

EQUITY NOTE: PANNERGY NYRT.

Recommendation: BUY

Target price (12M): HUF 1,420

26 March 2022

Highlights

Equity Analyst: Ákos Szemán

Phone: +36 1 486 6277

Email: akos.szeman@otpbank.hu

The 12M target price for PannErgy is decreased from HUF 1,450 to HUF 1,420. This can be essentially almost solely attributed to the unfavourable rate environment, the 10Y bond yield is 6.4% now, which is significantly higher than it was a few months ago (~3-4%). Consequently, the corresponding WACC rate is higher as well (9.2% vs. 7.7%), which results in a lower EV. At the same time, we note that the overall financial results were good, the EBITDA outlook is improved, net debt is lower YoY and share repurchases continued.

Production in 2021 was somewhat higher YoY and EBITDA increased from HUF 2.735 billion to HUF 2.878 billion (+5.2%), which means that the company achieved the high end of the planned range of HUF 2.8-2.88 billion. Net income increased from HUF 236 million to HUF 897 million (+278% YoY). The difference is mainly the result of the much lower exchange rate loss on FX credit and loans and higher revenues from geothermal heat sales.

Additionally, the **management improved its EBITDA guidance** as well. For 2022, the company expects the EBITDA to be around HUF 3.15-3.25 billion (+11.2% midpoint basis) and HUF 3.35-3.45 billion for 2023 (+6.2% midpoint basis). The latter is, however, conditional on the deepening and commissioning of the third production well of the Miskolc Project this year. In the event of a failure to deepen the well, the EBITDA plan is HUF 3.3-3.4 billion.

The company may pay HUF 18 per share dividends (~1.8% yield) this year if the proposal is accepted on the General Meeting and the share repurchase program could continue as well. We note that shareholders collectively owning at least one percent of the votes proposed a roughly HUF 37 dividend (~3.7% yield), somewhat higher level of share repurchases (HUF 800 million vs. HUF 600 million) and share capital reduction by cancelling some of the treasury shares (~5% of total shares).

Financial highlights of the earnings report:

Revenue for 2021 was HUF 6.439 billion (+8.7% YoY), while revenue from geothermal heat sales amounted to HUF 5.583 billion, exceeding our forecast of HUF 5.485 billion. Revenue from other operations increased from HUF 853 million to HUF 856 million, however, a significant part of this amount is made up of pass-through items (96%) so the margin on this kind of sales is almost zero; therefore, it has no effect on profitability.

In 2021, heat sales reached 1,699,190 GJ, an increase of 6% YoY but slightly smaller than the management's plan of 1,732,569 GJ (-2%). The small miss relative to the target can be attributed to less favourable weather conditions in Miskolc during Q2 2021 and because of a service interruption over the period 2-11 November, similarly in Miskolc.

Direct costs amounted to HUF 4.859 billion (+8.5% YoY), which is mainly the result of an increase in "maintenance and operating costs" and "electricity charges" items. The



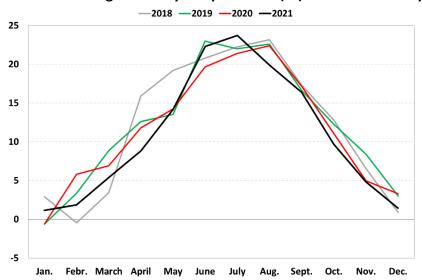
growth of maintenance, operational and facility management costs (+13% YoY) is attributable to additional tasks related to the operation and maintenance of the geothermal projects along with efficiency improving and capacity increasing projects. The **substantial increase in the costs of electricity** (+22% YoY) required for heat generation and sale was a result of the price increase in the electricity market during the period.

Depreciation decreased from HUF 1.66 billion to HUF 1.595 billion (-4% YoY), of which HUF 213 million was for intangible assets, HUF 1.37 billion for tangible assets and HUF 12 million for investment properties. The company also incurred HUF 109 million **research and development costs**, which were related to geothermal production during the period, this was nil in 2020. The other items were broadly in line. Because of the interaction of revenue and direct costs, gross profit margin slightly increased from 24.4% to 24.5%. The average gross profit margin between 2017 and 2019 was 21.6%.

