

Release date: 17 November 2022

Sven Sauer
 Equity Research Analyst
 +49 69 7 56 96 131
 ssauer@keplercheuvreux.com

Deutsche Rohstoff **Buy**

Germany | Oil & gas

Beta Profile:  
MCap: EUR135.7m

Target Price: EUR 40.00
Current Price: EUR 26.70
Up/downside: 49.8%
Market data: 16 November 2022

Bloomberg: DR0 GR Reuters: DR0G.DE
 Free float 90%
 Avg. daily volume (EURm) 0.7
 YTD abs performance 31.5%
 52-week high/low (EUR) 33.50/19.25

Sustained price levels, higher production and earnings – CMD feedback

Key points:

- The best is yet to come for DRAG, as it will increase its average yearly production from 6,000 BOEPD in 2019-21 to 9,000 BOEPD in 2022-24.
- The group has an attractive risk profile, given its low-risk operations in fields which have already been explored and the cooperation with major US oil players, in combination with the lucrative economic efficiency due to the current price levels.
- DRAG should continue to benefit from the structural trends, as the current environment is pointing towards sustained price levels and global undersupply.

CMD divided into three parts: DRAG's operations and perspectives, economic efficiency, and the global oil market

- The company hosted its second digital CMD with CEO Jan-Philipp Weitz and CFO Henning Döring. The two-hour event comprised the development and perspectives for Deutsche Rohstoff AG in the US oil and gas market, followed by an overview of the economic efficiency and profitability drivers of drilling wells, including a comparison of DRAG's drilling operations in Wyoming and Colorado.
- The CMD was complemented by a discussion regarding the supply and demand situation in the global oil market and the potential impacts – including from political players – on the oil price.
- Management illustrated how the technological improvement over the past decade in the drilling and production of oil wells has led to a fourfold increase of BOE after eleven months from a single well.
- Due to its proximity to significantly larger US oil and gas companies, DRAG is in good company with its operations in Colorado, Utah, and Wyoming, as it is able to assess the mostly public information from its competitors regarding efficiency or how many wells can be located next to each other. DRAG only drills wells where it is very likely that production is economically viable.
- Overall, DRAG's operations thus have a very attractive risk profile, as the information provided by its peers enables the group to operate at low risk given the lack of uncertainty. The chances of dry drilling or total loss are thus very limited and in most cases the ROI is achieved in the following years.
- Given major US oil companies' budget constraints, DRAG with its more than ten years' experience is an attractive and established partner, and it appears that these partnerships (as with Oxy) are a win for both sides.

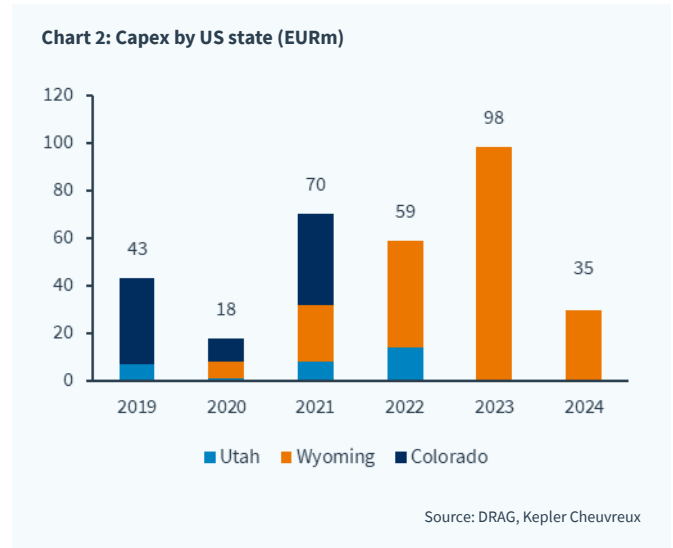
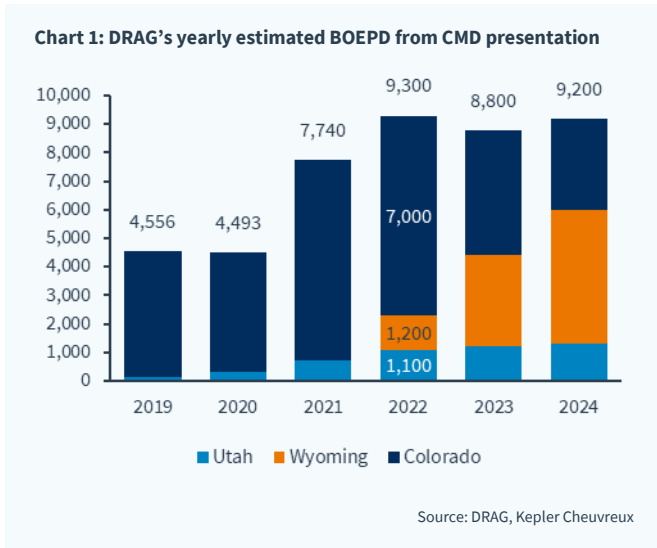
Production set to increase to higher levels over 2022-24E with high cash flow generation

- DRAG's second CMD was geared towards educating current and potential shareholders about the group's US oil & gas operations as well as its outlook regarding production, drilling, investments, and subsequent earnings.
- The group will increase focus on Wyoming, where it currently holds a 70% stake in 20 wells, which are expected to produce 1,200 BOEPD in 2022. DRAG's assets in Colorado (87 operating wells with a 60% stake) are expected to produce 7,000 BOEPD in 2022 and will be overtaken as the group's largest production driver in the coming two years by its assets in Wyoming. In total, the group aims to increase BOEPD on average to 9,000 per year in 2022-24 (up from 6,000 BOEPD in 2019-21) by investing c. EUR70m per year.
- Below we show management's 2022-24 production and capex estimates, which are rough estimates and could differ slightly from the actual figures, as we have copied them from a graph provided in the presentation.

