Due Diligence Research Report, 16.11.2018

KGHM Polska Miedz SA

WSE: KGH
Lubin, Poland
Common shares
PLN

East Mill Capital

This report outlines the opinions of analysts covering the security listed above. A company snapshot is provided in the executive summary with an appropriate consensus rating.

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Executive Summary

KGHM Polska Miedz SA (hereinafter "KGHM" or "The Company") is a Poland-based company involved in the copper ore mining, copper production and the production of precious metals and other non-ferrous metals. The Company also produces salts and provides casting services for light metals. Supplementary activities include geological and exploratory activities, and waste management.

KGHM Polska Miedz SA has a multi-divisional organizational structure, which is comprised of its Head Office and several divisions: mines, smelters, the concentrator division, the tailings division, the mine-smelter emergency rescue division and the data-center division. Its products are sold domestically, as well as exported to Germany, the United Kingdom, France, China, and the Czech Republic, among others. Through a wholly owned subsidiary, Bipromet SA, the Company is also engaged in the construction and engineering industry.

KGHM owns three copper smelters: "Głogów", "Legnica", and "Cedynia". KGHM's smelters also produce lead, refined lead, sulphuric acid, nickel sulphate, and platinum-palladium concentrate.

The Company has faced in the past supply chain inefficiencies, management instability, and poor profitability. This is all taken into consideration as the company is examined in determining it's investment potential as a turnaround equity position.

CONSENSUS:

KGHM is a well-positioned company on both domestic and international markets. While benchmarked comparisons reveal slight underperformance in profitability, investor sentiment stems from good financial stability, excellent management, and a sustained level of business activity. These factors, among others examined throughout this report, exemplify a company with strong future earnings potential and generous investment outlook.

At this time, East Mill Capital Research Group supports investments in this company and is committing to a position within the Research Fund.

Market Capitalization

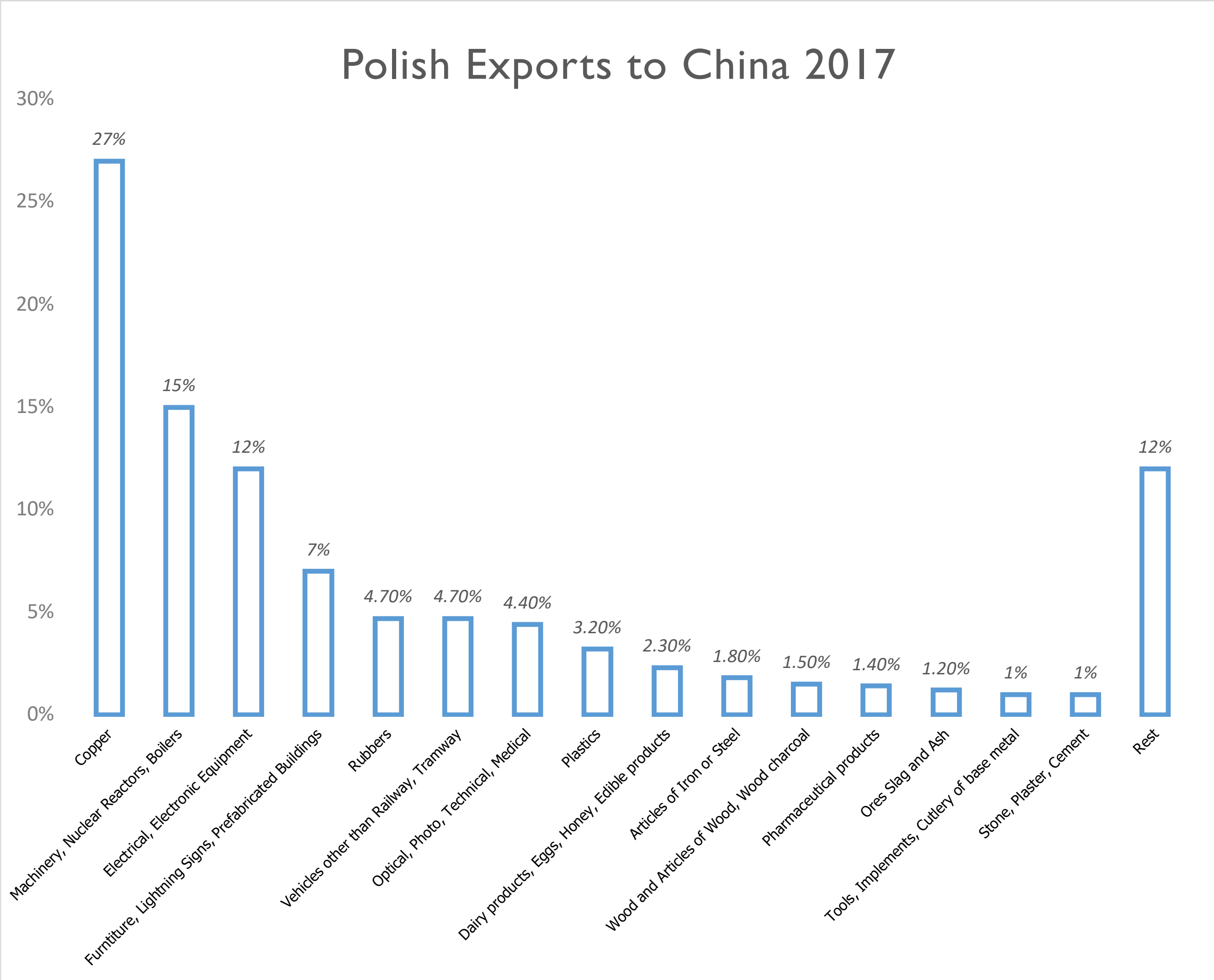
KGHM Polska Miedz debuted on the Warsaw Stock Exchange in July 1997. The share capital of the Company amounts to 2 000 000 000 PLN and is represented by 200 000 000 ordinary bearer shares having a nominal value of 10 PLN each.

