

Monday, March 7, 2022 | special comments

PGNiG: Breaking Down the LNG Supply Strategy

Recommendation: buy | target price: PLN 8.18 | current price: PLN 6.83

PGNiG PW; PGNiG.WA | Oil & Gas, Poland

Analyst: Kamil Kliszcz +48 22 438 24 02 | +48 667 770 837

With the current risk of a tighter balance in the European gas market (either through tougher sanctions on Russia or a suspension of pipeline supplies to the EU), we thought it would be a good idea to look at PGNiG's LNG import portfolio management strategy.

Aside from the Company's existing multi-year supply agreements, which cover a total of 12bcm of LNG supplies beginning from 2023, it is important to consider the technical capacity of the Polish LNG terminal in Świnoujście (6bcm).

When it comes to pricing, a significant portion (9.4bcm) of the contracts are linked to the U.S. Henry Hub (HH) benchmark, and under the current circumstances, after costs of shipping and liquefaction, the price spread between HH and TTF gas contracts hovers in the range of €10 to as much as €100/MWh depending on the contract length. To illustrate how extremely volatile gas markets have become over the recent months, it is enough to say that, as short ago as in early 2021, HH (in delivery to Europe) and TTF prices were basically the same.

Bearing in mind the volatility, after calculations using the current forward curve, hedging information, and certain simplifying assumptions, we arrived at a rough estimate of PLN 24 billion as the potential profit that PGNiG can make on LNG imports from the U.S. in 2023-24 alone.

After taxes, this represents almost 50% of the Company's market capitalization even before adding the expected gain on 2025 supply (the current FWD curve implies an €1bn).

Of course these are only crude approximations at this stage, but as PGNiG systematically hedges this exposure we will be watching closely what happens with the TTF vs. HH spread down the line.

Even at this stage, we would argue that the LNG supply arrangements provide a strong argument to buying PGN.

Contract Overview

PGNiG has secured the following multi-year LNG supply contracts to date, with deliveries starting from 2023:

- From Qatargas: 2.7 billion cubic meters a year until 2034, of which 1.3bcm is indexed to oil prices and the rest is linked to gas market quotes.
- From Cheniere Energy: 1.95bcm/year until 2042 to be delivered to Świnoujście, indexed to Henry Hub.
- From Venture Global: 7.4bcm per year until 2043, with offtake the U.S. terminals of Calcasieu Pass (2bcm) and Plaquemines (5.4bcm), indexed to Henry Hub.

Commissioning activity on Calcasieu Pass terminal began in November 2021, and the facility is expected to reach full production capacity of 16bcm by the end of this year.

Construction work on the Plaquemines terminal began in 2021, and more liquefaction capacity will be added there in the course of the next two years to reach full capacity of 13bcm (first stage) in 2024.

Informacje podmiotu z Grupy mBank - objęte ochroną | mBank Group's entity information - protected

In total, PGNiG will purchase 12bcm of LNG under the multiyear- contracts.

When it comes to the Świnoujście terminal, after planned investment by 2024 its capacity will increase from the current 6.2bcm to 8.3bcm. Imports to Poland potentially can be carried out via the future Poland-Lithuania gas link (1.9bcm) and the LNG terminal in Klaipeda (nominal import capacity ~1.9bcm), although this facility is already operating at full capacity and handles mainly LNG tanker trucks.

In the baseline scenario, PGNiG will therefore place about half of its LNG portfolio outside Poland (the volume of ex-ship deliveries to Świnoujście totals 4.6bcm).

Pricing Mechanism

PGNiG currently sells approximately 20bcm of gas to end customers in Poland and exports 6bcm to foreign customers (mainly in Germany). Its pricing is generally linked to market benchmarks except that approx. 5.4bcm is subject to the tariff regime of the Energy Regulatory Office (the regulator uses TGE contracts as its benchmark, but it has the discretion to make adjustments). Accordingly, as part of its trading activity PGNiG manages its purchase position so as to reflect market-based formulas in contracts with customers (TGE, TTF).

