (GBP m)	-3.55	-6.49	-9.35	-19.90	-7.02	-2.66
EBIT margin	-147.0%	-197.8%	-203.7%	-663.3%	-32.9%	-5.3%
Net income (GBP m)	-3.78	-6.12	-9.45	-19.70	-6.59	-2.47
EPS (diluted) (GBP)	-1.70	-2.13	-2.92	-4.95	-1.39	-0.52
FCF (GBPm)	-5.85	-9.57	-15.28	-20.86	-19.95	-14.10
Net gearing	-11.9%	-57.3%	-19.7%	-61.1%	-34.0%	-10.4%
Liquid assets (GBP m)	1.56	20.40	5.17	39.91	19.96	5.86

RISKS

The main risks are financing, Brexit, unfavourable regulation, technological innovation, and increasing competition.

COMPANY PROFILE

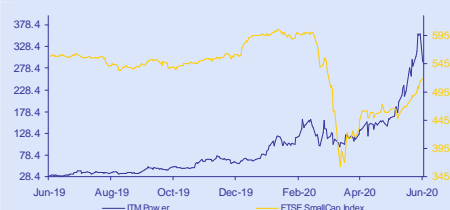
ITM Power designs and manufactures integrated hydrogen energy systems for energy storage, clean fuel production, and renewable chemistry. The group's product offering is based on PEM technology and is scalable to 100 MW. ITM is headquartered in Sheffield, UK, and has ca. 190 employees.

MARKET DATA

	As of 08 Jun 2020
Closing Price	GBP 292.00
Shares outstanding	473.28m
Market Capitalisation	GBP 1381.97m
52-week Range	GBP 29.90 / 358.50
Avg. Volume (12 mths)	2,634,773

Multiples	2019	2020E	2021E
P/E	n.a.	n.a.	n.a.
EV/Sales	300.0	458.9	64.5
EV/EBIT	n.a.	n.a.	n.a.
Div. Yield	n.a.	n.a.	n.a.

STOCK OVERVIEW



COMPANY DATA

	As of 31 Oct 2019
Liquid Assets	GBP 56.88m
Current Assets	GBP 83.64m
Intangible Assets	GBP 1.06m
Total Assets	GBP 92.99m
Current Liabilities	GBP 18.11m
Shareholders' Equity	GBP 74.40m

SHAREHOLDERS

Linde	20.2%
Allianz SE	9.4%
Investec	9.4%
Other	15.0%
Free Float	46.0%



Preliminary FY 2020 figures below prior year numbers Total income fell 60% from GBP 17.6m to GBP 7.0m (FBe: GBP 11.0m) due both to lower grants and revenues. Grants declined from GBP 14.3m to GBP 4.0m (FBe: GBP 6.5m) owing to challenges experienced in obtaining new grant funding from the EU. Revenue was down 30% to GBP 3.0m (FBe: GBP 5.5m) due mainly to covid-19-related delays. Gross profit was GBP -4.8m, of which GBP 3.4m is attributable to the world's largest PEM electrolyser system at the Wesseling Shell refinery through the Refhyne project in Germany. We note that in the future, the JV with Linde looks set to mitigate such EPC-based losses as Linde will execute the EPC work. EBITDA amounted to GBP -17.5m (FBe: GBP -16.0m) versus GBP -6.7m in FY 2018.

Figure 1: Reported preliminary figures versus forecasts

in GBPm	2020A	2020E	Delta	2019A	Delta
Total income	7.00	11.04	-36.6%	17.56	-60.1%
Revenue	3.00	5.54	-45.8%	4.49	-33.2%
EBITDA	-17.50	-15.99	-	-6.70	-

Source: First Berlin Equity Research, ITM Power Plc

Rising order backlog and tender opportunity pipeline The order backlog reached a record level of GBP 52.4m (27 January 2020: GBP 42.4m), comprising GBP 21.8m of projects under contract and GBP 30.6m of awards in the final stages of negotiation. The tender opportunity pipeline (ToP) amounted to GBP 263m (27 January 2020: GBP 248m), comprising 32 active commercial tender responses over the last 12 months with an average project size of GBP 7.7m (GBP 7.2m) reflecting strong industrial demand for larger systems. The ToP is now more highly qualified and comprises only high probability projects. In many cases the ToP does not include the EPC component of bids, which it did before the formation of the joint venture with Linde. We expect this to increasingly become the norm going forwards.

Completion of new production site postponed to Q4 Due to covid-19, completion of the new production site is now scheduled for Q4/20 (previously: mid-August). The site will have an annual capacity of 300 MW per annum from opening, which will expand to 1 GW (1,000MW) per annum by 2024. ITM has spent two years developing the new manufacturing process for the factory, which includes semi-automation, a new process for stack manufacture and process layout to achieve a 1 GW manufacturing capacity. This blueprint can now be replicated so that capacity expansion in other territories could be very effectively achieved.

The site also benefits from a 5 MW grid connection enabling two 2 MW systems to be tested in parallel or one 5 MW module at any one time. Factory Acceptance Testing is an important stage in the production cycle and one which has suffered from constraints in ITM's current facility.