The company's shares are traded on the WSE's primary market in a continuous trading system and are a component of the **WIG** and **WIG20** indices, and since 23 September 2013 have also been a component of the **WIG30 index**, comprising 30 of the largest and most liquid companies on the Polish-market. WSE:KGH shares are also a contingent of the Poland IShares MSCI ETF $EPOL, weighted 4.71%, and the Poland Vaneck ETF $PLND, weighted 6.03%.

KGHM Polska Miedz has a total market cap of **18.24 bn** PLN.

Expectations

November 6th, 2018, marked an important catalyst that should drastically impact KGHM's future cashflows: the signing a 4-billion-dollar long-term copper cathode delivery contract for China Minmetals. [1]
The value of exported products within five years should reach up to USD 4 billion. Important to remember - KGHM is the largest Polish exporter to China and has been present on the Chinese market for 21 years. Since the conclusion of the first trade agreement, KGHM has exported more than 1.3 million tons of copper cathodes to China.



Courtesy of Trading Economics & UN COMTRADE [2]

According to the KGHM president Marcin Chludzinski, in august this year, the company had an opportunity to sign a 2-billion-dollar deal in Chile. Mr. Chludzinski chose to wait, thus directly avoiding their biggest competitor Codelco. He opted to continue business with KGHM's consistent Chinese client.

[1] https://www.money.pl/gospodarka/wiadomosci/artykul/kghm-miedz-china-minmetals-nonferrous-metals,178,0,2420402.html

[2] https://tradingeconomics.com/poland/exports/china

Company growth is highly contingent on their production of copper. The production levels of copper must be increased in the next few years to meet the global demand arising majorly from industrial economies such as China. Currently, China is the largest consumer of industrial metals and represents a major share of the global copper consumption.

Competitors

Regional Competitors

Chilean state-owned company Codelco is considered as KGHM's main competitor in copper mining and refinery. Antofagasta, also headquarted in Chile, has a similar level of yearly copper production (638,000 Metric tonnes compared to 656,000 - KGHM), while targeting alternative markets.

Antofagasta is a company from Chile, listed on the London Stock exchange and is a constituent of FTSE100.The company's market capitalization is $1.2B and it employs 5400 workers. Chile is the world's largest exporter of copper and Antofagasta faces Codelco as its main competitor in its own backyard. Antofagasta's copper output has been declining for a year, and the company has announced that they are aiming to increase production in 2019. [4]

Direct Competitors

Norilsk Nickel (hereinafter Nornickel) and Aurubis AG – both headquarted in competitive regions; Russia and Germany, respectively, make up KGHM's strongest direct competitors

Nornickel is a diversified mining and metallurgical company. The company produces nickel, palladium, platinum, cobalt, copper and rhodium along with gold, silver, iridium, osmium, selenium, ruthenium and tellurium. Nornickel is involved in exploration, production, and processing, as well as production and sale of non-ferrous and precious metals, what alongside with the 78,000 people employed, makes Nornickel seem like incredibly large company with the broad spectrum of operations. The market capitalization of $2.4B though is comparable to the one of Aurubis, which is a lot smaller company in the number of operations, as well as in number of employees.
Nornickel has been accused of failing to modernize their production for a long time, which increased their operational costs in the past. [5]
According to Nornickel CEO, Vladimir Potanin, in 2019 the company intends to introduce stablecoin, metal-pegged cryptocurrency as a way of raising new capital, which can be interpreted as an unconventional move for the company from that sector and might be indicative of liquidity-related issues. The company balance sheet already points to long-term debt issues as the company attempts to leverage their capital further without diluting equity. [6]

Aurubis AG is the largest European copper manufacturer, and the second largest one in the world, with a market cap of $2.41B. The company is headquartered in Hamburg, Germany and has 6400 employees. Aurubis, doesn't mine its copper, and instead is restricted to refining processes, which allows the company to focus more on the production and the export of secondary copper products. Aurubis' strengths lie in the company's ability to manufacture over one million of copper cathodes a year and is considered as highly modern and technologically advanced company.
The company is biggest heavy metal emitter in Germany, and remains under government scrutiny due to allegations regarding environment – soil and water degradation in areas of operations. The arsenic scandal in Hamburg in 1985 pointed to a discovery of heavy metals that had accumulated in the soil in eastern Hamburg, affecting agricultural areas.
Sustaining profits can be perceived as a problematic area due to variations in the prices of finished products internationally. Although this is a common issue within the sector, Aurubis remains more sensitive to commodity and raw material price volatility due to it's supply chain.

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[4] http://www.mining.com/antofagasta-cuts-copper-output-guidance-sees-increase-2019/

[5] http://tass.com/economy/1006528

[6] https://u.today/russian-giant-nornickel-to-launch-stablecoin-precious-metal-pegged

Management

Executive Changes

On 22. June 2018. KGHM Polska Miedz brought in Macin Chludzinski to be the new company CEO.

Chludzinski has been the head of the state-run Industrial Development Agency. Local media, including Puls Biznesu, had reported he was always the frontrunner to become KGHM's new CEO. KGHM has not had a CEO since Radoslaw Domagalski-Labedzki was dismissed on March 10. According to the Polish mainstream media, Mr. Domagalski-Labedzki was dismissed due to political reasons in a move that was deemed as a malicious act from KGHM board members. The Board also dismissed, at that time, vice president Michael Jezior and decided to bring in a new CEO and restructure executive management and align company interests. KGHM needed a quick decision in order to resolve production inneciencies at domestically and internationally, and they needed a new and capable leader. [7]

Structure of Board

The management board consists of 4 vice presidents that have been part of the company since April 2018. The final addition to the board team was Katarzyna Kreczmanska-Gigol, who has joined the team in July as VP of Finance, in a decision supportive of the new CEO.