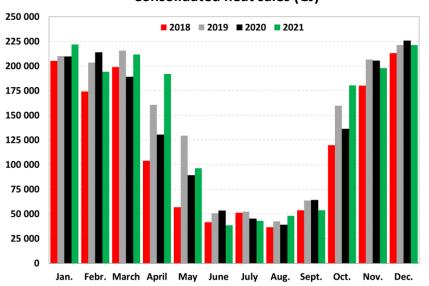
The Group's **administrative and overhead costs** increased by 2% on YoY including an increase of 19% in indirect personnel-type costs (labour market processes and fluctuation), while banking costs decreased by 57% (higher base figure due to one-off impacts). This brings EBIT to HUF 1,283 million (+19.3% YoY).

EBITDA amounted to HUF 2.878 billion (+5.2% YoY), while the EBITDA ratio declined to 44.7% from 46.2%. This means that the company achieved the high end of the planned EBITDA range (HUF 2.8-2.880 billion) for the financial year 2021.

Combined average monthly temperatures (°C) in Miskolc and Győr



Consolidated heat sales (GJ)





The company reported a net financial loss of HUF 319 million (HUF 112 million financial income and HUF 431 million financial expenditure), which is almost HUF 500 million lower than it was in 2020. This is mainly the result of substantially lower financial expenditures, which were down by HUF 487 million YoY largely because **exchange rate loss on FX credit and loans was only HUF 43 million compared to HUF 453 million** booked under the same heading in 2020.

Overall, the company reported HUF 897 million net income after tax, which is significantly higher than the HUF 236 million net income in 2020 (+278% YoY). The difference is mainly the result of the much lower exchange rate loss on FX credit and loans and higher revenues from geothermal heat sales.

Looking ahead, the company expects heat sales to reach 1,752,012 GJ in 2022 (+3.1% YoY) and EBITDA could be between HUF 3.15-3.25 billion (+9.5-12.9%). This is expected to reflect the effect of completed or in-progress capacity expansion and efficiency improving projects and changes in the energy market environment. The EBITDA target for 2023 is updated to HUF 3.35-3.45 billion (+6.2% YoY midpoint basis). This is conditional, however, on the deepening and commissioning of the third production well of the Miskolc Project this year. In the event of a failure to deepen the well, the EBITDA plan is HUF 3.3-3.4 billion.

P/L Table consolidated (million HUF)	2016	2017	2018	2019	2020	2021
Revenue	4 529	4 699	4 679	5 648	5 923	6 439
Net other revenue	101	537	407	192	132	215
OPEX	2 914	3 012	2 903	2 982	3 320	3 776
From which:						
* SGA	684	492	456	457	501	512
* Depreciation	1 435	1 300	1 317	1 468	1 660	1 595
EBITDA	1 715	2 241	2 231	2 666	2 735	2 878
EBIT	281	923	906	1 198	1 075	1 283
EBT	-131	626	525	782	262	964
Income Taxes	28	121	90	47	25	67
Net income	-151	488	434	728	236	897

Financial highlights of the 2021 report

	2016	2017	2018	2019	2020	2021
EPS (HUF)	-8,47	27,60	23,55	40,77	14,01	54,71
EBITDA (HUFm)	1 715	2 241	2 231	2 666	2 735	2 878
Gross profit rate	19,0%	18,7%	20,4%	25,8%	24,4%	25,0%
EBIT rate	6,2%	19,6%	19,4%	21,2%	18,2%	20,0%
EBITDA rate	37,9%	47,7%	47,7%	47,2%	46,2%	44,7%
ROE	-1,7%	5,4%	4,6%	7,3%	2,4%	9,1%
ROA	-0,6%	1,9%	1,7%	2,8%	0,9%	3,3%
ROS	-3.3%	10.4%	9.3%	12.9%	4.0%	13.9%

27,60

23,55

40,77

14,01

54,71

Announcements and proposals for the General Meeting:

-8.47

EPS (HUF)

There are several proposals for the GM (13 April 2022); we only highlight those, which may have an impact on the valuation of the company.