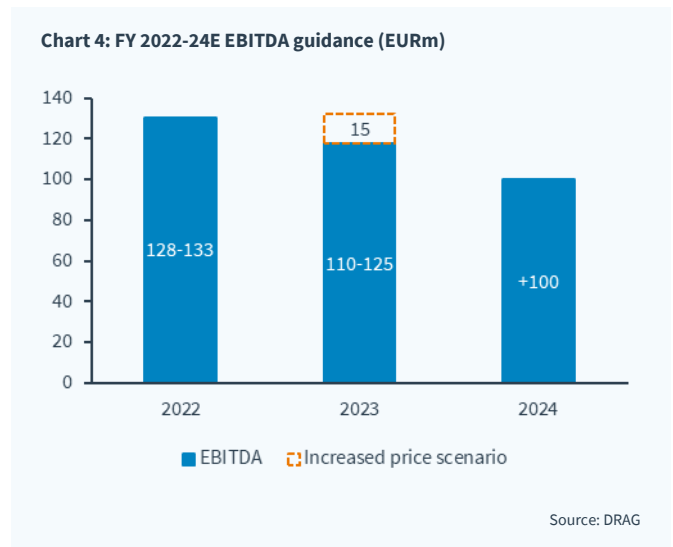
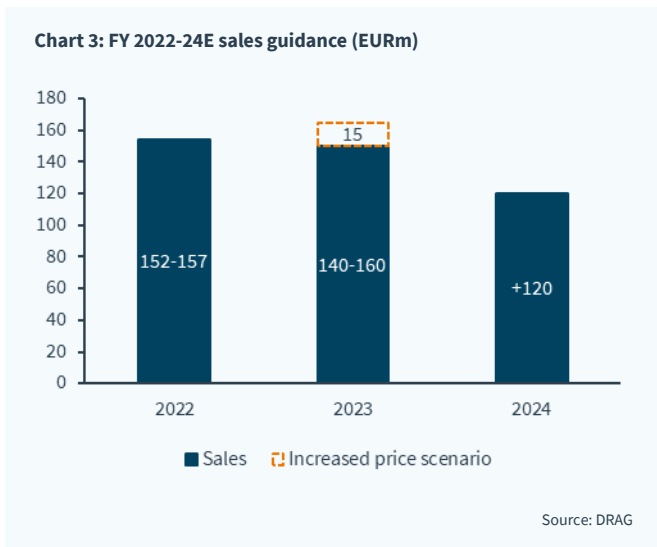
Kepler Cheuvreux and the issuer have agreed that Kepler Cheuvreux will produce and disseminate investment research on the said issuer as a service to the issuer.

IMPORTANT. Please refer to the back of the report for important information and disclosures.
keplercheuvreux.com

This research is the product of Kepler Cheuvreux, which is authorized and regulated by the Autorité des Marchés Financiers in France.



- Regarding sales and EBITDA, management has reiterated its FY 2022-24E guidance on the basis of a USD75 WTI price, which we show in the graphs below.
- Should the average WTI price be USD85 in 2023, management expects an additional EUR15m in sales and EBITDA.



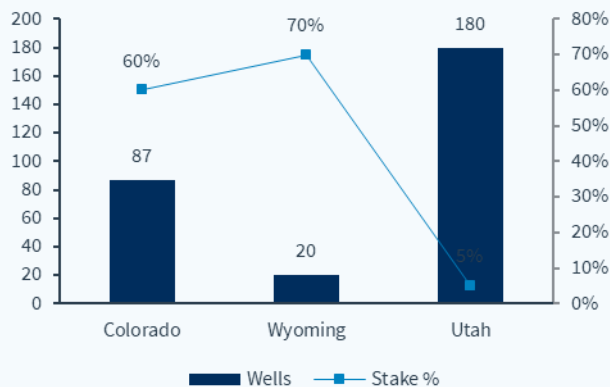
- DRAG has laid the foundation for a significant increase in potential wells going forward, which are not part of the production or sales and earnings guidance.
- As of 2022, the group operates 87 wells (7,000 BOEPD) and has a stake in over 200 non-operating wells. With its 60,000 acres in Wyoming, there is potential for 100 additional wells in the mid- to long term. DRAG has received over 20 permits for its acreage.
- In 2023, Cub Creek will add a total of five new operating wells (four net wells) in Wyoming, which could be increased to eight.
- Two areas of cooperation with Occidental with a total investment amount of c. USD150m until H2 2024 will see the development of 31 further wells.
- The next well site will be completed in Q1 2021 with an amount of USD30m (Huckleberry).
- The production from the first 30 days from its first wells with Oxy is within management's expectation; however, no figures have been disclosed yet.

Economic efficiency in Wyoming higher than in Colorado

- As pointed out above, DRAG will increase its focus on Wyoming (and Utah to a smaller extent) given its own 60,000 acres, its new operating wells, and its cooperation agreements with Oxy.

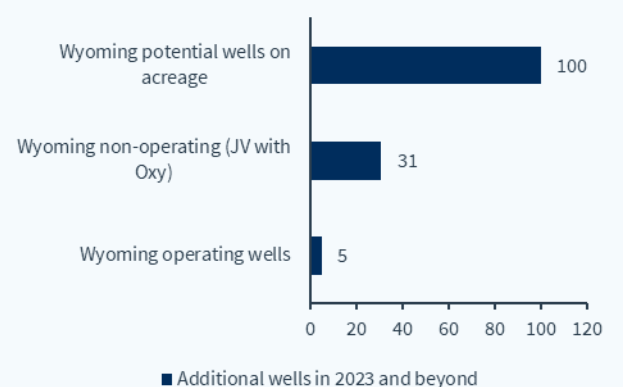
- In Wyoming, the single well economics are much more lucrative than in Colorado. While the drilling costs (and transport costs) are significantly higher in Wyoming (c. USD8.5-11.5m per well versus c. USD5m per well in Colorado), the increased cost base is overcompensated for by a higher production volume and flow rate, as the wells are drilled twice as deep in Wyoming. In addition, the share of oil is c. 70% in Wyoming compared to 40% in Colorado when a new well is drilled and production is commenced. As a result, the ROI is higher in Wyoming compared to Colorado, especially when the group will be able to generate scale effects.