The team is well experienced, and since it was formed, there was only one major change that improved overall performance of KGHM- arrival of current CEO in June this year. Since his arrival, company had major successes in Poland, and recently they have increased their exports.

Current structure:

Radoslaw Stach- Vice president of the Management Board (Productions)
Katarzyna Kreczmanska-Gigol- Vice president of the Management Board (Finance)
Adam Bugajczuk- Vice president of the Management Board (Development)
Pawel Gruza- Vice president of the Management Board (International Assets) [8]

It's well known that Marcin Chludzinski is in the same political party as Polish Prime Minister Mateusz Morawiecki. They are part of the ruling political party- Law and Justice ("Prawo i Sprawiedliwość"). Politics plays a major role, not only for KGHM and its employees, but for the whole mining sector. KGHM became a Polish brand since arrival of Marcin Chludzinski. Public opinion attributes the recent increase in deal volume to the CEO's political advantage, while the company has not commented on the relationship.

Currently, company possesses production plants on three continents- Europe, South and North America. They own mines for copper and nickel production both in their homeland, as well as overseas. Most of their mines are located in US and Canada. [9]

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[7] https://www.pb.pl/chludzinski-pokieruje-kghm-932863

[8] https://kghm.com/en/about-us/leadership

[9] https://kghm.com/en/about-us/our-sector

Risks

Trade War Risk:

Concerning the Trade war between China and the US; the efforts being made to attempt to come to a deal between the two economic hegemons are not reasonably supported by President Donald J. Trump. Trump has imposed tariffs on $250 billion on imports and in 2019 the tariffs will increase by 10% to a 25% aggregate. President Trump also threatened that he will add on another $267 Bn of tarrifs which would affect most of the exports to the United States despite Head of Treasury - Steve Mnichkhin's hopes of reaching a deal.
The G20 summit approaching on November 30th, 2018, should lay groundwork in aiming to relinquish the crippling trade war. Furthermore, Trump has set out some policies that China should implement in order to diminish the this trade war. US demands China to cut off tariffs from non-sensitive goods to the US. Also, the United States wants China to allow American Foreign direct investment, while on the other hand China remains unable to invest in America due to unsubstantial national security claims.

Ultimately, the performance of the firm will be affected minimally by the trade war due to the deal that China just signed with KGHM. Furthermore, the effects of the trade war will not resonate in the performance of KGHM due to the notion that China is planning on the One Belt One Road initiative which is infrastructural project to promote trade within the silk road routes. This project will need the cooperation of KGHM; so if the trade war does not diminish, the company will still manage to preform due to the Chinese need for infrastructure development.

Disruptive Technology :

Disruptive technology in the mining field, as well as in copper production are continuously being deployed to help businesses to find competitive advantages in the supply chain management. Many Tech-Companies are working on innovative technologies to fasten and simplify the procedure of mining fields. Innovation will tremendously boost the mining business and KGHM is currently in working with Wenco-Mining, Canadian based international mining company to fasten the mining field hours of Sierra Gorda Copper mine in Chile.[10]
Frankly, this new Automated mining field plant should generate through automation more effective and profitable gains. Furthermore, KGHM is working with other 23 partners around the globe in the BIOMOre project, which is led by KGHM. BIOMOre project, focuses on to develop a process for copper recovery and other strategic metals directly from the orebody with a ferric iron rich solution of low pH generated in a bioreactor. KGHM, is very active in innovative technology and works with various of partners in order to revolutionize the industry of mining as well as to differentiate itself from the rest.[11]

Financial Risk :

It is important to evaluate KGHM for financial risk relative to industry benchmarks and competitors. All companies operating within the mining industrials sector have to balance high capital expenditure with profitability and competitiveness. KGHM has managed to remain underleveraged by all benchmarks, while retaining a high level of current assets necessary to meet short-term obligations. By resisting the capex-intensive pressures that warrant leveraging KGHM has positioned itself

[10] https://www.miningmagazine.com/simulation-optimisation/news/1337497/sierra-gorda-improves-productivity-with-wenco

[11] https://www.miningmagazine.com/innovation/news/1331840/biomore-concept-tested-at-polish-operation

dynamically, being able to both meet creditor requirements for immediate short-term borrowing, or to heavily leverage its asset portfolio for substantial long-term growth. KGHM is currently very conservative in borrowing, but that does not mean it must remain so.

Foreign Exchange Risk

The risk of changes in foreign exchange rates is an ongoing concern for KGHM as many of its operations are outside of Poland – it's base or reporting currency is PLN. This means that KGHM must account for potential changes across volatile markets and adequately manage their foreign exchange risk.

The types of exposures to FX risk that can be identified are:

- Transaction Risk: based on the volatility of cashflows in the base currency.
- Balance Sheet Value Risk: assets denominated or valued in foreign currency must be adequately hedged for foreign exchange volatility.
- Investments in Foreign Operations (including joint ventures): The net investments of the company in foreign equity as part of joint venture is also subject to volatility relative to the base currency of the company.

Foreign currency settled cashflows present a risk for any multinational company. The biggest concern regarding KGHM's FX operations are from emerging market currencies subject to USD pressure. However, EURCLP (Euro : Chilean Peso) has remained relatively stable throughout 2018. KGHM has outlined through their annual reports hedging strategies used to mitigate foreign exchange risk in their parent entities and subsidiaries through derivative options.