1) **Dividends:** HUF 294 million is proposed, which would represent roughly HUF 18 per share paid out of profit after tax for the current year (~1.8% dividend yield). The first date of payment of the dividend is 14 July 2022. The record date for dividend payment



- is 30 June 2022. Shareholders collectively holding at least one percent of the votes proposed a dividend payment of HUF 600 million (roughly HUF 37; ~3.6% yield).
- 2) Share-repurchases: the board proposes to purchase treasury shares up to an amount of HUF 600 million at a share price of at least HUF 1 and no more than HUF 1,400. The period would be almost one year (2 May 2022-13 April 2023). The shares may be purchased solely in trading at the stock exchange. Shareholders collectively owning at least one percent of the votes proposed HUF 800 million for HUF 1,400 / share at most.
- 3) Reduction of share capital by cancelling some of the treasury shares: shareholders collectively owning at least one percent of the votes proposed the reduction of the share capital by cancelling 1,054,655 shares (~5% of total shares) with a total nominal value of HUF 21 million. After the reduction, the share capital of the company would be HUF 400 million (20 million shares). The company held 4,729,144 shares (22.46% of total) as of 20 March 2022.

For now, we do not incorporate the effects of dividends, share repurchases and share capital reduction until they are accepted on the General Meeting.

Other notable highlights:

In 2022, the company will continue its investment projects aimed at increasing capacity and improving efficiency. As part of the plan PannErgy intends to commence of the boring of a new production well in Miskolc until the spring of 2023 (conditional on the assessment of the relevant grant application and evaluation of seismic data and delivery deadlines), expand heat exchange capacities and other engineering conversions for capacity expansion.

As we already noted in our previous note the company announced on 17 February 2022 that the range of its EBITDA plan for the 2022 fiscal year of HUF 3-3.1bn has been revised upward to HUF 3.15-3.25bn, an increase of ~5% on a midpoint basis. This is the result of an earlier MEKH announcement, which is related to the treatment of profits made by MAVIR in the separate coffers of the KÁT and Premium schemes due to high electricity prices. Consequently, large consumers, including members of the PannErgy Group, can expect to receive monthly payments in the future as long as the revenues from the sale of electricity at market prices exceed the costs related to the KÁT and METÁR subsidies. The payment amounts will depend mainly on the level of electricity prices in a given month and the amount of electricity subsidised under the KÁT and METÁR schemes.

We also note that the administrative prices set for the period between 2021 October and 2022 September are somewhat higher than previous figures, which will also help to achieve the higher EBITDA target.



Location of the wells		in effect until 30 September 2021		Change
Szentlőrinc	Szentlőrinci Geothermal Ltd.	3 654 HUF/GJ	3 791 HUF/GJ	4%
Miskolc	Miskolci Geothermal Ltd.	2 626 HUF/GJ	2 650 HUF/GJ	0,9%
Miskolc	KUALA Ltd.	2 626 HUF/GJ	2 650 HUF/GJ	0,9%
Győr	Arrabona Geothermal Ltd.	3 204 HUF/GJ	3 397 HUF/GJ	6,0%

Source: Hungarian Official Gazette, issue 179/2021

Recent information's effect on our valuation

Overall, the 12M target price for PannErgy is decreased from HUF 1,450 to HUF 1,420. This can be almost entirely attributed to the unfavourable rate environment, the 10Y Hungarian government bond yield is 6.4% now, which is significantly higher than it was a few months ago (~3-4%). Consequently, the corresponding WACC rate is higher as well (9.2% vs. 7.7%), which results in a lower EV. Furthermore, risks are likely pointing to the upside given the inflationary effects of the Russia-Ukraine conflict and slowing global growth, persistent supply-chain issues, and high commodity prices.