Chart 5: Number of DRAG's operating and non-operating wells by US state



Source: DRAG

Chart 6: DRAG's additional and potential wells expected in 2023 and beyond



Source: DRAG

Part 3: What can investors expect from the oil and gas market going forward?

- To round off the CMD, management held a discussion regarding the current situation and the outlook for demand and supply in the global oil market.
- Management convincingly argued that the WTI price should remain at sustained levels due to the current global supply shortage.
- While a slowdown in demand, especially from China, could impact prices negatively, management suggests (and we agree) that the factors pointing towards a rather optimistic outlook outweigh the downside: 1) the regulatory environment in the US is comparatively positive; 2) the recent figures on a deceleration of inflation and declining producer prices can increase demand for oil; 3) OPEC's recent decision to cut oil supply; 4) the overall lower production in the US compared to pre-pandemic levels (620-640 active oil wells, which is 25% below pre-pandemic levels, and even lower compared to 2014 with over 1,900 active oil wells); 5) 70-80% of the global population have a lower prosperity level than in the US, which means the upside to higher demand for oil is significant in countries such as China, India and Africa, where the average person consumes c. 3,000-4,000 litres of oil per year (compared to 200,000-300,000 in the US); and 6) a lack of alternatives to substitute oil demand (except for e-mobility).
- Overall, a very informative and well-rounded CMD hosted by management with a strong outlook in the coming 12-24 months.

Appendix 1: Research framework

Last model update: 14 October 2022

Investment case

- As one of the few European companies offering direct exposure to US shale, DRAG has extensive experience as an operator in the field. There are a large number of manufacturing companies offering optimal opportunities for non-operative activities and participations.
- Assuming a c. 30% rate of success on the acquired acreage in Wyoming’s Powder River Basin (up to 100 well locations), our play-by-play model suggests that this could lead to a sustainable high level of DRAG's oil & gas production in the medium term.
- The minority stake in Almonty Industries, which is expected to ramp up production at one of the largest tungsten mines outside China, should generate stable and long-term returns.

Catalysts

- Higher-than-assumed economic viability in Wyoming (50-100 potential net wells for BRE's part alone).
- Price movements in the WTI benchmark.
- Production start of Almonty's Sangdong mine in South Korea.

Valuation methodology

- Our valuation is based on an SOP of its oil & gas assets, Deutsche Rohstoff’s minority investments in metals, and its investment portfolio.
- We value Cub Creek, Elster Oil & Gas and Bright Rock Energy/Salt Creek Oil and Gas using a 27-year NPV model with a 10% WACC.
- Under our current long-term WTI oil price assumption of USD68/bbl, our SOP points to a fair value of EUR40.0.

Risks to our rating

- Weaker-than-expected US dollar. Each USD0.05 move in our long-term EUR/USD assumption impacts our SOP by EUR1.5-2.0 per share.
- Lower demand leading to negative price movements in the WTI benchmark. Each USD3/bbl move in our long-term WTI oil price assumptions impacts our SOP by c. EUR1-2 per share.

Appendix 2: Company description

Deutsche Rohstoff is a Germany-based holding company that specialises in investing in resource projects. The current portfolio is mainly focused on the oil & gas sector, but it also holds minority stakes in high-tech metals such as tungsten. Its management team has longstanding expertise in the sector, and the group focuses on well-explored areas in the US.

Management Jan-Philipp Weitz, CEO | Henning Döring, CFO

Key shareholders Free float: 89.96% | Management: 10.04% | Institutional investors: 20.00%

Appendix 3: share price perf.



Appendix 4: SWOT analysis

Strengths

- Solid oil and gas asset portfolio with an extensive drilling pipeline.
- Diversified portfolio
- Expert management with experience in resource-based activities

Opportunities

- Efficiency gains in drilling could allow additional costs savings
- New land acquisitions
- Investments in electro mobility

Weaknesses

- No control over non-operating wells
- Lower transparency compared to US oil and gas peers.
- The majority of mining investments are not producing yet.

Threats

- Price increases from field services companies leading to higher capex
- Direct competition from extractor Oil & Gas in land purchase.
- Euro/US dollar currency fluctuations