ITM Linde JV up and running The 50/50 joint venture between ITM Power and Linde Engineering, ITM Linde Electrolysis GmbH (ILE) was incorporated in Germany in January 2020. Andreas Rупieper appointed as Managing Director to provide global green hydrogen solutions using ITM Power's PEM electrolysis technology and Linde's EPC expertise. Since then, ILE has made significant progress with an operational centre established in Dresden and several further full-time business development appointments made. ILE can provide fully optimised turnkey electrolysis plants and is already engaged in numerous proposals for the deployment of large-scale electrolysis equipment. It has won its first feasibility study for the installation of a 100 MW plant at an oil refinery and also a major Front End Engineering Design (FEED) study for an additional 100 MW plant. A key reason behind the collaboration with Linde Engineering was to enable ITM Power to focus solely on its core competence – the manufacture of electrolysis equipment.



8 MW electrolyser order In April, ITM Power signed an agreement to supply an 8 MW electrolyser in the UK. The agreement, including associated project costs, has a total value of GBP 10m and funding will fall across FY2021 and FY2022. After the 10 MW project with Shell in Germany, this is the second-largest electrolyser contract in ITM's history.

GBP 7.5m funding secured for 2nd phase of Gigastack project In February, Gigastack, a project to demonstrate low-cost green hydrogen production in the UK at industrial scale (see <https://www.gigastack.co.uk>), was awarded GBP 7.5m in funding for its second phase as part of the Department for Business, Energy and Industrial Strategy (BEIS) Hydrogen Supply Competition. ITM is expected to receive GBP 5.4m. Gigastack project partners are

- ITM Power,
- Ørsted, the leading operator of offshore wind farms;
- Phillips 66 Limited, the UK subsidiary of an international, diversified energy company and the owner of the Phillips 66 Humber Refinery, one of Europe's most complex refineries;
- Element Energy, a zero-carbon consultancy with 17 years of experience in hydrogen technology projects.

As part of the initial feasibility phase of the Gigastack project, which finished in 2019, ITM Power developed designs for a low-cost modular 5 MW electrolyser stack, collaborating with Ørsted to understand the potential synergies with offshore wind farms and with Element Energy to undertake a market analysis and explore business models for the first industrial-scale 100 MW electrolyser. ITM created the computational designs for their fourth stack generation, which will have a capacity of 5 MW, and finalised the material specifications for the stack itself. This design will increase stack capacity, reduce material costs and make the stack compatible with semi-automated manufacturing. This looks set to reduce stack costs by more than 40% and contribute to system costs of less than 400 GBP/kW.

For the second phase of the project, the consortium will conduct a Front-End Engineering Design ('FEED') study on a 100 MW electrolyser system using staged installations with a nominal capacity of 20 MW. The FEED study will detail the actual design of a hydrogen production system connected to a wind farm and industrial off-taker using ITM Power's new generation of electrolyser stack technology, renewable energy directly from Ørsted's Hornsea Two offshore wind farm, and with the resulting renewable hydrogen supplied to an industrial off-take, Phillips 66 Limited's Humber Refinery. A key objective of the Gigastack project is to identify and highlight regulatory, commercial and technical challenges for real applications of industrial-scale renewable hydrogen systems.

As part of the second phase, ITM Power will install and test both their next-generation electrolyser stack and the semi-automated manufacturing machines required for large-scale and high-volume manufacture of these new large low-cost stacks.

We believe that the Gigastack project has been and will be instrumental in strengthening ITM's leading position in stack technology and establishing the company as a leader in industrial electrolyser production processes.

Green Hydrogen for Humberside Project Deployment Study In April, ITM Power and its partner Element Energy announced that they have won a first stage deployment project in the UK Government's Industrial Strategy Challenge Fund competition "Decarbonisation of Industrial Clusters" to assess the feasibility and scope of deploying green hydrogen with some major industrial partners in Humberside. The project will examine the feasibility of switching to renewable hydrogen and justify a number of 100 MW deployments of electrolysers. It will lead to the production of renewable hydrogen at the gigawatt (GW) scale distributed to a mix of industrial energy users in Immingham, Humberside. Decarbonisation of this cluster is critical in reaching the UK's legally binding 2050 net zero emission targets.



Humberside, the UK's largest cluster by industrial emissions, (12.4Mt of CO₂ per year), contributes GBP 18bn to the national economy each year and has access to renewable electricity from GW scale offshore wind farms which comes ashore in the region. In the long-term, there is an opportunity to build several tens of GWs of wind power solely to generate green hydrogen offshore. The Humberside project will help to create a blueprint for decarbonised industrial production that can be rolled out elsewhere.

If realised the project volume will be very large. It could reach a GW figure. This represents a huge opportunity for ITM as the company is in the pole position to become the main supplier of electrolyzers for the project.

ITM Power and Ørsted work on wind turbine electrolyser integration In April, ITM shared the details of a small project which is sponsored by the UK Department for Business, Energy & Industrial Strategy (BEIS). As we believe that offshore wind-based hydrogen production is a huge opportunity to reach the Paris climate targets, we provide insight into this project.