On the positive side, the EBITDA outlook is improved, management expects 2022 EBITDA to be around HUF 3.15-3.25 billion (+11.2% midpoint basis) and HUF 3.35-3.45 billion for 2023 (+6.2% midpoint basis). The latter is, however, conditional on the deepening and commissioning of the third production well of the Miskolc Project this year. In the event of a failure to deepen the well, the EBITDA plan is HUF 3.3-3.4 billion. For the purpose of our valuation, we have not included the expected positive EBITDA impact of the new production well in Miskolc. We will incorporate it later when there is more certainty about it. We did include, however, the effects of the recent MEKH announcement, which is related to the treatment of profits made by MAVIR in the separate coffers of the KÁT and Premium schemes due to high electricity prices. This resulted higher EBITDA estimates for the period of 2022-2024 as higher electricity prices might be stickier. Our estimated 2022 EBITDA is HUF 3.28bn, which is slightly higher than the company's target range, while our 2023 figure of HUF 3.29bn is basically at the lower end of management's target range. We note that the level of net debt is lower YoY by ~9% and as a result of continued share repurchases the number of shares is also lower YoY by 0.6%. These factors had a positive impact on the valuation, however, they could only partially offset the negative effects of the higher WACC rate.

We have not used relative valuation for our target price estimate, but international peer data is disclosed.



Risks surrounding PannErgy's economic activity

1. **Price risk:** The administered price is set at a level that takes into account the cost of doing business and providing a fair profit. However, the administered price setting has inherent risks related to the administrative authority.

Moreover, at the moment PannErgy provides heat at a lower cost than its peers (natural gas). However, if natural gas prices fall significantly, then consumers who do not have mandatory purchase agreement with PannErgy could switch to other sources of heat.

- 2. **Environmental risks:** Extreme weather conditions during the heating season could harm the company's profit target. If the winter season is too short or too cold due to global warming or other extreme weather conditions the costs are higher, as the output from the drilling wells drops.
- 3. **Operational risks:** Maintenance costs increased significantly at the Győr Project in 2016 due to scaling issues concerning the tubing and pumps, and this has reduced production. Although the problem was dealt with, we identify it as a source of risk in the future as well. This could be a risk to our depreciation forecast as well.
- 4. **Improving energy efficiency risk:** It is not necessarily a PannErgy-specific risk, but in the long term, the building of passive houses and the coming investment which increases the energy efficiency of houses and flats could decrease demand for heat.
- 5. **Pandemic risks:** Based on our current knowledge, covid-19 has no material effect on the company. However, the covid crisis and its economic effects may change rapidly and unpredictably in the future. This may pose some unforeseen risks for PannErgy as well.

Appendix:

Income statement						
P/L Table consolidated (million HUF)	2019	2020	2021	2022F	2023F	2024F
Revenue from geothermal-heat	5 060	5 070	5 583	5 666	5 778	5 892
Other revenue	192	132	215	251	228	228
OPEX	2 982	3 320	3 776	3 824	3 902	4 042
from which: Depreciation	1 468	1 660	1 595	1 479	1 479	1 479
EBITDA	2 666	2 735	2 878	3 279	3 291	3 265
EBIT	1 198	1 075	1 283	1 800	1 812	1 786
EBT	782	262	964	1 522	1 533	1 507
Income Taxes	47	25	67	183	184	181
Non-controlling interest	0	0	0	0	0	0
Net income	728	236	897	1 339	1 349	1 326
EPS (HUF)	45	14	55	82	83	81

Balance sheet							
Balance sheet - consolidated (million HUF)	2019	2020	2021	2022F	2023F	2024F	
Non-current assets	23 177	23 634	22 933	22 034	21 135	19 586	
Current assets	2 796	3 099	3 950	4 388	4 658	5 552	
Total assets	25 973	26 733	26 883	26 421	25 792	25 138	
Total equity	10 213	9 747	9 980	11 025	12 039	13 029	
Non-current liabilities	11 910	14 441	13 704	12 543	10 882	9 220	
Current liabilities	3 850	2 545	3 199	2 853	2 871	2 889	
Total equity and liabilities	25 973	26 733	26 883	26 421	25 792	25 138	