Commodity Price Risk

KGHM is exposed to the risk of changes in the prices of the metals it sells: copper, silver, gold and lead. The price formulas used in physical delivery contracts are mainly based on average monthly quotations from the London Metal Exchange for copper and other common metals and from the London Bullion Market for precious metals.

With respect to managing risk in 2017, the Company implemented copper price hedging transactions with a total notional amount of 126 thousand tons and a hedging horizon from April 2017 to December 2019 (where 84 thousand tons were in respect of the period from January 2018 to December 2019). Put options were purchased (Asian options) and seagull options structures (three-way option strategies) were implemented (Asian options). In 2017 the Company did not implement derivatives transactions on the silver market.

According to KGHM's CEO, their primary focus is on copper. This doesn't necessarily mean the company will stop investing in production of other metals, but they are one of the biggest copper production companies in Poland and central Europe.

Copper rose on Friday as signs of supply tightness supported prices, but worries about the outcome of the US-China trade dispute limited gains. Benchmark copper on the London Metal Exchange closed up 0.3% at $6,205 per ton, 2.4% higher - current week. Potential risk for KGHM could be tight supply of copper, which is pushing the price of other metals, such as zinc, higher. Metals received a further boost when the US dollar weakened after Federal Reserve officials appeared to question the pace of interest rate rises and from strong US manufacturing data. A weaker dollar makes metals cheaper for buyers holding other currencies.
China is still the biggest copper(metals) consumer, and KGHM remains Poland's largest exporter to China, giving KGHM a large advantage given they recently brokered a deal with Chinese company, Minmetals, worth $4Bn.

Stock Exchange Risk

KGHM shares are listed publicly on the Warsaw Stock Exchange. The WSE utilizes the same UTP (Universal Trading Platform) systems that are found on Euronext exchanges and support continuous trading. Exchange volume has improved since major improvements were made in 2013 and currently present less relative exchange inefficiency risk when compared to other emerging market public equity exchanges. The price discovery process on the WSE has also been perceived as efficient.

Valuation Multiples

The market has valued KGHM at very low price multiples, and far below sector averages. The P/E ratio suggests that the company price is trailing at lower levels and has not warranted much investor attention. KGHM also posts a low EPS ratio of 1.13, significantly lower than leveraged competitors averaging above 3.0 EUR per share.

For the periods: 1Q2018, 2Q2018, 3Q2018	PLN (M)	EUR (adj) (M)
Book Value	17,617	4,078
EBIT	2,109	488
EBITDA	3,425	793
Enterprise Value	35,055	8,115
Market Capitalization	18,240	4,222

For the periods: 1Q2018, 2Q2018, 3Q2018	PLN	EUR (adj)
Share Price (16.11.2018)	91.20	21.11
Book Value per Share	88.09	20.39
Enterprise Value per Share	175.28	40.57
EPS	4.87	1.13
Price / Earnings	18.75	4.34
Price / Book Value	1.03	1.03
EV / EBITDA	10.24	2.37

Given future cashflow expectations WSE:KGH securities right now remain well priced for entrance in anticipation of increased profitability. Current comparative metrics suggest that the security may be mispriced or undervalued. Recent trade development has already contributed to price action, however the valuation of this company still remains favourable for an investment. Investments in this company can be considered as committed beliefs in turnaround management styles of KGHM's board, coupled with the assumption of continued organic growth that could be effectively leveraged during a given opportunity.

Balance Sheet

Examining the company's liquidity profile shows a good ability to meet short-term obligations. In a sector heavily driven by capital expenditure this remains important especially in the emerging markets setting. Benchmarking against industry and sector competitors and companies with similar capex requirements and market capitalizations shows that the average WCR remains slightly higher than KGHM's. However, it is important to underline the importance of remaining too conservative, making use of current liability leverage to drive company performance is a very good short-term strategy when balanced against liquidity risk correctly.

	KGHM	*Industry Average* [12]
Working Capital Ratio	1.54	1.877
Debt to Equity Ratio	0.99	1.343
Liabilities to Assets Ratio	0.49	0.510

Further underlying the importance of understanding the capital intensity of the sector, examining the Debt to Equity of the firm shows a conservative approach to leveraging. While most companies within the sector boast high Debt ratios between 2.0 and 4.0, suggesting at least 75% reliance on creditors. This allows companies to grow their operations faster, fuelling further R&D and PPE development to support their revenue streams. KGHM has a notably lower debt-to-equity ratio which raises two assumptions; firstly, KGHM will be able to secure creditor financing in the future – should the occasion call for it – and grow rapidly without hinderance from creditor loaning constraints, and secondly; they prove that they are able to remain competitive through organic growth.

This appraisal is further supported through the company's liabilities-to-assets ratio, which stands at below the industry average. The company should be able to appeal to short-term creditors quickly, with enough assets to support its liabilities and seek additional loans in the case of expansion. It is not uncommon for companies within the sector to have relatively low asset to liability ratios, yet high debt to equity, as lending activities are generally geared towards industrial expansion, debiting PPE.

Overall, KGHM presents a very well rounded balance sheet that can facilitate rapid leveraged growth if needed, or continue supporting its revenue pipeline organically with little liquidity risk. The balance sheet is presented on the following page.

[12] Industry average has been computed by our analysts on the aggregate absolutes of European, Russian, and Latin American mining companies with pipeline focus on copper ore. Average values are subject estimation in the case of inconsistent data.