In the case of the Qatargas contract, 1.4bcm of the total volume is probably indexed to European market quotes (this is a guess as the actual pricing formula has not been made public), and 1.3bcm is linked to the three-month moving average of oil prices (this volume is naturally hedged by oil produced by PGNiG).

The "U.S." contracts (9.4bcm) are indexed to Henry Hub (HH), giving rise to a potential spread vis-à-vis TTF prices in the portion that is supposed to secure PGNiG's retail portfolio in Europe.

Under its current hedging policy, PGNiG can open positions for a 3-year horizon. The following table summarizes the Company's reported hedging contracts for transactions indexed to the HH benchmark.

Open positions designated for hedge accounting as of 30 September 2021 approximated 52 TWh, but nothing is known about their maturity structure other than a general indication that they cover a horizon of up to 4 years.

The annual volume of LNG ordered from terminals in the U.S. is about 103 TWh, but, as mentioned, only a portion of this can be accommodated by the Polish LNG terminal (about 38 TWh in 2023 and about 61 TWh from 2024). For this reason, it is unlikely that the hedged 52 TWh volume applies only to 2023.

Cumulative volume of hedges for HH-linked gas purchases and average HH-TTF spread in 2023 deliveries

	2019	2020	1Q'21	2Q'21	3Q'21	4Q'21	1Q'22
volume (TWh)	4.5	18.8	25.5	37.5	52.2	?	?
spread (EUR/MWh)	-0.2	-1.6	-1.5	1.1	3.6	14.6	35.9
Source: PGNiG, mBank estimates							

Note that, due to the sales portfolio characteristics described earlier, PGNiG does not strictly hedge the HH purchase price,



but swaps HH for TTF (while hedging the LNG purchase price, it simultaneously sells gas based on the TTF formula). Hence, any valuation gains reported on the HH position (+PLN 0.55bn for a \$2.25-\$3.48/MMbtu price range) do not stand for much since they are probably offset by a loss on the other "leg" of the hedging position.

Gas price speculation is not part of PGNiG's business model, however, looking at the extreme volatility in gas markets (read on for more) and the huge spread it is creating between prices in Europe and the U.S., we see the Company's U.S. contracts as a huge opportunity for extra profits, at least in the first few years of supplies.

The main drivers behind the potential windfalls include:

- a record-high EU-US price spread even after liquefaction and freight charges,
- PGNIG's hedging policy that caps the hedge horizon to 3 years; as a result, subsequent hedging transactions for 2023-24 supplies will take into account the increasing spread, and
- offtake of 7.4bcm on a FOB U.S. basis a volume that cannot be fully physically received into the Świnoujście terminal yet, and that is not likely to have been TTF-swapped before but, given current spreads, will probably find its way into Europe.

Prediction of 2023-24 LNG Contract Margins

We estimate that the 52 TWh of hedged U.S. LNG purchases mentioned earlier are hedged at an average HH-TTF "margin" of €0.6/MWh.

At the same time, as you can see in the table above, the price spreads in 2023 trans-Atlantic supply in Q4 2021 increased to €15/MWh, and in the first quarter to date they more than doubled to €36h, having shot past €50 as we write this.

This is accompanied by a HH-TTF spread of \in 21 in contracts for 2024 delivery.

We used the following assumptions for our margin calculations:

- Total 2023-24 HH-linked LNG imports from U.S. of 18.8bcm (206 TWh), assuming all terminals open for business as scheduled;
- Freight at Reuters quotes for the Sabine Pass-Świnoujście route;
- Terminal operator fees (incl. logistics and liquefaction) at \$2.5/MMBtu;
- Included is the 52 TWh volume hedged through 30 September 2021 on a HH-TTF spread of \$0.6/MWh;
- We assume that, in Q4'21, PGNiG hedged the spread for another 14.7 TWh (after a similar volume hedged in Q3'21);
- The remaining estimated open position at the end of 2021 (139 TWh) is split 50:50 between 2023 deliveries (€50/MWh spread) and 2024 deliveries (€21 current spread).