Ca	Cash flow statement					
Cash flow statement (million HUF)	2019	2020	2021	2022F	2023F	2024F
Profit before taxes	782	262	964	1 522	1 533	1 507
Cash flow from operations	2 601	1 238	2 859	2 691	2 992	2 966
Cash flow from investment	-1 790	-1 639	-1 475	-1 364	-1 364	-614
Cash flow from financing activities	-575	-278	-774	-1 096	-1 047	-1 047
Change in cash and cash equivalents	236	-679	610	231	581	1 305

FCFF valuation

Valuation summary (million HUF)	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	Terminal year
Revenue from geothermal heat	5 666	5 778	5 892	6 008	6 127	6 248	6 371	6 497	6 625	6 756	6 758
EBITDA	3 279	3 291	3 265	3 239	3 272	3 288	3 321	3 354	3 386	3 418	3 454
Depreciation	1 479	1 479	1 479	1 479	1 479	1 424	1 424	1 424	1 424	1 424	1 424
Working capital sales	310	20	21	21	21	21	21	21	21	21	21
Capex	750	750	100	100	100	100	100	100	100	100	100
FCFF	2 003	2 303	2 930	2 907	2 937	2 944	2 973	3 002	3 030	3 058	3 090
WACC	9,2	9,2	9,2	9,2	9,2	9,2	9,2	9,2	9,2	9,2	9,3
PV(FCFF)	1 680	1 769	2 060	1 872	1 732	1 590	1 470	1 359	1 257	1 264	13 705

Share price estimation	
Enterprise value	29 757
Net debt (-)	9 794
Equity value	19 963
Number of shares	16 325
Required return on equity	16,2
Target price for the next 12 M (HUF)	1420

International peer data

Company name	Country	Market capitalization (billion HUF)	EV/EBITDA
Polaris Infrastructure	Canada	89,6	7,9
Ormat Technologies	USA	1503,2	16,8
ARISE	Germany	63,5	15,9
ABO Invest	Germany	45,1	11,1
Northland Power	Canada	2531,9	11,6
Falck	Denmark	1074,8	19,8
		Average	13,9
		Median	13,8



Notes:

The initiation report, which contains the assumptions of the models used, is available here.

The valuation methodology used in this present equity research note to determine our price targets and recommendations is available here. (Also available in Hungarian)

This investment recommendation has not used proprietary models.

The risk warning, which includes the adequate explanations of the length of time of the investment to which the recommendation relates as well as a sensitivity analysis of the assumptions, is indicated in the part of this recommendation where the length of time and the risks of the investment are presented.

Any information relating to the date and time for the price mentioned in this recommendation is revealed in the part of the recommendation where the given price is indicated.

OTP Bank Plc's recommendations and price targets history for PannErgy in the past twelve months:

Date	Recommendations	Target Price	Publication
20/07/2020	BUY	HUF 1,216	Equity note
16/10/2020	BUY	HUF 1,204	Equity note
18/01/2021	BUY	HUF 1,204	Equity note
29/03/2021	BUY	HUF 1,387	Equity note
19/04/2021	BUY	HUF 1,387	Equity note
16/07/2021	BUY	HUF 1,387	Equity note
06/09/2021	BUY	HUF 1,387	Equity note
06/10/2021	BUY	HUF 1,450	Equity note
18/10/2021	BUY	HUF 1,450	Equity note
17/01/2022	BUY	HUF 1,450	Equity note
18/02/2022	BUY	HUF 1,450	Equity note

Period	Recommendations	Percent of recommendation
	BUY	100%
2021Q1	HOLD	0%
	SELL	0%
	BUY	100%
2021Q2	HOLD	0%
	SELL	0%
	BUY	100%
2021Q3	HOLD	0%
	SELL	0%
	BUY	100%
2021Q4	HOLD	0%
	SELL	0%
	BUY	100%
2022Q1	HOLD	0%
	SELL	0%



The list of all recommendations made in the past 12 months is available here.

