



**THE MANAGEMENT BOARD'S REPORT ON  
THE ACTIVITIES OF KGHM POLSKA MIEDŹ  
S.A. AND OF THE KGHM POLSKA MIEDŹ S.A.  
GROUP IN 2018**

Lubin, March 2019

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*In accordance with Art. 49b point 9 of the Accounting Act, „The Management Board's Report on the activities of KGHM Polska Miedź S.A. and the KGHM Polska Miedź S.A. Group in 2018” does not contain a declaration on non-financial information, due to the fact that a separate non-financial report is being prepared and published.*

## Useful terms and abbreviations

Adjusted EBITDA	EBITDA adjusted by impairment losses/reversals of impairment losses on non-current assets recognised in cost of sales, selling costs and administrative expenses.
Barren rock	Rock which accompanies the extraction of mineral ore is not considered as useful.
BAT	Best Available Technique, as defined in Directive 96/61/EC, means the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole.
BREF	"BAT REfERENCE document", the reference document of best available techniques (BAT).
Cash cost of producing copper in concentrate (C1)	Unit cash cost of producing payable copper in concentrate, reflecting ore mining and processing costs, transport costs, the minerals extraction tax, administrative expenses during the mining phase and smelter treatment and refining charges (TC/RC) less by-product value
Copper cathodes	The basic form of electrolytically-refined copper; the product of electrolytic copper refining.
Copper concentrate	The product of enriching low-grade copper ore.
Copper equivalent	Total volume of production of all metals calculated to copper based on market prices.
Copper wire rod	Drawn copper rod, usually with a diameter of 6-12 mm, universally used as a starting material in the cable industry.
Deposit/Orebody	Natural collection of minerals in the earth, arising as a result of various geological processes.
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortisation – profit/(loss) on sales plus depreciation/amortisation.
Electrolytic copper	The product of electrolytic copper refining.
Electrolytic copper refining technology	A process involving the electrolytic refining of metal, in this case copper. The periodic removal of portions of the electrolyte is required to maintain the level of contaminants at an acceptable level, which is the one of decisive factors determining the quality of electrolytically-refined copper. The contaminated electrolyte and slimes are used as the raw material in the recovery of some of the metals accompanying the copper, such as silver, gold, selenium and nickel.
Electrorefining	The process of electrolysing dissolvable anodes which are produced from refineable alloys. During this process refined metal is collected on starter sheets under controlled conditions, while contaminants remain in the electrolyte as solids or liquid.
Flotation (ore enrichment)	A stage in the process of breaking down ore into fragments of varying composition of useful elements which exploits differences in the degree of wettability of individual mineral grains. Well-wetted minerals fall to the bottom of the flotation tank, while the poorly-wetted grains (those whose wettability decreases due to the action of so-called collecting agents, e.g. xanthates) collect at the surface of the froth created from froth-inducing agents.
Flotation tailings	Waste remaining after the ore enrichment process; can be utilised or stored.
ISO	International Organization for Standardization.
LTIFR	Lost-time injury frequency rate – number of accidents per million worked hours.
Mine excavation	Open area left after the mining work.
Muck	Rock removed from a mine face. Contains both ore and barren rock.
NBP	National Bank of Poland.
Net debt	Borrowings less free cash and cash equivalents.
OFE rod	Oxygen-free copper wire rod produced at the Cedynia wire rod plant using UPCAST technology.
Ore	Rock which contains one or more useful elements. Ore can be monometallic (containing a single metal) or polymetallic (containing more than one metal).
Payable copper	Volume of copper produced less the amount corresponding to the loss incurred in further processing to pure metal.
Payable metal	Volume of metal produced less the amount corresponding to the loss incurred in further processing to pure metal.
Pillar (mining)	An unremoved mass of rock in an underground mine used to support the ceiling against collapse.
Pre-precious metals credit unit cost of electrolytic copper production from own concentrate	The sum of costs of mining, flotation, smelter processing per cathode and support functions (the Data Center Division, the Mine-Smelter Emergency Rescue Division and the Head Office), together with cathode selling costs, adjusted by the value of inventories of half-finished products and work in progress divided by the volume of electrolytic copper production from own concentrate.
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals - decree issued by the European Parliament and the European Council on the safe use of chemicals through their registration and evaluation, and in certain cases through the issuance of permits and restrictions in the sale and use of certain chemicals.
Silver smelting and electrolytic refining technology	Comprised of: batch preparation (the mixture of batch elements followed by drying); the smelting of Doré metal and the casting of anodes (melting of the batch in a Kaldo furnace to remove slag or gasify impurities followed by casting of the product [99% silver] into anodes); silver electrorefining (forming into cathodes containing a min. 99.99% Ag); melting in an electric induction furnace and the casting of refined silver into commercial form