Appendix 5: Key financials

Last model update: 14 October 2022

Market data date: 16 November 2022

FY to 31/12 (EUR)	12/15	12/16	12/17	12/18	12/19	12/20	12/21	12/22E	12/23E	12/24E
Income Statement (EURm)										
Sales	1.9	9.2	53.7	109.1	41.2	38.7	73.3	152.7	142.0	108.3
% Change	-91.7%	383.4%	486.1%	102.9%	-62.2%	-6.1%	89.5%	108.3%	-7.0%	-23.7%
EBITDA adjusted	4.9	6.4	36.1	97.9	22.7	20.4	48.4	132.8	118.2	85.3
EBITDA adj. margin (%)	na	69.5%	67.2%	89.8%	55.2%	52.8%	66.0%	87.0%	83.3%	78.7%
EBIT adjusted	2.4	-0.5	5.3	32.7	5.6	-19.6	14.9	90.4	82.8	57.3
EBIT adj. margin (%)	na	-5.9%	9.9%	30.0%	13.7%	-50.8%	20.3%	59.2%	58.3%	52.9%
Net financial items & associates	-3.0	-1.4	-4.0	-6.2	-5.4	-6.4	-5.5	-6.3	-5.5	-5.5
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax	1.1	2.0	6.4	-8.5	-0.1	6.4	-0.7	-17.7	-19.3	-12.9
Net profit from continuing operations	0.5	0.1	7.7	17.9	0.2	-16.1	26.4	66.5	57.9	38.8
Net profit from discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit before minorities	0.5	0.1	7.7	17.9	0.2	-16.1	26.4	66.5	57.9	38.8
Net profit reported	1.2	0.1	5.5	13.9	0.3	-15.5	24.8	63.0	55.9	37.1
Net profit adjusted	1.2	0.1	5.5	13.9	0.3	-19.0	7.1	63.0	55.9	37.1
Cash Flow Statement (EURm)										
Levered post tax CF before capex	1.2	2.9	37.8	68.7	13.9	14.0	51.8	107.2	113.8	83.1
Capex	-10.0	-66.1	-51.7	-66.2	-28.7	-36.8	-52.8	-61.0	-40.9	-60.0
Free cash flow	-8.8	-63.2	-13.9	2.5	-14.8	-22.9	-1.0	46.1	72.9	23.1
Acquisitions & divestments	-4.6	3.1	-2.0	0.1	-2.8	-3.9	-0.3	0.0	0.0	0.0
Dividend paid	-2.5	-2.7	-3.0	-3.2	-3.2	-0.5	0.0	-3.0	-4.1	-3.0
Others	-4.1	21.8	-8.8	31.1	-9.3	-15.1	16.8	0.0	0.0	0.0
Change in net financial debt	20.0	41.1	27.6	-30.5	30.1	42.3	-15.5	-43.1	-68.8	-20.1
Balance Sheet (EURm)										
Intangible assets	12.3	29.3	46.0	12.1	14.4	15.1	21.6	50.2	52.8	70.0
Tangible assets	12.6	91.2	102.2	114.8	147.0	119.4	157.2	176.2	178.0	189.4
Financial & other non-current assets	46.5	24.7	24.1	36.4	42.5	50.5	43.9	30.2	30.2	30.2
Total shareholders' equity	61.8	66.2	56.7	73.8	71.5	45.6	80.1	143.5	197.4	233.1
Pension provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liabilities and provisions	66.2	127.4	156.9	151.0	207.4	161.1	184.9	194.8	214.1	227.1
Net debt	9.5	50.6	78.2	47.7	77.8	120.2	104.7	61.6	-7.2	-27.3
Net financial debt	9.5	50.6	78.2	47.7	77.8	120.2	104.7	61.6	-7.2	-27.3
IFRS 16 debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net working capital	1.1	-23.0	-9.3	-22.4	-29.3	-11.9	-19.0	-32.7	-52.0	-65.0
Invested capital	15.0	74.9	96.2	94.1	119.3	108.8	139.4	144.8	127.2	125.7
Per share data (EUR)										
EPS adjusted	0.23	0.02	1.10	2.74	0.06	-3.74	1.40	12.40	11.00	7.30
EPS adj and fully diluted	0.23	0.02	1.10	2.74	0.06	-3.74	1.43	12.73	11.30	7.50
% Change	-95.2%	-91.2%	5328.9%	150.0%	-97.8%	-chg	+chg	788.0%	-11.2%	-33.6%
EPS reported	0.23	0.02	1.10	2.74	0.06	-3.05	4.88	12.40	11.00	7.30
Cash flow per share	0.24	0.58	7.48	13.56	2.74	2.75	10.20	21.09	22.39	16.35
Book value per share	11.71	11.16	9.73	12.99	12.66	7.76	14.31	26.11	36.31	43.01
Dividend per share	0.55	0.60	0.65	0.70	0.10	0.00	0.60	0.80	0.60	0.60
Number of shares, YE (m)	5.06	5.06	5.06	5.06	5.08	5.08	5.08	5.08	5.08	5.08
Ratios										
ROE (%)	1.9%	0.2%	10.5%	24.1%	0.5%	-36.6%	12.7%	61.3%	35.3%	18.4%
ROIC (%)	15.7%	-0.8%	4.0%	22.3%	3.4%	-11.2%	7.8%	41.4%	39.6%	29.4%
ND(F+IFRS16) / EBITDA (x)	1.9	7.9	2.2	0.5	3.4	5.9	2.2	0.5	-0.1	-0.3
Gearing (%)	15.4%	76.4%	138.0%	64.7%	108.9%	263.6%	130.7%	42.9%	-3.6%	-11.7%
Valuation										
P/E adjusted	72.4	na	18.6	7.7	na	na	11.6	2.2	2.4	3.7
P/E adjusted and fully diluted	72.4	na	18.6	7.7	na	na	11.3	2.1	2.4	3.6
P/BV	1.4	1.5	2.1	1.6	1.3	1.2	1.1	1.0	0.7	0.6
P/CF	67.9	30.0	2.7	1.6	5.8	3.4	1.6	1.3	1.2	1.6
Dividend yield (%)	3.3%	3.5%	3.2%	3.3%	0.6%	0.0%	3.7%	3.0%	2.2%	2.2%
Dividend yield preference shares (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield (%)	-9.8%	-72.1%	-15.5%	-1.5%	-18.2%	-46.4%	-3.1%	31.4%	52.2%	15.8%
EV/Sales	50.4	16.1	3.5	1.5	4.0	4.5	2.6	1.4	1.0	1.1
EV/EBITDA adj.	19.4	23.2	5.2	1.7	7.3	8.5	4.0	1.6	1.2	1.4
EV/EBIT adj.	39.6	na	35.6	5.0	29.4	na	13.0	2.3	1.7	2.1

Research ratings and important disclosures

The term "KEPLER CHEUVREUX" shall, unless the context otherwise requires, mean each of KEPLER CHEUVREUX and its affiliates, subsidiaries and related companies (see "Regulators" table below).