Disclaimer 1

This research/commentary was prepared by the assignment of Budapest Stock Exchange Ltd. (registered seat: 1054 Budapest, Szabadság tér 7. Platina torony I. ép. IV. emelet; company registration number: 01-10-044764, hereinafter: BSE) under the agreement which was concluded by and between BSE and OTP Bank Plc (registered seat: 1051 Budapest, Nádor u. 16., company registration number: Cg. 01-10-041585, hereinafter: Investment Service Provider). This research/commentary was made with the joint, equally proportional financing of the BSE and the company that is the subject of this research/commentary.

The Investment Service Provider's policies and procedures ensure the independence of this research/commentary, and the Investment Service Provider has undertaken not to accept any instructions or additional remuneration from the company involved in the research/commentary.

BSE shall not be liable for the content of this research/commentary, especially for the accuracy and completeness of the information therein and for the forecasts and conclusions; the Service Provider shall be solely liable for these. The Service Provider is entitled to all copyrights regarding this research/commentary however BSE is entitled to use and advertise/spread it but BSE shall not modify its content.

This research/commentary shall not be qualified as investment advice specified in Point 9 Section 4 (2) of Act No. CXXXVIII of 2007 on Investment Firms and Commodity Dealers and on the Regulations Governing their Activities. Furthermore, this document shall not be qualified as an offer or call to tenders for the purchase, sale or hold of the financial instrument(s) concerned by the research/commentary. This research/commentary cannot be deemed as an incentive to enter into contract or covenant.

Disclaimer 2

- 1. Pursuant to the Commission-delegated regulation 2017/565/EU of the European Parliament, the content of this document shall be considered as an investment research, which recommends or suggests an investment strategy, explicitly or implicitly concerning one or more financial instruments or the issuers of financial instruments, including any opinion as to the present or future value or price of such instruments. The statements in this investment research contain objective or independent explanation. Furthermore, pursuant to Directive 2014/65/EU of the European Parliament and of the Council, this document shall be considered as investment recommendation. This document does not take into account investors' individual interests, circumstances, or objectives; therefore, in the absence of personal recommendation, it shall not be considered as an investment advice.
 - OTP Bank intends to make this document available to its clients or to the public, or to make it accessible to other persons in a way that allows this document to be disseminated to the public.
- 2. Information herein reflects the market situation at the time of writing. It provides only momentary information and may change as market conditions and circumstances develop. Additional information may be available on request. Where a figure relates to a period on or before the date of communication, the figure relates to the past and indicates a historic data. Past performance is not a reliable indicator of future results and shall be not treated as such. OTP Bank makes no representation or warranty, express or implied, is made regarding future performance of any financial instrument mentioned in this communication. OTP Bank shall have no liability for the information contained in this for any loss or damage whether direct, indirect, financial, economic, or consequential, whether or not caused by the negligent act or omission of OTP Bank, provided that such limitation of liability shall not apply to any liability which cannot be excluded or limited under the applicable law.
- 3. The issuer of this report does not claim that the information presented herein is perfectly accurate or complete. However it is based on sources available to the public and widely believed to be reliable. Also the opinions and estimates presented herein reflect a professional subjective judgment at the original date of publication and are therefore subject to change thereafter without notice. Furthermore there can be no guarantees that any market developments will unfold as forecasted. Opinions and estimates constitute our judgment and are subject to change without notice.