	(billets or granules).
Total unit cost of producing copper from own concentrate	The sum of costs of mining, flotation, smelter processing per cathode and support functions (the Data Center Division, the Mine-Smelter Emergency Rescue Division and the Head Office), together with cathode selling costs, adjusted by the value of inventories of half-finished products and work in progress and less the value of anode slimes, divided by the volume of electrolytic copper production from own concentrate.
TPM – Total Precious Metals	Precious metals (gold, platinum, palladium).
Troy ounce (oz t)	A unit of measure mainly used in English-speaking countries. The troy ounce (abbreviated as oz t) is universally used in jewellery and precious metals commerce. 1 troy ounce equals 31.1035 grams.
YoY	year on year, i.e. comparison between one year and the next year.

## Aggregated data of the Company and Group for the years 2011-2018

(data for the years 2011-2016 according to annual reports for these periods)

		2018	2017	2016	2015	2014	2013	2012	2011
<b>Basic items of the consolidated financial statements</b>									
Sales revenue	PLN mn	20 526	20 358	19 156	20 008	20 492	24 110	26 705	22 107
Profit/(loss) for the period	PLN mn	1 658	1 525	(4 449)	(5 009)	2 451	3 033	4 803	11 064
Total assets	PLN mn	37 237	34 122	33 442	36 764	40 374	34 465	33 616	30 554
Liabilities and provisions	PLN mn	18 012	16 337	17 531	16 350	14 844	11 401	11 906	7 172
Earnings per share (EPS) <sup>1</sup>	PLN	8.29	7.84	(21.86)	(25.06)	12.25	15.18	24.01	55.02
Share price of the Company <sup>2</sup>	PLN	88.88	111.20	92.48	63.49	108.85	118.00	190.00	110.60
Net debt/EBITDA <sup>3</sup>		1.6	1.3	1.6	1.4	0.9	0.4	-	-
Payable copper production <sup>4</sup>	kt	634	656	677	718	663	666	676	571
Payable silver production <sup>4</sup>	t	1 205	1 234	1 207	1 299	1 258	1 164	1 274	1 260
Concentrate production cost C1 <sup>4</sup>	USD/lb	1.81	1.59	1.41	1.59	1.89	1.85	1.59	0.63
Cash expenditures on property, plant and equipment and intangible assets	PLN mn	2 875	2 796	3 251	3 939	3 434	3 188	2 402	1 859
<b>Basic items of the separate financial statements</b>									
Sales revenue	PLN mn	15 757	16 024	15 112	15 939	16 633	18 579	20 737	20 097
Profit/(loss) for the period	PLN mn	2 025	1 323	(4 085)	(2 788)	2 414	3 058	4 868	11 335
Total assets	PLN mn	34 250	30 947	30 100	33 120	32 312	29 038	28 177	29 253
Liabilities and provisions	PLN mn	15 205	13 691	14 200	12 841	8 035	5 740	6 254	6 118
Earnings per share (EPS)	PLN	10.13	6.62	(20.42)	(13.94)	12.07	15.29	24.34	56.68
Electrolytic copper production	kt	502	522	536	574	577	565	566	571
Metallic silver production	t	1 189	1 218	1 191	1 283	1 256	1 161	1 274	1 260
Concentrate production cost C1	USD/lb	1.85	1.52	1.30	1.47	1.82	1.78	1.34	0.63
Cash expenditures on property, plant and equipment and intangible assets	PLN mn	1 907	1 991	2 604	2 481	2 203	2 174	1 647	1 406
<b>Macroeconomic data (average annual)</b>									
Copper prices on LME	USD/t	6 523	6 166	4 863	5 495	6 862	7 322	7 950	8 811
Silver prices per LBMA	USD/oz t	15.71	17.05	17.14	15.68	19.08	23.79	31.15	35.12
Exchange rate	USD/PLN	3.61	3.78	3.94	3.77	3.15	3.17	3.26	2.96