The investment recommendation(s) referred to in this report was (were) completed on 17/11/2022 13:34 (GMT) and was first disseminated on 17/11/2022 13:59 (GMT).

Unless otherwise stated, all prices are aligned with the "Market Data date" on the front page of this report.

Disclosure checklist - Potential conflict of interests

Company Name	ISIN	Disclosure
Deutsche Rohstoff	DE000A0XYG76	KEPLER CHEUVREUX and the issuer have agreed that KEPLER CHEUVREUX will produce and disseminate investment research on the said issuer as a service to the issuer

Organizational and administrative arrangements to avoid and prevent conflicts of interests

KEPLER CHEUVREUX promotes and disseminates independent investment research and have implemented written procedures designed to identify and manage potential conflicts of interest that arise in connection with its research business, which are available upon request. The KEPLER CHEUVREUX research analysts and other staff involved in issuing and disseminating research reports operate independently of KEPLER CHEUVREUX Investment Banking business. Information barriers and procedures are in place between the research analysts and staff involved in securities trading for the account of KEPLER CHEUVREUX or clients to ensure that price sensitive information is handled according to applicable laws and regulations.

It is Kepler Cheuvreux' policy not to disclose the rating to the issuer before publication and dissemination. Nevertheless, this document, in whole or in part, and with the exclusion of ratings, target prices and any other information that could lead to determine its valuation, may have been provided to the issuer prior to publication and dissemination, solely with the aim of verifying factual accuracy.

Please refer to www.keplercheuvreux.com for further information relating to research and conflict of interest management.

Analyst disclosures

The functional job title of the person(s) responsible for the recommendations contained in this report is Equity/Credit Research Analyst unless otherwise stated on the cover.

Name of the Research Analyst(s): Sven Sauer

Regulation AC - Analyst Certification: Each Equity/Credit Research Analyst(s) listed on the front-page of this report, principally responsible for the preparation and content of all or any identified portion of this research report hereby certifies that, with respect to each issuer or security or any identified portion of the report with respect to an issuer or security that the equity research analyst covers in this research report, all of the views expressed in this research report accurately reflect their personal views about those issuer(s) or securities. Each Equity/Credit Research Analyst(s) also certifies that no part of their compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that equity research analyst in this research report.

Each Equity/Credit Research Analyst certifies that he is acting independently and impartially from KEPLER CHEUVREUX shareholders, directors and is not affected by any current or potential conflict of interest that may arise from any KEPLER CHEUVREUX activities.

Analyst Compensation: The research analyst(s) primarily responsible for the preparation of the content of the research report attest that no part of the analyst's(s') compensation was, is or will be, directly or indirectly, related to the specific recommendations expressed by the research analyst(s) in the research report. The research analyst's(s') compensation is, however, determined by the overall economic performance of KEPLER CHEUVREUX.

Registration of non-US Analysts: Unless otherwise noted, the non-US analysts listed on the front of this report are employees of KEPLER CHEUVREUX, which is a non-US affiliate and parent company of Kepler Capital Markets, Inc. a SEC registered and FINRA member broker-dealer. Equity/Credit Research Analysts employed by KEPLER CHEUVREUX, are not registered/qualified as research analysts under FINRA/NYSE rules, may not be associated persons of Kepler Capital Markets, Inc. and may not be subject to NASD Rule 2711 and NYSE Rule 472 restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

Research ratings

Kepler Cheuvreux rating split as of dd 00 yyyy

Rating Breakdown	A	B
Buy	58%	70%
Hold	33%	23%
Reduce	5%	0%
Not Rated/Under Review/Accept Offer	4%	7%
Total	100%	100%

Source: Kepler Cheuvreux

A: % of all research recommendations

B: % of issuers to which material services of investment firms are supplied

12 months rating history

The below table shows the history of recommendations and target prices changes issued by KEPLER CHEUVREUX research department (Equity and Credit) over a 12 months period.

Company Name	Date	Business Line	Rating	Target Price	Closing Price
Deutsche Rohstoff (EUR)	21/02/2022 05:48	Equity Research	Buy	36.00	24.30
	14/06/2022 04:40	Equity Research	Buy	40.00	31.00

Credit research does not issue target prices. Left intentionally blank.

Please refer to the following link <https://research.keplercheuvreux.com/disclosure/stock/> for a full list of investment recommendations issued over the last 12 months by the author(s) and contributor(s) of this report on any financial instruments.

Equity research

Rating system

KEPLER CHEUVREUX equity research ratings and target prices are issued in absolute terms, not relative to any given benchmark. A rating on a stock is set after assessing the twelve months expected upside or downside of the stock derived from the analyst's fair value (target price) and in the light of the risk profile of the company. Ratings are defined as follows:

Buy: The minimum expected upside is 10% over next 12 months (the minimum required upside could be higher in light of the company's risk profile).

Hold: The expected upside is below 10% (the expected upside could be higher in light of the company's risk profile).

Reduce: There is an expected downside.

Accept offer: In the context of a total or partial take-over bid, squeeze-out or similar share purchase proposals, the offer price is considered to be fairly valuing the shares.

Reject offer: In the context of a total or partial take-over bid, squeeze-out or similar share purchase proposals, the offered price is considered to be undervaluing the shares.

Under review: An event occurred with an expected significant impact on our target price and we cannot issue a recommendation before having processed that new information and/or without a new share price reference.

Not rated: The stock is not covered.

Restricted: A recommendation, target price and/or financial forecast is not disclosed further to compliance and/or other regulatory considerations.

Due to share prices volatility, ratings and target prices may occasionally and temporarily be inconsistent with the above definition.