Using these simplifying assumptions, we arrived at a sum total of €5.2bn as the ballpark profit that PGNiG may be poised to make on its Henry Hub-indexed 2023-24 LNG purchases (most of this will be recognized next year). This makes a Polish zloty equivalent of PLN 24bn – a figure that corresponds to 50% of PGNiG's current market capitalization after taxes.

If the prices implied by the 2025 TTF forward curve hold, this would give rise to a positive trans-Atlantic spread of $\sim 10/MWh$ to an extra profit €1bn in 2025.

~€10/MWh to an extra profit €1bn in 2025.
Informacje podmiotu z Grupy mBank - objęte ochroną | mBank Group's entity information - protected

As a reminder, our calculations are based on the assumption that the current EU-US price spreads will continue in place – an unlikely scenario given the quotation history shown below.

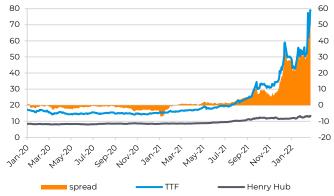
At this time we opt not to factor these estimates into our models for PCNiG.

Current EU-US Price Relations

Tight supply since the end of 2020 has pushed natural gas prices in Europe and Asia to record levels. Weather conditions (freezing cold, low winds, droughts that affect output from hydropower plants), shutdowns (UK, US blackout), a higher failure rate of LNG infrastructure, and Gazprom's supply restrictions, came up against higher demand, upset the market balance, and drained Europe of its gas reserves.

In addition, as a result of Russia's invasion of Ukraine and the introduction of further sanctions on Moscow, the market is increasingly concerned about a complete shutdown of Russian gas supplies to the EU.

European (TTF) and US (Henry Hub) 2023 contract quotes and price spread including freight and liquefaction costs (EUR/MWh)



Source: Bloomberg, mBank

Tensions have sent gas quotes on major European hubs soaring to all-time highs, and, looking at the current forward curve, it may take 4-5 years for prices to retreat to the average level seen in the last 10 years.

Meanwhile, in the U.S., amid rising production (+4%) and limited export capacity (at about 13% of total LNG production capacity), the Henry Hub gas benchmark has had a much more muted reaction to supply concerns than the rest of the world.

As a result, the net price spread between TTF gas contracts and Henry Hub futures has been on the rise since early 2021, and it has recently hit €130/MWh for front-month contracts, with the gap between longer-term contracts also reaching an unprecedented size:

Comparison of TTF-HH spreads on 1M, 1Y and 2Y FWD gas contracts after freight and liquefaction charges

EUR/MWh	1M FWD	1Y FWD	2Y FWD			
TTF	159.2	79.0	43.0			
Henry Hub	25.9	23.4	21.9			
spread	133.3	55.6	21.1			

Source: Bloomberg, mBank

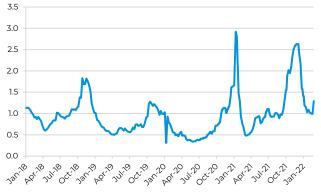
When it comes to the cost to transport LNG gas shipments from the U.S. to Europe, it is prone to dramatic fluctuations that, however, do not form any consistent trend (in the past

mBank.pl

year, the cost to move on the Sabine Pass-Świnoujście route has averaged \$1.2/MMBtu).

An undersupplied European market is by far the biggest factor behind the rapid expansion in the EU-US LNG price spread.

Sabine Pass-Świnoujście transport costs (\$/MMBtu)

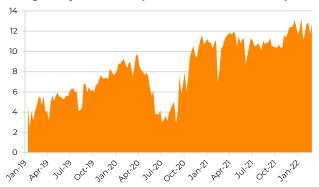


Source: Reuters, mBank

Of course, as the U.S. grows its gas liquefaction capacity (for current and planned capacity, see the following tables), trans-Atlantic arbitrage will become more efficient. As things stand, the U.S. has no free spot LNG volumes to offer with 100% of the existing capacity being utilized at all times.