KGHM Condensed Consolidated Statement of Financial Position	*all values PLN millions*
Assets	30.Jun.18
Mining and metallurgical property, plant and equipment	16 469
Mining and metallurgical intangible assets	1 557
Mining and metallurgical property, plant and equipment and intangible assets	18 026
Other property, plant and equipment	2 746
Other intangible assets	207
Other property, plant and equipment and intangible assets	2 953
Joint ventures accounted for using the equity method	6
Loans granted to joint ventures	4 316
Total involvement in joint ventures	4 322
Derivatives	329
Other financial instruments measured at fair value	527
Other financial assets	781
Financial instruments, total	1 637
Deferred tax assets	542
Other non-financial assets	109
Non-current assets	**27 589**
Inventories	5 568
Trade receivables, including:	1 222
Trade receivables measured at fair value	549
Tax assets	226
Derivatives	158
Other financial assets	296
Other assets	402
Cash and cash equivalents	610
Current assets	**8 482**
Total Assets	**36 071**
EQUITY AND LIABILITIES	
Share capital	2000
Other reserves from measurement of financial instruments	-636
Accumulated other comprehensive income	2094
Retained earnings	14525
Equity attributable to shareholders of the Parent Entity	17983
Equity attributable to non-controlling interest	**91**
Equity	**18074**
Borrowings	7472
Derivatives	204
Employee benefits liabilities	2 328

Provisions for decommissioning costs of mines and other technological facilities	1 418
Deferred tax liabilities	495
Other liabilities	605
Total Non-current liabilities	12 522
Borrowings	1 151
Derivatives	51
Trade payables	1 394
Employee benefits liabilities	820
Tax liabilities	738
Provisions for liabilities and other charges	283
Other liabilities	1 038
Total Current Liabilities	5 475
Total Liabilities	**17 997**
Total Liabilities and Equity	**36 071**

Profitability

Relative to competition KGHM is an underperformer. However, unlike competitors, KGHM has not leveraged themselves in order to reach higher levels of output and profit. The company's profit margin remains relatively low, much like other relative metrics such as return on assets, and equity.

Profit Margin	0.059
ROE	0.034
ROA	0.017
EPS (PLN)	3.05
EPS (EUR)	0.71

However, it is important to reiterate the significance of the company maintaining its place in the market under unleveraged circumstances. The company could choose to leverage its production process, to similar extents as Nornickel, and achieve higher returns. It is the decision of management to sustain their profitability organically at this time.

Regardless of the company's unleveraged balance sheet and mediocre profitability, it is expected that the company should continue to remain profitable using its existing business strategy, with investor sentiment attributing to increased future profitability.

The company's interim income statement is presented on the following page.

KGHM Polsa Miedzy *Income Statement for the Six-month period ended 30 June 2018*	*All values in PLN Millions unless otherwise noted.*
Revenues from contracts with customers, including:	9,423
COGS	-7,431
Gross profit	**1,992**
Selling costs and administrative expenses	-640
Profit on sales	**1,352**
Share of losses of joint ventures accounted for using the equity method	-254
Interest income on loans granted to joint ventures using the effective discount rare method	126
Profit or loss on involvement in joint ventures	-128
Other operating income and (costs), including:	363
Interest income calculated using the effective discount rate method	4
Finance income and (costs)	-603
Profit before income tax	**984**
Income tax expense	-373
Net Income	**611**
Profit for the period attributable to:	
Shareholders of the Parent Entity	610
Non-controlling interest	1
Weighted average number of ordinary shares (million)	**200**
Basic/diluted earnings per share (in PLN)	**3.05**

Historical Performance

KGHM shares have been trading between a 125.8 PLN YTD high and 81.1 PLN YTD low.

KGHM announced production and sales results for the month of September 2018.

- For the month, the company reported production of 57.4 thousand tonnes of copper. The increase compared to September 2017 by 3% was in respect of production in Poland and by Sierra Gorda- one of the mines KGHM owns in Chile. [13]

Total precious metal production amounted to 15.8 thousand troy ounces. The decrease by nearly 30% compared to September 2017 was mainly due to lower gold production by KGHM Polska Miedz S.A. and by KGHM International Ltd. Molybdenum production amounted to 0.8 million pounds and was at a comparable level to that recorded in September 2017. For the month of September 2018, the company reported Sales of payable copper amounted to 60.4 thousand tonnes and were higher by 12% compared to September 2017. Sales of silver amounted to 135.9 tonnes and were higher by 125% compared to September 2017. TPM sales amounted to 18.0 thousand troy ounces and were lower by 27% compared to September 2017. Molybdenum sales amounted to 1.6 million pounds and were lower by 20% compared to September 2017.

[13] https://kghm.com/en/our-business/mining-and-enrichment/sierra-gorda

Macroeconomic Focus: Poland

Poland, with a population of 38.08 million inhabitants, is the 6th largest member of the European Union, and the 38th largest country in the world.[14] Poland also ranks as the 8th biggest economy in the EU and the 22nd biggest economy in the world by measure of gross domestic product.[15]

Demographics and Social Development Level

In 2018 Poles living in urban areas constituted 60.8% of the population, while the remaining 39.2% lived in rural areas, increasing by 0.02% p.a. (2015 - 2020 est.) The urban population shrank since the previous census of 2002 by 204k persons while the rural population increased rather significantly (by 486k).
Compared to the Europe's average of 0.08% increase of a population in 2017 & 2018, the population of Poland is not increasing at a very high rate. It had a negative growth rate of 0.05% every year until 2007. After 2007, the growth rate varied, and the population grew slightly, while mostly still decreasing. The data for 2018 shows an overall decrease of -0.17%.[16]

Over the recent years a lowering demographic dependency ratio - which measures the pressure on the productive population between 15 and 64 years of age has been observed: in 2017 the total dependency ratio was 43.9, in 2011 there were 57 persons at non-productive age for every 100 persons at productive age, while in 2002 this ratio was 62 : 100. This data is showing us that the general productivity is increasing and that the productive part of the population (aged 15 – 64) is becoming relieved of a lot of pressure.