Valuation methodology and risks

Unless otherwise stated in this report, target prices and investment recommendations are determined based on fundamental research methodologies and relies on commonly used valuation methodologies such as Discounted Cash Flow (DCF), valuation multiples comparison with history and peers, Dividend Discount Model (DDM).

Valuation methodologies and models can be highly dependent on macroeconomic factors (such as the price of commodities, exchange rates and interest rates) as well as other external factors including taxation, regulation and geopolitical changes (such as tax policy changes, strikes or war). In addition, investors' confidence and market sentiment can affect the valuation of companies. The valuation is also based on expectations that might change rapidly and without notice, depending on developments specific to individual industries. Whichever valuation method is used there is a significant risk that the target price will not be achieved within the expected timeframe.

Unless otherwise stated, models used are proprietary. Additional information about the proprietary models used in this report is accessible on request.

KEPLER CHEUVREUX' equity research policy is to update research rating when it deems appropriate in the light of new findings, markets development and any relevant information that can impact the analyst's view and opinion.

Regulators

Location	Regulator	Abbreviation
KEPLER CHEUVREUX S.A - France	Autorité des Marchés Financiers	AMF
KEPLER CHEUVREUX, Madrid branch	Comisión Nacional del Mercado de Valores	CNMV
KEPLER CHEUVREUX, Frankfurt branch	Bundesanstalt für Finanzdienstleistungsaufsicht	BaFin
KEPLER CHEUVREUX, Milan branch	Commissione Nazionale per le Società e la Borsa	CONSOB
KEPLER CHEUVREUX, Amsterdam branch	Autoriteit Financiële Markten	AFM
KEPLER CHEUVREUX (Switzerland) SA, Zurich branch	Swiss Financial Market Supervisory Authority	FINMA
KEPLER CAPITAL MARKETS, Inc.	Financial Industry Regulatory Authority	FINRA
KEPLER CHEUVREUX, London branch	Financial Conduct Authority	FCA
KEPLER CHEUVREUX, Vienna branch	Austrian Financial Services Authority	FMA
KEPLER CHEUVREUX, Stockholm branch	Finansinspektionen	FI
KEPLER CHEUVREUX Oslo branch	Finanstilsynet	NFSA
KEPLER CHEUVREUX, Bruxelles branch	Autorité des Services et Marchés Financiers	FSMA

KEPLER CHEUVREUX is authorised and regulated by both Autorité de Contrôle Prudentiel and Autorité des Marchés Financiers.

Legal and disclosure information

Other disclosures

This product is not for distribution to retail clients.

MIFID 2 WARNING: We remind you that pursuant to MiFID 2, it is your responsibility, as a recipient of this research document, to determine whether or not your firm is impacted by the provisions of the Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments ("MiFID 2") regarding the unbundling of research and execution (the "MiFID 2 Research Rules"). For any request on the provision of research documents, please send an email to crystal.team@keplercheuvreux.com.

The information contained in this publication was obtained from various publicly available sources believed to be reliable, but has not been independently verified by KEPLER CHEUVREUX. KEPLER CHEUVREUX does not warrant the completeness or accuracy of such information and does not accept any liability with respect to the accuracy or completeness of such information, except to the extent required by applicable law.

This publication is a brief summary and does not purport to contain all available information on the subjects covered. Further information may be available on request.

This publication is for information purposes only and shall not be construed as an offer or solicitation for the subscription or purchase or sale of any securities, or as an invitation, inducement or intermediation for the sale, subscription or purchase of any securities, or for engaging in any other transaction.

Any opinions, projections, forecasts or estimates in this report are those of the author only, who has acted with a high degree of expertise. They reflect only the current views of the author at the date of this report and are subject to change without notice. KEPLER CHEUVREUX has no obligation to update, modify or amend this publication or to otherwise notify a reader or recipient of this publication in the event that any matter, opinion, projection, forecast or estimate contained herein, changes or subsequently becomes inaccurate, or if research on the subject company is withdrawn. The analysis, opinions, projections, forecasts and estimates expressed in this report were in no way affected or influenced by the issuer. The author of this publication benefits financially from the overall success of KEPLER CHEUVREUX.

The investments referred to in this publication may not be suitable for all recipients. Recipients are urged to base their investment decisions upon their own appropriate investigations that they deem necessary. Any loss or other consequence arising from the use of the material contained in this publication shall be the sole and exclusive responsibility of the investor and KEPLER CHEUVREUX accepts no liability for any such loss or consequence. In the event of any doubt about any investment, recipients should contact their own investment, legal and/or tax advisers to seek advice regarding the appropriateness of investing. Some of the investments mentioned in this publication may not be readily liquid investments. Consequently it may be difficult to sell or realise such investments. The past is not necessarily a guide to future performance of an investment. The value of investments and the income derived from them may fall as well as rise and investors may not get back the amount invested. Some investments discussed in this publication may have a high level of volatility. High volatility investments may experience sudden and large falls in their value which may cause losses. International investing includes risks related to political and economic uncertainties of foreign countries, as well as currency risk.

To the extent permitted by applicable law, no liability whatsoever is accepted for any direct or consequential loss, damages, costs or prejudices whatsoever arising from the use of this publication or its contents.

Country and region disclosures

United Kingdom: This document is for persons who are Eligible Counterparties or Professional Clients only and is exempt from the general restriction in section 21 of the Financial Services and Markets Act 2000 on the communication of invitations or inducements to engage in investment activity on the grounds that it is being distributed in the United Kingdom only to persons of a kind described in Articles 19(5) (Investment professionals) and 49(2) (High net worth companies, unincorporated associations, etc.) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended). It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. Any investment to which this document relates is available only to such persons, and other classes of person should not rely on this document.

United States: This communication is only intended for, and will only be distributed to, persons residing in any jurisdictions where such distribution or availability would not be contrary to local law or regulation. This communication must not be acted upon or relied on by persons in any jurisdiction other than in accordance with local law or regulation and where such person is an investment professional with the requisite sophistication to understand an investment in such securities of the type communicated and assume the risks associated therewith.