ITM's and Ørsted's concept places an electrolyser at the wind turbine with a direct electrical connection to the DC link in the wind turbine, with appropriate power flow control and water supplied to it. This may represent a better design concept for bulk hydrogen production as opposed to, for instance, remotely located electrolyzers due to reduced costs and energy losses. The main advantages are:

- The wind turbine generator has the potential to power the electrolyser directly resulting in fewer power conversion steps and thereby reducing both energy losses and electrolyser footprint
- Abundant cooling capacity is readily available via sea water
- Energy is supplied in the form of hydrogen gas to shore by pipe rather than via electricity, which is much cheaper.

Overall, the concept explores opportunities to minimise the cost of hydrogen production through a combination of improved efficiency and reduced CAPEX.

Hydrogen bus project in Australia In May, ITM announced the formation of the H2OzBus Project and the signing of a memorandum of understanding (MoU) with strategic partners, Transit Systems (part of the SeaLink Travel Group), Ballard Power Systems, BOC Limited (part of Linde), and Palisade Investment Partners. The Consortium will collaborate on a project to further investigate deploying an initial 100 hydrogen fuel cell electric buses in cities across Australia in phase 1, with the intention to use this as a seed for a more widespread roll-out. The first phase of the project is a concept development phase which will focus on infrastructure requirements and detailed plans for use of hydrogen fuel cell electric buses on bus routes in up to 10 central hub locations across Australia where interest and demand for fuel cell buses has already been identified. ITM Power and BOC will provide the hydrogen production and refuelling infrastructure. This project provides the first application in Australia of ITM's new 2 MW PEM module which has been developed by the REFHYNE project in Germany with Shell. Thanks to its early positioning in the Australian market and the partnership with Linde, ITM belongs to the hydrogen leaders down under and looks set to deploy some of its new 2 MW electrolyser modules for hydrogen bus refuelling stations.

Establishment of ITM Motive ITM Motive will own and operate a network of eight publicly accessible hydrogen refuelling stations, which will expand to 11 by the end of 2020. Each incorporates an ITM Power electrolyser and a Linde IC90 compression, storage and dispensing system. ITM Power has successfully sourced both UK and EU funding to support the build and deployment costs, and developed a siting agreement with Shell for deployment on their forecourts in the UK. Up to now, ITM's refuelling stations have demonstrated a very high station availability of 98%. ITM appointed Duncan Yellen as Managing Director of the separate, wholly owned subsidiary for the management of the Company's refuelling assets.



Dr Yellen (54) has had a 30 year career in the energy and environmental sector. Prior to joining ITM Motive, Duncan was most recently M&A and Business/Project Development Manager at Storengy, a wholly owned subsidiary of Engie, where he was responsible for identifying new business streams and successfully developed its business strategy in green gases, CNG and geothermal.

We see the establishment of ITM Motive as a strategic move to increase independence and flexibility of the refuelling station management. Owning and operating hydrogen refuelling stations is a capital-intensive business and very different from constructing electrolysers. Separating this business from ITM's core business frees management resources for the latter. We can imagine that ITM Motive might be open for cooperations with other companies and find further stakeholders to grow the business both nationally and internationally.

Linde sees green hydrogen business as its biggest growth opportunity In an interview, Steve Angel, CEO of the world's largest supplier of industrial gases, said that he wants to significantly increase the company's green hydrogen business. Linde generates more than \$2bn in revenues with the production, distribution, storage, and application of hydrogen. Given the expected investment plans of more than \$100bn worldwide, Linde's hydrogen business could quadruple. Recently, Linde established the business field "Clean Hydrogen" to increase the focus on this business. Angel expects hydrogen to play an important role in the stimulus programmes in the EU, China, South Korea, and Japan.

Envisaging a hydrogen economy in post corona times In a blog contribution, the CEO of the leading hydrogen fuel-cell manufacturer, Ballard Power, Randy MacEwen, made some forecasts for the hydrogen industry in post pandemic times, some of which we would like to share with our readers.

- Demand for commercial trucks will rise as more logistics investment is necessary thanks to the Sars-CoV-2-induced rise in e-commerce.
- Governments will support the establishment of a hydrogen refuelling infrastructure as part of stimulus packages which will include infrastructure spend.
- We will see additional financial support for zero emission vehicles as countries will address particulate matter pollution because new studies have shown a connection between air pollution and covid-19.
- Large oil companies will invest in hydrogen to diversify their business and prepare for the post-fossil age. In February, BP announced its plan to become a net zero company by 2050 or sooner.

Daimler-Volvo fuel cell truck JV Daimler and Volvo concluded a non-binding agreement to commercialise fuel cell systems for heavy-duty vehicles, including trucks. This is a clear sign that both companies believe in hydrogen fuel cells for commercial vehicles.