Over the last several years a positive change to Poland's educational attainment level has been recorded. The percentage of Poles with education at the secondary or higher level increased from 41.4%, in 2002, to 48.6%, in 2011, and currently standing at 51%.[17] The most popular fields of education are natural sciences, engineering, statistics, construction and manufacturing.[18]

Emigrants remain an important element of the Polish economy: According to Poland's central statistical office data, in 2017, 2.5M Poles lived abroad, attributing an increase of 400k in the number of emigrants in 2012; 2.1M. [19] According to the Polish central bank, the value of emigrants' money transfers to Poland in 2013 amounted to EUR 3.92B, which accounted for 1.24% of the Polish GDP.

Poland is perceived by the United Nations as a highly developed country (the top rank on the UN's scale) in terms of Human Development Index (HDI), which takes into account factors such as life expectancy, the years of schooling average for 25 year olds and expected number of years of schooling of school-age children, as well as GNI per capita adjusted for purchasing-power parity (PPP) which is being used to measure people's living standards uniformly by converting the data into a common currency. In the HDI ranking included in Human Development Report 2018 Poland was ranked 33rd among 189 countries featuring on the list.

[14] United Nation's 2017 revision of World Population Prospects
[15] 2017 GDP in current prices, USD-denominated, IMF, World Economic Outlook Database
[16] Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2017 Revision.
[17] 2017, OECD
[18] 2017, OECD
[19] Główny Urząd Statystyczny, 2017

Currency and Central Bank Policy

Largely seen as a regional currency, the Polish złoty has been the center of an ongoing debate concerning whether or not Poland will adopt the Euro as its national currency in place of the złoty. Since 1998, Narodowy Bank Polski (NBP) (National Bank of Poland – Poland's Central Bank) has directly targeted inflation through the establishment of an acceptable inflation target. Dating back to 2004, the target has been 2.5%. Aside from managing inflation of the złoty, the NBP has the sole right to issue currency and acts as a regulatory body for domestic banks.

The National Bank of Poland held its benchmark reference rate at a record low of 1.5 % on October 3rd 2018.

The annual inflation rate in the second quarter of 2018 was slightly higher than in the previous three month period, due to the growth in the fuel prices; while core inflation rate, which excludes food and energy, continues to remain low. Also, the lombard rate and the deposit rate were kept unchanged at 2.5% and 0.5%, respectively, and the rediscount rate was left at 1.75%. Interest Rate in Poland averaged 6.92% from 1998 until 2018, reaching an all-time high of 24% in March of 1998 and a record low of 1.50% in March of 2015.[20]

Gross Domestic Product (GDP)

In 2018, reached an all-time high of $549.48 Bn. After two years of stagnant growth (2015 and 2016) Poland's GDP rallied to $524.51 B in 2017, and in 2018 on boosted production levels surpassing its previous all-time high from 2014 ($545.18 B). Poland's GDP represents 0.88% of the world economy.[21]

In terms of economic growth in 2017, Poland ranked #6 in the EU, after Romania, Ireland, Malta, Estonia and Slovenia. [22] IMF data shows that the expected increase of the Polish economy by 2020 is 3.58%, compared to the projected growth of 1.85% of the European Union and its bordering countries; Ukraine, Lithuania, Slovakia, Czech Republic, Germany, Belarus projected 4.03%, 3.73%, 3.0%, 2.18%, 1.26%, and 0.50%, respectively. [23]

[20] Trading Economics Data
[21] IMF Data
[22] Eurostat, European Commission database
[23] International Monetary Fund

Over the last decade, Polish economy's performed relatively well, especially against the backdrop of the region of Central and Eastern Europe as well as the entire European Union. Particularly, Poland displayed an anti-depressionary quality in 2009, when Polish GDP grew 1.6%, making Poland the only EU country with positive economic growth for the year, earning the country the nickname "green island".[24]
Growing faster than most of the countries of EU, Poland is catching up, in terms of wealth, with Western EU countries. Poland's GDP per capita in 1995 was 43% of the average of EU countries. In 2000, it was 48%, and in 2017 it amounts to 70%, which equals to $27,216.0 - it's all time high.[25]

Internal Markets and the EU Funds

Strong internal demand and solid private consumption can be considered as strengths of the Polish economy. This helped the country to retain its economic growth in the face of difficult conditions in the international markets during the 2008-09 financial crisis, which proved instrumental in avoiding the impact of the recession.
Since Poland's accession to the European Union in 2004, the country has come a long way. Strong fiscal support in this process has - and continues to be - provided by the inflow of structural funds granted in the framework of the EU's cohesion policy.
The inflow of EU funds to Poland, through 24 national and regional programmes, has been increased in the period from 2014 to 2020, as the EU budget for the period, approved by the European parliament in November 2013, set the funds allocation for Poland at $122.468 Bn, including $84,385 Bn for the Cohesion Policy framework, that aims to reduce development inequalities between different regions, and $32,990 Bn as Common Agricultural Policy payments.
Consequently, Poland is the biggest EU funds beneficiary among all of the member states – not only of Cohesion funds, but of all funds.

The ESI Funds combine five Funds: European Regional Development Fund (ERDF): European Social Fund (ESF);Cohesion Fund (CF) European Agricultural Fund for Rural Development (EAFRD), and the European Maritime and Fisheries Fund EMFF).