This communication is confidential and is intended solely for the addressee. It is not to be forwarded to any other person or copied without the permission of the sender. This communication is provided for information only. It is not a personal recommendation or an offer to sell or a solicitation to buy the securities mentioned. Investors should obtain independent professional advice before making an investment.

Notice to U.S. Investors: This material is not for distribution in the United States, except to "major US institutional investors" as defined in SEC Rule 15a-6 ("Rule 15a-6"). KEPLER CHEUVREUX has entered into a 15a-6 Agreement with Kepler Capital Markets, Inc. ("KCM, Inc.") which enables this report to be furnished to certain U.S. recipients in reliance on Rule 15a-6 through KCM, Inc.

Each U.S. recipient of this report represents and agrees, by virtue of its acceptance thereof, that it is a "major U.S. institutional investor" (as such term is defined in Rule 15a-6) and that it understands the risks involved in executing transactions in such securities. Any U.S. recipient of this report that wishes to discuss or receive additional information regarding any security or issuer mentioned herein, or engage in any transaction to purchase or sell or solicit or offer the purchase or sale of such securities, should contact a registered representative of KCM, Inc.

KCM, Inc. is a broker-dealer registered with the Securities and Exchange Commission ("SEC") under the U.S. Securities Exchange Act of 1934, as amended, Member of the Financial Industry Regulatory Authority ("FINRA") and Member of the Securities Investor Protection Corporation ("SIPC"). Pursuant to SEC Rule 15a-6, you must contact a Registered Representative of KCM, Inc. if you are seeking to execute a transaction in the securities discussed in this report. You can reach KCM, Inc. at Tower 49, 12 East 49th Street, Floor 36, New York, NY 10017, Compliance Department (212) 710-7625; Operations Department (212) 710-7606; Trading Desk (212) 710-7602. Further information is also available at www.keplercheuvreux.com. You may obtain information about SIPC, including the SIPC brochure, by contacting SIPC directly at 202-371-8300; website: <http://www.sipc.org/>.

KCM, Inc. is a wholly owned subsidiary of KEPLER CHEUVREUX. KEPLER CHEUVREUX, registered on the Paris Register of Companies with the number 413 064 841 (1997 B 10253), whose registered office is located at 112 avenue Kléber, 75016 Paris, is authorised and regulated by both Autorité de Contrôle Prudentiel (ACP) and Autorité des Marchés Financiers (AMF).

Nothing herein excludes or restricts any duty or liability to a customer that KCM, Inc. may have under applicable law. Investment products provided by or through KCM, Inc. are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution, may lose value and are not guaranteed by the entity that published the research as disclosed on the front page and are not guaranteed by KCM, Inc.

Investing in non-U.S. Securities may entail certain risks. The securities referred to in this report and non-U.S. issuers may not be registered under the U.S. Securities Act of 1933, as amended, and the issuer of such securities may not be subject to U.S. reporting and/or other requirements. Rule 144A securities may be offered or sold only to persons in the U.S. who are Qualified Institutional Buyers within the meaning of Rule 144A under the Securities Act. The information available about non-U.S. companies may be limited, and non-U.S. companies are generally not subject to the same uniform auditing and reporting standards as U.S. companies. Securities of some non-U.S. companies may not be as

liquid as securities of comparable U.S. companies. Securities discussed herein may be rated below investment grade and should therefore only be considered for inclusion in accounts qualified for speculative investment.

Analysts employed by KEPLER CHEUVREUX SA, a non-U.S. broker-dealer, are not required to take the FINRA analyst exam. The information contained in this report is intended solely for certain "major U.S. institutional investors" and may not be used or relied upon by any other person for any purpose. Such information is provided for informational purposes only and does not constitute a solicitation to buy or an offer to sell any securities under the Securities Act of 1933, as amended, or under any other U.S. federal or state securities laws, rules or regulations. The investment opportunities discussed in this report may be unsuitable for certain investors depending on their specific investment objectives, risk tolerance and financial position.

In jurisdictions where KCM, Inc. is not registered or licensed to trade in securities, or other financial products, transactions may be executed only in accordance with applicable law and legislation, which may vary from jurisdiction to jurisdiction and which may require that a transaction be made in accordance with applicable exemptions from registration or licensing requirements.

The information in this publication is based on sources believed to be reliable, but KCM, Inc. does not make any representation with respect to its completeness or accuracy. All opinions expressed herein reflect the author's judgment at the original time of publication, without regard to the date on which you may receive such information, and are subject to change without notice.

KCM, Inc. and/or its affiliates may have issued other reports that are inconsistent with, and reach different conclusions from, the information presented in this report. These publications reflect the different assumptions, views and analytical methods of the analysts who prepared them. Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is provided in relation to future performance.

KCM, Inc. and any company affiliated with it may, with respect to any securities discussed herein: (a) take a long or short position and buy or sell such securities; (b) act as investment and/or commercial bankers for issuers of such securities; (c) act as market makers for such securities; (d) serve on the board of any issuer of such securities; and (e) act as paid consultant or advisor to any issuer. The information contained herein may include forward-looking statements within the meaning of U.S. federal securities laws that are subject to risks and uncertainties. Factors that could cause a company's actual results and financial condition to differ from expectations include, without limitation: political uncertainty, changes in general economic conditions that adversely affect the level of demand for the company's products or services, changes in foreign exchange markets, changes in international and domestic financial markets and in the competitive environment, and other factors relating to the foregoing. All forward-looking statements contained in this report are qualified in their entirety by this cautionary statement.

France: This publication is issued and distributed in accordance with legal or regulatory requirements relating to independent investment research, as defined under Article 36 of the EU delegated regulation n°565/2017.