German national hydrogen strategy will be presented shortly In its stimulus package of 3 June, the German government announced that it will soon present a national hydrogen strategy. The strategy's goal is to make Germany the leading global supplier for hydrogen technology. Accordingly, a program for the development of hydrogen production plants will be developed to demonstrate industrial-scale production of up to 5 GW total output in Germany by 2030. For the period up to 2035, but by 2040 at the latest, an additional 5 GW will be added if possible. The government will examine whether hydrogen production can be supported by tenders for electrolyser capacity. Furthermore, the switch from fossil fuels to hydrogen, especially in industrial processes, will be promoted. Funding will come from investment grants in new plants and a new pilot program to support the operation of electrolysis plants based on the carbon contracts for difference approach. The government aims to exempt the production of green hydrogen from the EEG surcharge. A mandatory power-to-liquid (PtL) quota for aviation fuel, a quota for climate-friendly steel, and funding of



"hydrogen-ready" plants via the CHP Act are also being examined. The regulatory basis for setting up a hydrogen infrastructure will be implemented quickly. In order to foster the use of green hydrogen in heavy goods traffic, the hydrogen filling station network will be expanded rapidly. The RED II directive will be implemented more ambitiously than the EU requirements. In addition, the government will promote the direct use of green hydrogen in aircraft engines as well as the development of concepts for "hybrid electric flying" (combination of hydrogen / fuel cells / battery technology). To implement all these measures, the German government will invest €7bn.

Germany also wants to forge partnerships with countries in which hydrogen can be produced efficiently due to favourable geography. Based on the above described technologies "made in Germany", large hydrogen production capacities are to be built in these countries to increase their independence from fossil fuels and to cover Germany's hydrogen needs. Germany plans to develop suitable hydrogen storage processes for global, cost-effective hydrogen transport. The government wants to spend €2bn on these partnerships.

We believe that this is probably the most ambitious national hydrogen strategy worldwide and expect it to be a game changer for the global green hydrogen industry. Although the German national hydrogen strategy aims at forging German global hydrogen champions, i.e. strong competitors of ITM, we believe that global demand will be far ahead of supply in coming years, which will also support ITM.

EU Green Deal gives hydrogen a prominent role The European Commission presented the European Green Deal on 11 December 2020, outlining the main policy initiatives for reaching net-zero global warming emissions by 2050. Hydrogen will be a key instrument for meeting the Green Deal objectives.

The overarching objective of the European Green Deal is a climate neutral Europe. To this end, a plan for smart sector integration, bringing the electricity, gas and heating sectors closer together in one system, will be presented in Q2 2020. We note that hydrogen can play a pivotal role in smart sector integration as it is a viable option in all three sectors (power, heat, and fuel) and as a cross-sector technology (power-to-gas, power-to-heat, power-to-fuel).

'Climate and resource frontrunners' are required to mobilise EU industry for a clean and circular economy. These will develop the first commercial applications of breakthrough technologies in key industrial sectors by 2030. Priority areas include [clean hydrogen](#). The transition to climate neutrality also requires smart infrastructure. The regulatory framework for energy infrastructure should foster the deployment of innovative technologies and infrastructure, such as smart grids and [hydrogen](#) networks. Partnerships with industry and Member States will support research and innovation on transport, including batteries, [clean hydrogen](#), and low-carbon steel making.

Planned EU recovery fund and medium-term EU budget look set to accelerate support for hydrogen The EU is proposing a €750bn recovery fund, with 25% earmarked for climate action. The medium-term EU budget plan for the years 2021-27 suggests a volume of €1,100bn and is expected to significantly support clean hydrogen. On Twitter, EU Vice-President Frans Timmermans, who is responsible for the Green Deal, made it clear that "Clean hydrogen is one of the top priorities in our energy transition."

Brexit not helpful for ITM Brexit negotiations between the UK and the EU are currently not moving forward. If negotiations fail, a no-deal Brexit could limit the UK's access to the EU single market and may lead to the establishment of tariffs. As ITM's production site is in the UK, electrolyser exports to the EU may be hampered. Given the anticipated strong electrolyser demand in the UK, we believe that this does not pose a threat to ITM in the short-term. It may be an incentive for the company to build its next production site in the EU.



Forecasts unchanged for the time being Although the covid-19 pandemic resulted in a closure of all seven sites, where ITM is working to install equipment, the company expects to recover the majority of the delays. ITM has not provided guidance for FY 2021, which started 1 May 2020. The pandemic has hit the UK the hardest in Europe, and its further development is difficult to predict. For the time being, we stick to our forecasts, but note that visibility is very low.



VALUATION MODEL

No valuation model provided.