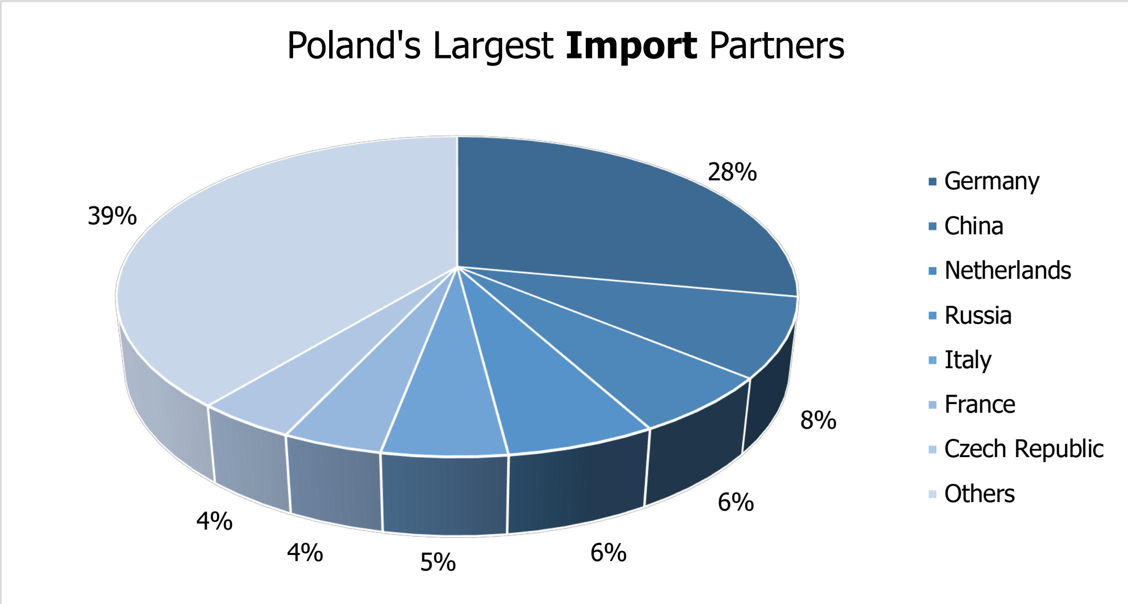
Poland's total budget is to be invested in various areas, from infrastructure networks (transport and energy), SME competitiveness to boost research and innovation, investments in the low-carbon economy as well as environmental protection to increasing social inclusion and labor market participation.[26]

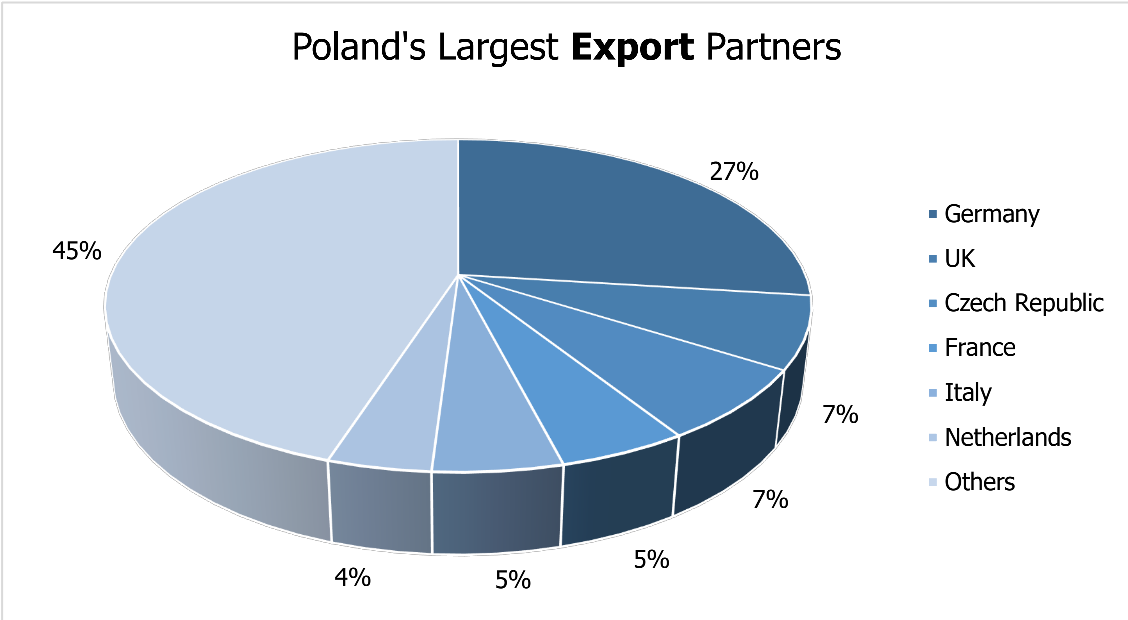
Import and Export

Germany is Poland's biggest trading partner for both import and export. The United Kingdom, China, and the Czech Republic are also very important partners. Due to its big population, Poland doesn't rely heavily on export due to a large internal market with a large demand for production.
Poland's major exports consist of; machinery and transport equipment, 37.8%; intermediate manufactured goods and miscellaneous goods, 40.8%; and food and livestock, 7.1%.[27]

The following page outlines Poland's largest import and export partners.

[24] Eurostat, European Commission database
[25] International Monetary Fund
[26] European Commission
[27] Central Intelligence Agency, The World Factbook





Source: Trading Economics & UN COMTRADE

Foreign Investments

Private equity and venture capital investment into companies in Central and Eastern Europe (CEE) reached a record €3.5 billion in 2017, Polish companies were the big draw, receiving 71% of the total amount, followed by those in Romania, Hungary and Latvia respectively.[28]

Poland is part of a group of the most attractive countries in Europe for facilitating FDI. Its main assets are its strategic position, a large population, membership in the European Union, economic stability, cheap skilled labour costs and an attractive fiscal system.