Germany: This report must not be distributed to persons who are retail clients in the meaning of Sec. 31a para. 3 of the German Securities Trading Act (Wertpapierhandelsgesetz – "WpHG"). This report may be amended, supplemented or updated in such manner and as frequently as the author deems.

Italy: This document is issued by KEPLER CHEUVREUX Milan branch, authorised in France by the Autorité des Marchés Financiers (AMF) and the Autorité de Contrôle Prudentiel (ACP) and registered in Italy by the Commissione Nazionale per le Società e la Borsa (CONSOB) and is distributed by KEPLER CHEUVREUX. This document is for Eligible Counterparties or Professional Clients only as defined by the CONSOB Regulation 16190/2007 (art. 26 and art. 58). Other classes of persons should not rely on this document. Reports on issuers of financial instruments listed by Article 180, paragraph 1, letter a) of the Italian Consolidated Act on Financial Services (Legislative Decree No. 58 of 24/2/1998, as amended from time to time) must comply with the requirements envisaged by articles 69 to 69-novies of CONSOB Regulation 11971/1999. According to these provisions KEPLER CHEUVREUX warns on the significant interests of KEPLER CHEUVREUX indicated in Annex 1 hereof, confirms that there are not significant financial interests of KEPLER CHEUVREUX in relation to the securities object of this report as well as other circumstance or relationship with the issuer of the securities object of this report (including but not limited to conflict of interest, significant shareholdings held in or by the issuer and other significant interests held by KEPLER CHEUVREUX or other entities controlling or subject to control by KEPLER CHEUVREUX in relation to the issuer which may affect the impartiality of this document). Equities discussed herein are covered on a continuous basis with regular reports at results release. Reports are released on the date shown on cover and distributed via print and email. KEPLER CHEUVREUX branch di Milano analysts is not affiliated with any professional groups or organisations. All estimates are by KEPLER CHEUVREUX unless otherwise stated.

Spain: This document is only intended for persons who are Eligible Counterparties or Professional Clients within the meaning of Article 78bis and Article 78ter of the Spanish Securities Market Act. It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. This report has been issued by KEPLER CHEUVREUX Sucursal en España registered in Spain by the Comisión Nacional del Mercado de Valores (CNMV) in the foreign investments firms registry and it has been distributed in Spain by it or by KEPLER CHEUVREUX authorised and regulated by both Autorité de Contrôle Prudentiel and Autorité des Marchés Financiers. There is no obligation to either register or file any report or any supplemental documentation or information with the CNMV. In accordance with the Spanish Securities Market Law (Ley del Mercado de Valores), there is no need for the CNMV to verify, authorise or carry out a compliance review of this document or related documentation, and no information needs to be provided.

Switzerland: This publication is intended to be distributed to professional investors in circumstances such that there is no public offer. This publication does not constitute a prospectus within the meaning of Articles 652a and 1156 of the Swiss Code of Obligations.

Canada: The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the dealer registration requirement in the relevant province or territory of Canada in which such offer or sale is made. Under no circumstances is the information contained herein to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. In Canada, the information contained herein is intended solely for distribution to Permitted Clients (as such term is defined in National Instrument 31-103) with whom Kepler Capital Markets, inc. deals pursuant to the international dealer exemption. To the extent that the information contained herein references securities of an issuer incorporated, formed or created under the laws of Canada or a province or territory of Canada, any trades in such securities may not be conducted through Kepler Capital Markets, inc. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon these materials, the information contained herein or the merits of the securities described herein.

Other countries: Laws and regulations of other countries may also restrict the distribution of this report. Persons in possession of this document should inform themselves about possible legal restrictions and observe them accordingly.

None of the material, nor its content may be altered in anyway, transmitted to, copied or distributed to any other party, in whole or in part, unless otherwise agreed with KEPLER CHEUVREUX in writing.

Copyright © KEPLER CHEUVREUX. All rights reserved.

Local insight, European scale.



Europe

 **Amsterdam**
Kepler Cheuvreux Benelux
Johannes Vermeerstraat 9
1071 DK Amsterdam
+31 20 563 2365

 **London**
Kepler Cheuvreux UK
5th Floor
95 Gresham Street
London EC2V 7NA
+44 20 7621 5100

 **Paris**
Kepler Cheuvreux France
112 Avenue Kleber
75016 Paris
+33 1 53 65 35 00


 **Brussels**
Kepler Cheuvreux Belgium
Rogier Tower
Place Rogier 11
1210 Brussels
+32 11 491460

 **Madrid**
Kepler Cheuvreux Espana
Paseo de la Castellana, 52
28046 Madrid
+34 914 36 5100

 **Stockholm**
Kepler Cheuvreux Sweden
Malmskillnadsgatan 23
11157 Stockholm
+46 8 723 51 00

 **Frankfurt**
Kepler Cheuvreux Germany
Taunusanlage 19
60325 Frankfurt
+49 69 756 960

 **Milan**
Kepler Cheuvreux Italia
Via C. Cornaggia 10
20123 Milan
+39 02 8550 7201

 **Vienna**
Kepler Cheuvreux Austria
Schottenring 16/2
1010 Vienna
+43 1 537 124 147

 **Geneva**
Kepler Cheuvreux SA
Avenue Perdretemps 23,
1260 Nyon
Switzerland
+41 22361 5151

 **Oslo**
Kepler Cheuvreux Norway
Filipstad Brygge 1
Pb. 1671 Vika
0120 Oslo
+47 23 13 9080

 **Zurich**
Kepler Cheuvreux Switzerland
Stadelhoferstrasse 22
8001 Zurich
+41 43 333 66 66

North America

 **New York**
Kepler Capital Markets, Inc.
Tower 49
12 East 49th Street, Floor 36
10017 New York, NY USA
+1 212 710 7600