- 4. The issuer(s) of the product(s) mentioned in this document do not hold more than 5% of OTP Bank's registered capital. OTP Bank is a market maker of the financial instrument that is discussed in this document. Neither was OTP Bank a lead-manager (organizer) or joint lead manager (organizer) of any public placement of the issuer's financial instruments (e.g. securities) in the previous 12 months. Regarding investment services defined in Sections A and B of Annex 1 of Directive 2014/65/EU, OTP Bank is not a party of the agreement with the issuer. OTP Bank maintains a conflict of interest policy and it keeps such records, and is has requirements that regulate the transmission of bank secrets and securities secrets, which requirements shall be considered as the effective internal organizational and management solutions as well as information barriers to prevent or manage conflicts of interest. The remuneration of the person(s) participating in preparing the recommendation is not directly related to the transactions carried out as part of the investment services specified in Sections A and B of Annex 1 of Directive 2014/65/EU, or to transactions carried out by them or by other legal entities of the same group or to trading fees that they or another legal person of the same group receive. OTP Bank does not hold net long or short positions that exceed 0.5% threshold of the issuer's total registered capital.
- 5. OTP Bank has developed appropriate internal procedures for (i) the personal transactions and tradings of financial analysts and other relevant persons, (ii) the physical separation of the financial analysts involved in the production of investment research and other relevant persons; moreover, information barriers have been implemented, (iii) for accepting and managing incentives and remuneration.
- 6. This communication does not contain a comprehensive analysis of the described issues; it is only for information purposes. No part, chapter, or the entirety of this information shall be considered as investment advice, not even if any part of this document contains a description of a certain financial instrument in terms of its possible price or yield development, and the related investment options. This information shall not be considered as legal, tax or accounting advice.
- 7. This information reflects the market situation at the time when the document was prepared. You may request more information from OTP Bank. This document was prepared based on publicly accessible information made available to OTP Bank from one or more sources. This document was prepared using data, facts and information from the following essential sources: Bloomberg, Reuters, Hungarian Central Statistical Office, Eurostat, Magyar Nemzeti Bank (Hungary's central bank), and European Central Bank (ECB). Although the information in this document has been prepared in good faith from sources that OTP Bank believes to be reliable, we do not represent or warrant its accuracy or completeness. This document represents the opinion and estimations of analysts at OTP Research, based on publicly available data. You may receive different recommendation from the staff of OTP Bank, in particular if you are provided investment advice based on an investment advice agreement. The content of this document is based on the opinion of OTP Research's analyst at the time when the document was prepared, and they may be subject to change at any time in the future without further notice.
- 8. Please be informed that, irrespective of the statements of this investment research, OTP Bank is entitled to deal or trade as market maker, acting in good faith and in accordance with the usual way of market-making, with the financial instruments distributed by the issuer(s) specified in this document, as well as to provide other investment activities or ancillary (investment) services, and/or other financial or ancillary financial services to the issuer and other persons.
- 9. This document shall not be a basis for any further analysis in relation to the financial instruments contained therein. Any reference in this document to the future distribution of a financial instrument shall be construed as indicative, preliminary and informative, and any analysis of such financial instrument is exclusively based on publicly available information listed in the respective prospectus or announcement. The content of this document shall not imply that OTP Bank acts as an agent, a fiduciary, or an advisor to, or on behalf on, any prospective purchaser of the financial instruments discussed herein.
- 10. For certain persons, access to the products and/or services discussed in this document may not be granted, or it may be limited. The act of preparing this document by OTP Bank, its uploading to the website, its publication may under no circumstances be considered as OTP Bank's intention to make available product and/or service information in the prospectus to persons whom any country or state prohibits from having or obtaining the given product and/or service, including the promotion and the advertisement thereof. This communication and any of the financial instruments and information contained herein are not intended for the use of private investors in



the UK and US. OTP Bank is not allowed to provide direct investment services to US investors. Any individual decision or investment made based on this publication is made solely at the risk of the client and OTP Bank shall not be held responsible for the success of the investment decisions or for attaining the Client's target.