INCOME STATEMENT

All figures in GBP '000	2017A	2018A	2019A	2020E	2021E	2022E
Total income	9,230	14,100	17,559	7,000	28,313	56,570
Revenues	2,415	3,283	4,589	3,000	21,340	50,570
Cost of goods sold	1,757	3,438	5,755	7,800	16,859	37,928
Gross profit	658	-155	-1,166	-4,800	4,481	12,643
S&M	1,528	1,455	1,713	1,800	2,100	2,700
G&A	2,202	3,086	4,738	5,100	5,100	6,200
R&D	2,023	1,792	2,327	2,400	2,900	3,900
Prototype production & engineering	2,615	4,144	6,202	7,800	4,400	4,500
Grant income	4,160	4,138	6,799	2,000	3,000	2,000
Operating income (EBIT)	-3,550	-6,494	-9,347	-19,900	-7,019	-2,657
Net financial result	0	18	29	3	11	25
Pre-tax income (EBT)	-3,550	-6,476	-9,318	-19,897	-7,008	-2,632
Income taxes	230	-360	133	-199	-420	-158
Minority interests	0	0	0	0	0	0
Net income / loss	-3,780	-6,116	-9,451	-19,698	-6,587	-2,474
Diluted EPS (in GBp)	-1.7	-2.1	-2.9	-4.9	-1.4	-0.5
EBITDA	-2,346	-4,782	-7,450	-17,484	-5,840	-665
Ratios						
Gross margin	27.2%	-4.7%	-25.4%	-160.0%	21.0%	25.0%
EBITDA margin on revenues	-97.1%	-145.7%	-162.3%	-582.8%	-27.4%	-1.3%
EBIT margin on revenues	-147.0%	-197.8%	-203.7%	-663.3%	-32.9%	-5.3%
Net margin on revenues	-156.5%	-186.3%	-205.9%	-656.6%	-30.9%	-4.9%
Tax rate	-6.5%	5.6%	-1.4%	1.0%	6.0%	6.0%
Expenses as % of revenues						
S&M	63.3%	44.3%	37.3%	60.0%	9.8%	5.3%
G&A	91.2%	94.0%	103.2%	170.0%	23.9%	12.3%
R&D	83.8%	83.8%	83.8%	83.8%	83.8%	83.8%
Prototype production & engineering	108.3%	126.2%	135.1%	260.0%	20.6%	8.9%
Y-Y Growth						
Revenues	n.a.	35.9%	39.8%	-34.6%	611.3%	137.0%
Operating income	n.a.	n.m.	n.m.	n.m.	n.m.	n.m.
Net income / loss	n.a.	n.m.	n.m.	n.m.	n.m.	n.m.



BALANCE SHEET

All figures in GBP '000	2017A	2018A	2019A	2020E	2021E	2022E
Assets						
Current assets, total	14,846	39,558	38,982	77,556	76,740	78,948
Cash and cash equivalents	1,558	20,403	5,173	39,913	19,964	5,864
Short-term investments	0	0	0	0	0	0
Receivables	12,528	18,500	31,903	35,589	52,619	67,889
Inventories	760	655	1,906	2,054	4,157	5,196
Other current assets	0	0	0	0	0	0
Non-current assets, total	4,899	4,809	6,411	6,275	8,992	10,080
Property, plant & equipment	4,519	4,454	5,742	3,660	6,104	6,908
Goodwill & other intangibles	380	355	669	615	888	1,172
Other assets	0	0	0	2,000	2,000	2,000
Total assets	19,745	44,367	45,393	83,831	85,732	89,028
Shareholders' equity & debt						
Current liabilities, total	6,675	8,776	19,184	18,520	27,008	32,778
Short-term debt	0	0	0	0	0	0
Accounts payable	6,666	7,928	17,579	16,915	25,403	31,173
Current provisions	9	848	1,605	1,605	1,605	1,605
Other current liabilities	0	0	0	0	0	0
Long-term liabilities, total	0	0	0	0	0	0
Long-term debt	0	0	0	0	0	0
Deferred revenue	0	0	0	0	0	0
Other liabilities	0	0	0	0	0	0
Minority interests	0	0	0	0	0	0
Shareholders' equity	13,070	35,591	26,209	65,311	58,724	56,249
Share capital	12,531	16,200	16,200	17,670	17,670	17,670
Capital reserve	61,930	86,631	86,631	143,961	143,961	143,961
Other reserves	-2,169	-1,902	-1,862	-1,862	-1,862	-1,862
Treasury stock	0	0	0	0	0	0
Loss carryforward / retained earnings	-59,222	-65,338	-74,760	-94,458	-101,045	-103,520
Total consolidated equity and debt	19,745	44,367	45,393	83,831	85,732	89,028
Ratios						
Current ratio (x)	2.22	4.51	2.03	4.19	2.84	2.41
Quick ratio (x)	2.11	4.43	1.93	4.08	2.69	2.25
Net debt	-1,558	-20,403	-5,173	-39,913	-19,964	-5,864
Net gearing	-11.9%	-57.3%	-19.7%	-61.1%	-34.0%	-10.4%
Book value per share (in GBP)	0.06	0.12	0.08	0.16	0.12	0.12
Return on equity (ROE)	-28.9%	-17.2%	-36.1%	-30.2%	-11.2%	-4.4%