In the longer term, given the EU's new commitment to diversifying gas sources (including by building more LNG regasification terminals that will keep the U.S. busy increasing its shipping capacity for offtake to Europe), we could see both freight costs and liquefaction costs grow in the coming years.

Average daily U.S. LNG exports in billion cubic feet per day



Source: EIA, mBank

U.S. LNG capacity, operating and under construction with Final Investment Decision (FID) issued

Facility	Capacity Bcf/d milli	on tonnes	Peak Capacity (Bcf/d)	Launched	Status	Owner
Sabine Pass	3.6	27.0	4.6	2016-21	commercial service	Cheniere Energy
Cove Point	0.7	5.3	0.8	2018	commercial service	Dominion Energy
Elba Island	0.3	2.5	0.4	2019-20	commercial service	Kinder Morgan
Corpus Christi	1.8	13.6	2.4	2019-21	commercial service	Cheniere Energy
Cameron	1.8	13.5	2.0	2019-20	commercial service	Sempra LNG
Freeport	2.0	15.0	2.1	2019-20	commercial service	Freeport LNG
Calcasieu 1-9	0.7	5.0	0.8	2021	commercial service	Venture Global LNG
total	10.8	81.8	13.0		commercial service	
Calcasieu 10-18	0.7	5.0	0.8	wrz.22	under construction	Venture Global LNG
Golden Pass 1	0.7	5.2	0.8	2024	under construction	Qatar Petroleum, Exxon, Conoco
Golden Pass 2-3	1.4	10.4	1.6	2025	under construction	Qatar Petroleum, Exxon, Conoco

Source: EIA, mBank

Proposed pre-FID U.S. LNG projects

Facility	Capacity		ve Leuneb	Status		
Facility	Bcf/d	mmt	xp. Launch	Status	Owner	
Lake Charles	2.2	16.5	2028	construction-ready, EPC tender	Energy Transfer	
Delfin	1.6	12.0	2026	construction-ready	Fairwood Group	
Driftwood	3.6	27.6	2024-25 E	PC contract, construction underway, FID expected 2022	Tellurian	
Port Arthur	1.8	13.5	2025	pending construction, EPC contract	Sempra Energy	
Freeport 4	0.7	5.1	2025	EPC contract, construction-ready, FID expected 2022	Freeport LNG	
Gulf LNG	1.5	10.9	?	designs are in progress	Kinder Morgan	
Plaquemines 1	1.3	10.0	2023	construction-ready, EPC contract	Venture Global LNG	
Plaquemines 2	1.3	10.0	2024	construction-ready, EPC contract	Venture Global LNG	
Texas LNG	0.6	4.0	2025-26	construction-ready 1	exas LNG Brownsville	
Rio Grande LNG	3.6	27.0	2025	EPC contract	Next Decade	
Corpus Christi III	1.5	11.5	2024	design ready, FID in 2022 (Cheniere Energy	
Alaska LNG	2.6	20.0	2030 (?)	initial stages A	AGDC	
Cameron LNG 4-5	1.4	10.0	?	initial designs S	Sempra Energy	
total	23.7	177.9				

Source: EIA, mBank

Informacje podmiotu z Grupy mBank - objęte ochroną | mBank Group's entity information - protected