- 11. This publication contains generic presentation of information and knowledge, thus it does not take into account the individual clients' unique and special interests, financial condition, or their ability and willingness to take risks. Therefore please contact our staff or contact your banking consultant for advice before you make an investment decision. The assessment and the consideration of the individual circumstances is provided by the suitability and compliance tests that assess clients' financial knowledge, experience, risk-taking abilities, as well as the examination of the target market.
- 12. Before making an informed decision to invest and to use the services, please carefully read through all documents, including the documentation, prospectus, regulations, terms and conditions, announcements and key information documents for that product/service, and carefully consider the subject, the risk, the fees and costs of your investment, the possibility of any loss, and seek information about the tax regulations regarding the product and the investment. The prices of financial instruments and securities are changing, outrights sales are realized at then current market prices, which may involve losses. The information and opinions in this document do not substitute or take the place of the issuance documentation for the given financial assets (e.g. prospectus, fund management rules), or their brochures or announcements.
- 13. You assume total responsibility and risk for any specific decision or investment; OTP Bank shall not be held responsible for the effectiveness of investment decisions or for reaching your purpose, nor for the individual investment decision made based on this document or any part thereof, or for their consequences. Investments in financial instruments carry a certain degree of risk, which may affect the effectiveness of the investment decision, and investors may not receive the whole amount they had expected the investment to yield in their investment targets; they may not preserve even the invested amount, therefore the invested capital might even decrease, be wholly lost, or even lead to additional payment obligation.
- 14. Trading with leveraged products (such as foreign exchange contracts, or shares and indices that have underlying products) carries a considerable amount of risk, and these products are not suitable for all investors. Trading with leveraged products carries the risk of losing all capital, and it may incur losses that exceed the amount invested.
- 15. The figures and information described herein refer to the past, and past performance is not a reliable indicator of future yields, changes, or performance. The changes on money and capital markets, the fluctuation of prices, the development of investments and their yields are influenced by the combined effect of multiple factors; one important factor of them is the change in investors' expectations. The development of prices, the future yield of financial assets, indices or indicators, the examination of their changes, trends, and future performance is based on estimations and forecasts, which forecasts do not allow reliable conclusions to be drawn about the future moves of prices, real future yields, changes, or performance. For each product and service, please assess their tax accounting implications, and other tax consequences, taking into account that they cannot be precisely assessed without knowing the effective tax regulations of the client's individual circumstances; and these legislative provisions as well as the circumstances may change over time.
- 16. OTP Bank reserves the right to modify this document in the future, without prior notice. The planned frequency of updates to the recommendation is quarterly. The initiation report preceding this research was published on 18 December 2017.
- 17. OTP Bank (business registration number: 01-10-041-585; registered seat: Nádor utca 16., Budapest H-1051, Hungary; authorised by Magyar Nemzeti Bank (former supervisory authority: Hungarian Financial Supervisory Authority, 'PSZÁF'). Supervisory authority: Magyar Nemzeti Bank (National Bank of Hungary H-1054 Budapest, Szabadság tér 9); financial customer services: H-1013 Budapest, Krisztina krt. 39. The terms and conditions of this equity research and disclaimer shall be governed by and construed in accordance with Hungarian law.
- 18. Please note that the Internet is not a secure environment and OTP Bank does not accept any liability for any loss caused by the result of using this report in a form altered or delayed by the wilful or accidental interception, corruption or virus infection.



- 19. OTP Bank, in compliance with the applicable law, assumes no responsibility, obligation, warranty or guarantee whatsoever for any direct or indirect damage (including losses arising from investments), or for the costs or expenses, detrimental legal consequences or other sanctions (including punitive and consequential damage) sustained by any natural or legal person as a result of the purchase or sale of financial instruments or engaging investment services described herein, even if OTP Bank was warned of the possibility of such occurrences.
- 20. If you received this document from OTP Bank Plc, then it was sent to you with your previous consent. You may withdraw this permission by sending an e-mail to research@otpbank.hu or writing a letter addressed to 'Research Center', Hungary H-1051, Budapest, Nádor utca 21. Please refer to your name and e-mail address in both cases.
- 21. The personal data in this investment research are processed by OTP Bank. The legal basis for processing the data is the legitimate interest of OTP Bank. The detailed information about the processing of personal data and the related rights of data subjects is available here.

This document was prepared by: Ákos Szemán Equity Analyst OTP Research

This document was finalized at 6:00:44 PM on 26 March 2022