CASH FLOW STATEMENT

All figures in GBP '000	2017A	2018A	2019A	2020E	2021E	2022E
EBIT	-3,550	-6,494	-9,347	-19,900	-7,019	-2,657
Depreciation and amortisation	1,204	1,712	1,897	2,416	1,179	1,992
EBITDA	-2,346	-4,782	-7,450	-17,484	-5,840	-665
Changes in working capital	-3,076	-3,602	-5,003	-4,498	-10,645	-10,538
Other adjustments	374	379	661	1,402	431	183
Operating cash flow	-5,048	-8,005	-11,792	-20,580	-16,054	-11,020
Investments in PP&E	-3,293	-8,622	-4,125	-5,100	-7,469	-6,574
Investments in intangibles	-151	-76	-436	-180	-427	-506
Grants received against purchases of PP&E	2,646	7,130	1,073	5,000	4,000	4,000
Free cash flow	-5,846	-9,573	-15,280	-20,860	-19,950	-14,100
Acquisitions & disposals, net	4	1	0	-2,000	0	0
Investment cash flow	-794	-1,567	-3,488	-2,280	-3,896	-3,080
Debt financing, net	0	0	0	0	0	0
Equity financing, net	5,732	29,358	0	58,800	0	0
Dividends paid	0	0	0	0	0	0
Other financing	-267	-970	29	-1,200	0	0
Financing cash flow	5,465	28,388	29	57,600	0	0
FOREX & other effects	45	29	3	0	0	0
Net cash flows	-332	18,845	-15,248	34,740	-19,950	-14,100
Cash, start of the year	1,890	1,558	20,403	5,173	39,913	19,964
Cash, end of the year	1,558	20,403	5,155	39,913	19,964	5,864
EBITDA/share (in GBp)	-1.1	-1.7	-2.3	-4.4	-1.2	-0.1
Y-Y Growth						
Operating cash flow	n.a.	n.m.	n.m.	n.m.	n.m.	n.m.
Free cash flow	n.a.	n.m.	n.m.	n.m.	n.m.	n.m.
EBITDA/share	n.a.	n.m.	n.m.	n.m.	n.m.	n.m.

Imprint / Disclaimer

First Berlin Equity Research

First Berlin Equity Research GmbH ist ein von der BaFin betreffend die Einhaltung der Pflichten des §85 Abs. 1 S. 1 WpHG, des Art. 20 Abs. 1 Marktmissbrauchsverordnung (MAR) und der Markets Financial Instruments Directive (MiFID) II, Markets in Financial Instruments Directive (MiFID) II Durchführungsverordnung und der Markets in Financial Instruments Regulations (MiFIR) beaufsichtigtes Unternehmen.

First Berlin Equity Research GmbH is one of the companies monitored by BaFin with regard to its compliance with the requirements of Section 85 (1) sentence 1 of the German Securities Trading Act [WpHG], art. 20 (1) Market Abuse Regulation (MAR) and Markets in Financial Instruments Directive (MiFID) II, Markets in Financial Instruments Directive (MiFID) II Commission Delegated Regulation and Markets in Financial Instruments Regulations (MiFIR).

Anschrift:

First Berlin Equity Research GmbH
Mohrenstr. 34
10117 Berlin
Germany

Vertreten durch den Geschäftsführer: Martin Bailey

Telefon: +49 (0) 30-80 93 9 680

Fax: +49 (0) 30-80 93 9 687

E-Mail: info@firstberlin.com

Amtsgericht Berlin Charlottenburg HR B 103329 B

UST-Id.: 251601797

Ggf. Inhaltlich Verantwortlicher gem. § 6 MDSStV

First Berlin Equity Research GmbH

Authored by: Dr Karsten von Blumenthal, Analyst

All publications of the last 12 months were authored by Dr Karsten von Blumenthal.

Company responsible for preparation: First Berlin Equity Research GmbH, Mohrenstraße 34, 10117 Berlin

The production of this recommendation was completed on 9 June 2020 at 09:37

Person responsible for forwarding or distributing this financial analysis: Martin Bailey

Copyright© 2020 First Berlin Equity Research GmbH No part of this financial analysis may be copied, photocopied, duplicated or distributed in any form or media whatsoever without prior written permission from First Berlin Equity Research GmbH. First Berlin Equity Research GmbH shall be identified as the source in the case of quotations. Further information is available on request.

INFORMATION PURSUANT TO SECTION 85 (1) SENTENCE 1 OF THE GERMAN SECURITIES TRADING ACT [WPHG], TO ART. 20 (1) OF REGULATION (EU) NO 596/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF APRIL 16, 2014, ON MARKET ABUSE (MARKET ABUSE REGULATION) AND TO ART. 37 OF COMMISSION DELEGATED REGULATION (EU) NO 2017/565 (MIFID) II.

First Berlin Equity Research GmbH (hereinafter referred to as: "First Berlin") prepares financial analyses while taking the relevant regulatory provisions, in particular section 85 (1) sentence 1 of the German Securities Trading Act [WpHG], art. 20 (1) of Regulation (EU) No 596/2014 of the European Parliament and of the Council of April 16, 2014, on market abuse (market abuse regulation) and art. 37 of Commission Delegated Regulation (EU) no. 2017/565 (MiFID II) into consideration. In the following First Berlin provides investors with information about the statutory provisions that are to be observed in the preparation of financial analyses.

CONFLICTS OF INTEREST

In accordance with art. 37 (1) of Commission Delegated Regulation (EU) no. 2017/565 (MiFID) II and art. 20 (1) of Regulation (EU) No 596/2014 of the European Parliament and of the Council of April 16, 2014, on market abuse (market abuse regulation) investment firms which produce, or arrange for the production of, investment research that is intended or likely to be subsequently disseminated to clients of the firm or to the public, under their own responsibility or that of a member of their group, shall ensure the implementation of all the measures set out in Article 34 (3) of Regulation (EU) 2017/565 in relation to the financial analysts involved in the production of the investment research and other relevant persons whose responsibilities or business interests may conflict with the interests of the persons to whom the investment research is disseminated. In accordance with art. 34 (3) of Regulation (EU) 2017/565 the procedures and measures referred to in paragraph 2 (b) shall be designed to ensure that relevant persons engaged in different business activities involving a conflict of interests carry on those activities at a level of independence appropriate to the size and activities of the investment firm and of the group to which it belongs, and to the risk of damage to the interests of clients.