List of abbreviations and ratios contained in the report: EV (Enterprise Value) – Equity Value + Net Debt; EBIT – Earnings Before Interest and Taxes; EBITDA – EBIT + Depreciation & Amortisation; Net Debt – Borrowings + Debt Securities + Interest-Bearing Loans -Cash and Cash Equivalents; *P/E* (Price/Earnings) – Price Per Share Divided by Earnings Per Share; *P/CE* (Price to Cash Earnings) – Price Per Share Divided by Earnings + Depreciation & Amortisation; *P/B* (Price to Book Value) – Price Per Share Divided by Book Value Per Share; *P/CE* (Price to Cash Flow) – Price Divided by Cash Flow from Operations; **ROE** (Return on Equity) – Earnings Divided by Shareholders' Equity; ROCE (Return on Capital Employed) – EBIT x (Average Assets - Current Liabilities); **ROI** (Return on Invested Capital) – EBIT x (I-Tax Rate) / (Average Equity + Minority Interest + Net Debt); **FCFF** (Free Cash Flow to Equity) – Free Cash Flow to Firm - Net Interest Expense (incl. Debt + Leases) - Lease Payments

OVERWEIGHT (OW) – a rating which indicates that we expect a stock to outperform the broad market NEUTRAL (N) – a rating which indicates that we expect the stock to perform in line with the broad market UNDERWEIGHT (UW) – a rating which indicates that we expect the stock to underperform the broad market

Recommendations of Biuro maklerskie mBanku:

A recommendations or bluro makierskie manku: A recommendation is usilid for a period of 9 months, unless a subsequent recommendation is issued within this period. Expected returns from individual recommendations are as follows: BUY – we expect that the rate of return from an investment will be at least 15% ACCUMULATE – we expect that the rate of return from an investment will range from 5% to 15% HOLD – we expect that the rate of return from an investment will range from -5% to +5% REDUCE – we expect that the rate of return from an investment will range from -5% to +5% SELL – we expect that an investment will be at least 15% SELL – we expect that an investment will be at least than 15%

Recommendations are updated at least once every nine months.

mBank S.A. with its registered office in Warsaw at Prosta 18 renders brokerage services via a dedicated organisational unit, the Brokerage Bureau, which uses the Polish name Biuro maklerskie mBanku

mBank SA. as part of the Exchange's Analytical Coverage Support Programme ("Programme", https://www.gpw.pl/eacsp) prepares analytical reports for the following companies: Cognor Holding, Compremum, Sygnity. These documents are prepared at the request of Gielda Papierów Wartościowych w Warszawie SA. ("WSE"), which is entitled to copyrights to these materials. mBank SA. receives remuneration from the WSE for the preparation of the reports. All documents prepared for the Programme are available at: https://www.mdm.pl/ui-pub/site/market_and_analysis/analysis_and_recommendations/analytical_coverage_support_programme

This document has been created and published by Biuro maklerskie mBanku. The present report expresses the knowledge as well as opinions of the authors on day the report was prepared. The opinions and estimates contained herein constitute our best judgment at this date and time, and are subject to change without notice. The present report was prepared with due care and attention, observing principles of methodological correctness and objectivity, on the basis of sources available to the public, which Biuro maklerskie mBanku considers reliable, including information published by issuers, shares of which are subject to recommendations. However, Biuro maklerskie mBanku, in no case, guarantees the accuracy and completeness of the report, in particular should sources on the basis of which the report was prepared prove to be inaccurate, incomplete or not fully consistent with the facts. mBank SA bears no responsibility for investment decisions taken on the basis of the present report.

In this uccument, course not constitute an other or invitation to subscribe for or purchase any financial instruments and neither this document nor anything contained herein shall form the basis of any contract or commitment whatsoever. It is being furnished to you solely for your information and may not be reproduced or redistributed to any other person. This document does not constitute investment, legal, accounting or other advice, and mank is not liable for damages resulting from or related to the use of data provided in the documents. This document may not be copied, duplicated and/or be directly or indirectly distributed in the United States, Canada, Australia or Japan, nor transferred to citizens or residents of a state where its distribution may be legally restricted, which does not limit the possibility of publishing materials prepared for the Programme on Cognor Holding, Compremum, Sygnity, mBank or WSE websites. Persons who disseminate this document should be aware of the need to comply with such restrictions. This document does not constitute an offer or invitation to subscribe for or purchase any financial instruments and neither this document nor anything contained herein shall form the basis of any contract or

Recommendations are based on essential data from the entire history of a company being the subject of a recommendation, with particular emphasis on the period since the previous recommendation.