The Polish business climate is well appraised and the World Bank ranks Poland 27th out of 190 countries. [29]

[28] 2018, Invest Europe, CEE Private Equity 2017 Statistics report
[29] 2018, Doing Business ranking

However, according to the United Nations Conference on Trade and Development (UNCTAD) 2018 World Investment Report, FDI inflows to Poland declined drastically in 2017 and stood at USD 6.4 billion (as opposed to USD 14 billion in 2016).

In addition to the global downward trend in FDI inflows, the current conservative government's willingness to increase the percentage of domestic ownership in certain industries (including banking and retail, which are currently dominated by foreign companies) negatively impacted FDI sentiment. Furthermore, Polish law limits foreign ownership of companies in selected strategic sectors, and restricts acquisition of real estate, especially of agricultural and forest land.

- *In 2016, the Netherlands, Germany, Luxembourg and France were countries responsible for most foreign direct investments inflow in Poland. The value of Dutch capital at the end of 2016 amounted to $11,684.67M. Over two-thirds of this capital was invested in manufacturing and trade.*

- *The value of German capital invested in Poland amounted to $9,327.42M 31.4% of capital was invested in manufacturing, and 36.5% in trade; repair of motor vehicles.*

- *The value of capital from Luxembourg amounted to $6856.93M. 46.4% of this capital was invested in manufacturing.*

- *The value of French capital invested in Poland amounted to $7682.77M by the end of 2016. One-third of French capital was invested in manufacturing and trade; repair of motor vehicles.*

Foreign direct investment concentrated in the manufacturing industry (28.6%), professional, scientific and technical activities (18,8%), information and communication activities (17.7%) and real estate (11.4%).[30]

Industrial Sectors

The industrial sector contributes 33.7% of GDP and employs 29.6% of the workforce. The country's main industrial sectors are machine manufacturing, telecommunications, environment, transport, construction, industrial food processing and information technologies. Some of the traditional sectors have been in decline, like the steel and shipbuilding industries. The Polish automobile industry has been highly resistant to the effects of the economic crisis, because of its timely niche position, and its ability to satisfy the current demand for small and economic cars. Major players in Poland’s automotive sector include: Fiat, Opel, Toyota, Volkswagen, MAN Nutzfahrzeuge, Solaris, Volvo and Scania AB. Automotive production accounts for 10.1% of Poland’s total industrial output and about 4% of the country’s GDP. The country is the world’s 21st largest vehicle manufacturer and is Eastern and Central Europe’s largest manufacturer of light vehicles. The automotive sector in Poland has experienced its most significant growth after the country became part of the EU. Annual exports from the automotive sector are valued at over $18.1B, translating to about 16% of the country’s total exports. The country’s manufacturing industry also features shipbuilding, the manufacture of petrochemicals and fertilizers, and the production of electronics and electrical machinery.[31]

The tertiary sector represents 63.6% of GDP, employing about 59.8% of the active population. The services sector is booming, especially financial services, logistics, hotel services, utilities and IT.

[30] Polish Investment and Trade Agency
[31] Polish Investment and Trade Agency;
International Organization of Motor Vehicle Manufacturers

Agriculture employs 12.7% of the active population and occupies 60% of the total land area. The primary agricultural sector accounts for 3,5% of the country's economy, which makes it one of its biggest industries. The country is generally self-sufficient in terms of its food supply. The main crops are rye, potatoes, beetroot, wheat and dairy products. Poland also breeds pigs and sheep in livestock farming. The country is rich in natural resources and the main minerals produced are coal, sulphur, copper, lead and zinc.[32]
Another major industry in Poland is the country's energy industry. The country is a world's 9th largest producer of hard coal. Poland produces about 57 megatons of brown coal and 78 megatons of hard coal. Most of the locally sourced coal in Poland is consumed domestically, as the country is Europe's second-largest consumer of coal, with its coal consumption in Europe being only surpassed by Germany. The Lodz Region in Poland is home to the Belchatow Power Station; Europe's biggest brown coal power station, which is responsible for the generation of 20% of energy consumed in Poland. [33]

Following is the list of the most exported products for 2017:

Parts and accessories for big motor vehicles(more than 10 seats, tractors are included	5.60%
Parts and accessories for cars	3.40%
Seats	2.70%
Automatic data processing machines	2.00%
Furniture	1.90%
Television receivers	1.90%
Medicaments	1.50%
Parts and accessories for the motor vehicles used for transport of goods	1.30%
Tobacco products	1.30%
Wire and cable industry.	1.20%

Conclusion

Investing in Poland may seem attractive given the country's robust growth rates, and the major risk is that Poland's economy is largely dependent on Germany. Downturns in Germany's economy will have a negative impact on its economy.
The Warsaw Stock Exchange (WSE) was Europe's third biggest market by the number of IPOs in 2017, behind London Stock Exchange Group and the NASDAQ Nordic and on par with the Spanish Exchange, BME. The strong macroeconomic conditions in Europe, the stability of the Polish currency and investors' positive perception of the Polish economy have been the probable contributors to the growth of capital raised by companies on the public market.

Polish currency represents a risk alternative to the Eurozone within the EU, because many international investors investing in the Eurozone must contend with the common currency's influence over equity and bond performance. However, Poland's independent currency has helped it avoid the crises the Eurozone was unable to dodge.
Ultimately, it is important to note that the EU has allocated most of the funds for Poland out all of the fellow EU countries, and the World Bank's forecasts, showcase Poland as a strong economy despite Brexit turbulences and the European refugee crisis, attributing to a positive outlook.

[32] Food and Agriculture Organization of the United Nations
[33] Statistical Review of World Energy

Disclaimer:

East Mill Capital is an academic endeavour serving as a demonstrative tool in confirming the assumptions of the investment thesis.

Investment Thesis:

Select investments in public emerging markets equity and debt securities are able to yield outsized, risk-adjusted returns that outperform traditional western benchmarks.

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