First Berlin offers a range of services that go beyond the preparation of financial analyses. Although First Berlin strives to avoid conflicts of interest wherever possible, First Berlin may maintain the following relations with the analysed company, which in particular may constitute a potential conflict of interest (further information and data may be provided on request):

- The author, First Berlin, or a company associated with First Berlin holds an interest of more than five percent in the share capital of the analysed company;
- The author, First Berlin, or a company associated with First Berlin provided investment banking or consulting services for the analysed company within the past twelve months for which remuneration was or was to be paid;
- The author, First Berlin, or a company associated with First Berlin reached an agreement with the analysed company for preparation of a financial analysis for which remuneration is owed;
- The author, First Berlin, or a company associated with First Berlin has other significant financial interests in the analysed company;

In order to avoid and, if necessary, manage possible conflicts of interest both the author of the financial analysis and First Berlin shall be obliged to neither hold nor in any way trade the securities of the company analyzed. The remuneration of the author of the financial analysis stands in no direct or indirect connection with the recommendations or opinions represented in the

financial analysis. Furthermore, the remuneration of the author of the financial analysis is neither coupled directly to financial transactions nor to stock exchange trading volume or asset management fees.

If despite these measures one or more of the aforementioned conflicts of interest cannot be avoided on the part of the author or First Berlin, then reference shall be made to such conflict of interest.

INFORMATION PURSUANT TO SECTION 64 OF THE GERMAN SECURITIES TRADING ACT [WPHG], DIRECTIVE 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 15 MAY 2014 ON MARKETS IN FINANCIAL INSTRUMENTS AND AMENDING DIRECTIVE 2002/92/EC AND DIRECTIVE 2011/61/EU, ACCOMPANIED BY THE MARKETS IN FINANCIAL INSTRUMENTS REGULATION (MIFIR, REG. EU NO. 600/2014).

First Berlin notes that it has concluded a contract with the issuer to prepare financial analyses and is paid for that by the issuer. First Berlin makes the financial analysis simultaneously available for all interested security financial services companies. First Berlin thus believes that it fulfils the requirements of section 64 WpHG for minor non-monetary benefits.

PRICE TARGET DATES

Unless otherwise indicated, current prices refer to the closing prices of the previous trading day.

AGREEMENT WITH THE ANALYSED COMPANY AND MAINTENANCE OF OBJECTIVITY

The present financial analysis is based on the author's own knowledge and research. The author prepared this study without any direct or indirect influence exerted on the part of the analysed company. Parts of the financial analysis were possibly provided to the analysed company prior to publication in order to avoid inaccuracies in the representation of facts. However, no substantial changes were made at the request of the analysed company following any such provision.

ASSET VALUATION SYSTEM

First Berlin's system for asset valuation is divided into an asset recommendation and a risk assessment.

ASSET RECOMMENDATION

The recommendations determined in accordance with the share price trend anticipated by First Berlin in the respectively indicated investment period are as follows:

Category		1	2
Current market capitalisation (in €)		0 - 2 billion	> 2 billion
Strong Buy ¹	An expected favourable price trend of:	> 50%	> 30%
Buy	An expected favourable price trend of:	> 25%	> 15%
Add	An expected favourable price trend of:	0% to 25%	0% to 15%
Reduce	An expected negative price trend of:	0% to -15%	0% to -10%
Sell	An expected negative price trend of:	< -15%	< -10%

¹ The expected price trend is in combination with sizable confidence in the quality and forecast security of management.

Our recommendation system places each company into one of two market capitalisation categories. Category 1 companies have a market capitalisation of €0 – €2 billion, and Category 2 companies have a market capitalisation of > €2 billion. The expected return thresholds underlying our recommendation system are lower for Category 2 companies than for Category 1 companies. This reflects the generally lower level of risk associated with higher market capitalisation companies.

RISK ASSESSMENT

The First Berlin categories for risk assessment are low, average, high and speculative. They are determined by ten factors: Corporate governance, quality of earnings, management strength, balance sheet and financial risk, competitive position, standard of financial disclosure, regulatory and political uncertainty, strength of brandname, market capitalisation and free float. These risk factors are incorporated into the First Berlin valuation models and are thus included in the target prices. First Berlin customers may request the models.

RECOMMENDATION & PRICE TARGET HISTORY

Report No.:	Date of publication	Previous day closing price	Recommendation	Price target
Initial Report	20 February 2019	GBp21.55	Buy	GBp43.00
2...1	↓	↓	↓	↓
2	12 June 2019	GBp32.50	Buy	GBp43.00
3	2 July 2019	GBp34.95	Buy	GBp46.00
4	15 October 2019	GBp49.00	Add	GBp60.00
5	12 February 2020	GBp160.00	Sell	GBp105.00
6	Today	GBp292.00	Not Rated	N.A.

INVESTMENT HORIZON

Unless otherwise stated in the financial analysis, the ratings refer to an investment period of twelve months.