Investing in shares is connected with a number of risks including, but not limited to, the macroeconomic situation of the country, changes in legal regulations as well as changes on commodity markets. Full elimination of these risks is virtually impossible.

mBank S.A. bears no responsibility for investment decisions taken on the basis of the present report or for any damages incurred as a result of investment decisions taken on the basis of the present report.

It is possible that mBank S.A. in its brokerage activity renders, will render or in the past has rendered services for companies and other entities mentioned in the present report.

mBank S.A. does not rule out offering brokerage services to an issuer of securities being the subject of a recommendation. Information about any conflicts of interest that may arise in connection with the issuance of recommendations (should such a conflict exist) is provided below, and it is valid as of the date of the most recent *Monthly Report* published by Biuro maklerskie mBanku or as of the date of the most recent recommendation issued for an Issuer, as applicable

This document was not transferred to the issuers prior to its publication.

mBank S.A. may have received compensation from the following companies in the last 12 months: Alchemia, Alior Bank, Ambra, Amica, Asseco Poland, ATM, Bank Handlowy, Bank Millennium, Bank Pekao, BNP Paribas Bank Polska, Boryszew, BOŚ, Capital Park, Cavatina, CD Projekt, Ceramika Nowa Gala, Cognor, Echo Investment, Elemental Holding, Elzab, Enea, Energoaparatura, Erbud, Ergis, Ferrum, GetBack, Getin Holding, Getin Noble Bank, GPW, Groclin, Grupa Pracuj, iz Development, ING BSK, Kruk, Lokum Deweloper, LW Bogdanka, Mennica Polska, Mostostal Warszawa, Netia, Neuca, NWAI Dom Maklerski, Oponeo.pl, OTP Bank, PA Nova, PBKM, PGNiG, PKO BP, Polenergia, Polimex-Mostostal, Polnord, Polwax, Poznańska Korporacja Budowlana PEKABEX, Primetech, Prochem, Projezem, PZU, Raiffeisen Bank Vistal Gdynia, Wittchen, Work Service, YOLO, Zastal, ZUE.

Asseco Poland provides IT services to mBank S.A.

mBank S.A. has a cash service agreement in place with Pekao and a phone subscription agreement in place with Orange Polska S.A.

mBank S.A., its shareholders and employees may hold long or short positions in the issuers' shares or other financial instruments related to the issuers' shares. mBank, its affiliates and/or clients may conduct or may have conducted transactions for their own account or for account of another with respect to the financial instruments mentioned in this report or related investments before the recipient has received this report.

Copying or publishing the present report, in full or in part, or disseminating in any way information contained in the present report requires the prior written agreement of mBank S.A. Recommendations are addressed to all Clients of Biuro maklerskie mBanku

Recommendations are addressed to all Clients of Biuro maklerskie mBanku.

All investment recommendations and strategies issued by mBank S.A. over the last 12 months are available at:

http://www.mdm.pl/ui-pub/site/market_and_analysis/analysis_and_recommendations/fundamental_analysis/recommendations?recent_filter_active=true&lang=en

The activity of mBank S.A. is subject to the supervision of the Polish Financial Supervision Commission

Individuals who did not participate in the preparation of recommendations, but had or could have had access to recommendations prior to their publication, are employees of Biuro maklerskie mBanku authorised to access the premises in which recommendations are prepared and/or individuals having to access to recommendations based on their corporate roles, other than the analysts mentioned as the authors of the present recommendations.

This publication constitutes investment research within the meaning of Art. 36.1 of Commission Delegated Regulation (EU) 2017/565.

The compensation of the research analysts responsible for preparing investment research is determined independently of and without regard to the compensation of or revenue generated by any other me compensation of the Figure and the provided to any employee whose business interests may reasonably be considered to conflict with the interests of the persons to whom the investment research prepared by the Research Department of Biuro maklerskie mBanku is disseminated. With that being said, since one of the factors taken into consideration when determining the compensation of research analysts is the degree of fulfillment of annual financial targets by customer service functions, there is a risk that the adequacy of compensation offered to persons preparing investment research will be available to any employee whose the service functions, there is a risk that the adequacy of compensation offered to persons preparing investment research will be questioned by a competent oversight body.

For U.S. persons only: This research report is a product of mBank SA which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S. regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of FINRA or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances and trading securities held by a research analyst account. This report is intended for distribution by mBank SA only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a 6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this required to be adverted by the required to be required to recipient of the recipient

report and return the same to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any U.S. person, which is not the Major Institutional Investor. In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors, mBank SA has entered into an agreement with a U.S. registered broker-dealer, Cabrera Capital Markets. ("Cabrera"). Transactions in securities discussed in this research report should be effected through Cabrera or another U.S. registered broker dealer.

Strong and weak points of valuation methods used in recommendations:

acknowledged as the most methodologically correct method of valuation, it consists in discounting financial flows generated by a company, its weak point is the significant susceptibility to a change of Forecast assumptions in the model. Relative – based on a comparison of valuation multipliers of companies from a given sector; simple in construction, reflects the current state of the market better than DCF; weak points include substantial variability (fluctuations together with market indices) as well as difficulty in the selection of the group of comparable companies. Economic profits – discounting of future economic profits; the weak point is high sensitivity to changes in the assumptions made in the valuation model. Relative

Discounted Dividends (DDM) – discounting of future dividends; the weak point is high sensitivity to changes in the assumptions as to future dividends made in the valuation model. NAV – valuation based on equity value, one of the most frequently used method in case of developing companies; the weak point of the method is that it does not factor in future changes in revenue/profits of a company

Informacje podmiotu z Grupy mBank - objęte ochroną | mBank Group's entity information - protected

mBank.pl

mBank S.A. Prosta 18

00-850 Warszawa http://www.mbank.pl/

Research Department

Kamil Kliszcz director +48 22 438 24 02 | +48 667 770 837 kamil.kliszcz@mbank.pl energy, power generation

Piotr Poniatowski +48 22 438 24 09 | +48 509 603 046 piotr.poniatowski@mbank.pl gaming

Antoni Kania +48 22 438 24 03 | +48 509 595 736 antoni.kania@mbank.pl industrials, chemicals, metals

Sales and Trading

Traders

Piotr Gawron director +48 22 697 48 95 piotr.gawron@mbank.pl

Daniel Urbański +48 22 697 47 44 daniel.urbanski@mbank.p<u>l</u>

Sales, Foreign Markets

Marzena Łempicka-Wilim deputy director +48 22 697 48 82 marzena.lempicka-wilim@mbank.pl

Private Client Sales

Kamil Szymański director kamil.szymanski@mbank.pl Michał Konarski +48 22 438 24 05 | +48 515 025 640 michal.konarski@mbank.pl banks, financials

Mikołaj Lemańczyk +48 22 438 24 07 | +48 501 663 511 mikolaj.lemanczyk@mbank.pl banks, financials Paweł Szpigiel +48 22 438 24 06 | +48 509 603 258 pawel.szpigiel@mbank.pl media, IT, telco, e-commerce

Janusz Pięta +48 22 438 24 08 | +48 506 065 659 janusz.pieta@mbank.pl retail, e-commerce

Jędrzej Łukomski +48 22 697 49 85 jedrzej.lukomski@mbank.pl

Andrzej Sychowski +48 22 697 48 46 andrzej.sychowski@mbank.pl

Piotr Brożyna +48 22 697 48 47 piotr.brozyna@mbank.pl

Jarosław Banasiak deputy director jaroslaw.banasiak@mbank.pl Tomasz Jakubiec +48 22 697 47 31 tomasz.jakubiec@mbank.pl

Łukasz Płaska +48 22 697 47 90 lukasz.plaska@mbank.pl