UPDATES

At the time of publication of this financial analysis it is not certain whether, when and on what occasion an update will be provided. In general First Berlin strives to review the financial analysis for its topicality and, if required, to update it in a very timely manner in connection with the reporting obligations of the analysed company or on the occasion of ad hoc notifications.

SUBJECT TO CHANGE

The opinions contained in the financial analysis reflect the assessment of the author on the day of publication of the financial analysis. The author of the financial analysis reserves the right to change such opinion without prior notification.

Legally required information regarding

- key sources of information in the preparation of this research report
- valuation methods and principles
- sensitivity of valuation parameters

can be accessed through the following internet link: <https://firstberlin.com/disclaimer-english-link/>

SUPERVISORY AUTHORITY: Bundesanstalt für Finanzdienstleistungsaufsicht (German Federal Financial Supervisory Authority) [BaFin], Graurheindorferstraße 108, 53117 Bonn and Marie-Curie-Straße 24-28, 60439 Frankfurt am Main

EXCLUSION OF LIABILITY (DISCLAIMER)**RELIABILITY OF INFORMATION AND SOURCES OF INFORMATION**

The information contained in this study is based on sources considered by the author to be reliable. Comprehensive verification of the accuracy and completeness of information and the reliability of sources of information has neither been carried out by the author nor by First Berlin. As a result no warranty of any kind whatsoever shall be assumed for the accuracy and completeness of information and the reliability of sources of information, and neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be liable for any direct or indirect damage incurred through reliance on the accuracy and completeness of information and the reliability of sources of information.

RELIABILITY OF ESTIMATES AND FORECASTS

The author of the financial analysis made estimates and forecasts to the best of the author's knowledge. These estimates and forecasts reflect the author's personal opinion and judgement. The premises for estimates and forecasts as well as the author's perspective on such premises are subject to constant change. Expectations with regard to the future performance of a financial instrument are the result of a measurement at a single point in time and may change at any time. The result of a financial analysis always describes only one possible future development – the one that is most probable from the perspective of the author – of a number of possible future developments.

Any and all market values or target prices indicated for the company analysed in this financial analysis may not be achieved due to various risk factors, including but not limited to market volatility, sector volatility, the actions of the analysed company, economic climate, failure to achieve earnings and/or sales forecasts, unavailability of complete and precise information and/or a subsequently occurring event which affects the underlying assumptions of the author and/or other sources on which the author relies in this document. Past performance is not an indicator of future results; past values cannot be carried over into the future.

Consequently, no warranty of any kind whatsoever shall be assumed for the accuracy of estimates and forecasts, and neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be liable for any direct or indirect damage incurred through reliance on the correctness of estimates and forecasts.

INFORMATION PURPOSES, NO RECOMMENDATION, SOLICITATION, NO OFFER FOR THE PURCHASE OF SECURITIES

The present financial analysis serves information purposes. It is intended to support institutional investors in making their own investment decisions; however in no way provide the investor with investment advice. Neither the author, nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be considered to be acting as an investment advisor or portfolio manager vis-à-vis an investor. Each investor must form his own independent opinion with regard to the suitability of an investment in view of his own investment objectives, experience, tax situation, financial position and other circumstances.

The financial analysis does not represent a recommendation or solicitation and is not an offer for the purchase of the security specified in this financial analysis. Consequently, neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall as a result be liable for losses incurred through direct or indirect employment or use of any kind whatsoever of information or statements arising out of this financial analysis.

A decision concerning an investment in securities should take place on the basis of independent investment analyses and procedures as well as other studies including, but not limited to, information memoranda, sales or issuing prospectuses and not on the basis of this document.

NO ESTABLISHMENT OF CONTRACTUAL OBLIGATIONS

By taking note of this financial analysis the recipient neither becomes a customer of First Berlin, nor does First Berlin incur any contractual, quasi-contractual or pre-contractual obligations and/or responsibilities toward the recipient. In particular no information contract shall be established between First Berlin and the recipient of this information.

NO OBLIGATION TO UPDATE

First Berlin, the author and/or the person responsible for passing on or distributing the financial analysis shall not be obliged to update the financial analysis. Investors must keep themselves informed about the current course of business and any changes in the current course of business of the analysed company.

DUPLICATION

Dispatch or duplication of this document is not permitted without the prior written consent of First Berlin.

SEVERABILITY

Should any provision of this disclaimer prove to be illegal, invalid or unenforceable under the respectively applicable law, then such provision shall be treated as if it were not an integral component of this disclaimer; in no way shall it affect the legality, validity or enforceability of the remaining provisions.

APPLICABLE LAW, PLACE OF JURISDICTION

The preparation of this financial analysis shall be subject to the law obtaining in the Federal Republic of Germany. The place of jurisdiction for any disputes shall be Berlin (Germany).

NOTICE OF DISCLAIMER

By taking note of this financial analysis the recipient confirms the binding nature of the above explanations.

By using this document or relying on it in any manner whatsoever the recipient accepts the above restrictions as binding for the recipient.

QUALIFIED INSTITUTIONAL INVESTORS

First Berlin financial analyses are intended exclusively for qualified institutional investors.

This report is not intended for distribution in the USA and/or Canada.