<sup>1</sup> Attributable to shareholders of the Parent Entity

<sup>2</sup> At the end of the period

<sup>3</sup> Adjusted EBITDA for the year, excluding EBITDA of the joint venture Sierra Gorda S.C.M.

<sup>4</sup> Comprises Sierra Gorda S.C.M. pursuant to interest held (55%)

## Significant events in 2018 and to the date of preparation of this report

Date	Event	Section
<b>Change in macroeconomic conditions</b>		
2018	An increase in average annual prices of copper, molybdenum and nickel respectively by 6%, 48% and 26% alongside a decrease in the silver price by 8%	4.3
2018	Changes in average annual exchange rates: USD/PLN by -4%, USD/CAD by -0.2% and USD/CLP by -1%	4.3
<b>KGHM Polska Miedź S.A. on the Stock Exchange</b>		
2018	Decrease in the share price of KGHM Polska Miedź S.A. by 20% from 111.20 PLN to 88.88 PLN	11.1
11 July 2018	Increase in the share of the total number of votes in the Company to more than 5% by Aviva Otwarty Fundusz Emerytalny Aviva BZ WBK.	11.4
12 October 2018	Increase in the share of the total number of votes in the Company to more than 5% by Otwarty Fundusz Emerytalny PZU „Złota Jesień”.	11.4
19 February 2019	Decrease in the share of the total number of votes in the Company to below 5% by Otwarty Fundusz Emerytalny PZU „Złota Jesień”.	11.4
<b>Changes in the composition of KGHM Polska Miedź S.A.’s governing bodies</b>		
10 March 2018	Dismissal from the composition of the Management Board of President of the Management Board Radosław Domagalski-Łabędzki and of Vice President of the Management Board (International Assets) Michał Jezioro. Assignment, until the date of appointment of Members of the Management Board selected under qualification proceedings, of Rafał Pawełczak - Vice President of the Management Board (Development) with the responsibilities of President of the Management Board and Stefan Świątkowski - Vice President of the Management Board (Finance) with the responsibilities of Vice President of the Management Board (International Assets).	17.3
3 April 2018	Andrzej Myślecki submitted his resignation from serving as a Member of the Supervisory Board of KGHM Polska Miedź S.A.	17.3
22 June 2018	Appointment, as at the date of conclusion of the Ordinary General Meeting of KGHM Polska Miedź S.A. approving the financial statements for the financial year ending 31 December 2017, to the composition of the 10 <sup>th</sup> -term Management Board of Marcin Chłudziński, Katarzyna Kreczmańska-Gigol and Radosław Stach.	17.3
6 July 2018	Appointment by the Ordinary General Meeting to the composition of the 10 <sup>th</sup> -term Supervisory Board of: Leszek Banaszak, Jarosław Janas, Andrzej Kisielewicz, Janusz Marcin Kowalski, Bartosz Piechota, Marek Pietrzak, Agnieszka Winnik-Kałemba, Józef Czyczerski, Ireneusz Pasis and Bogusław Szarek.	17.3
6 July 2018	Assumption by Marcin Chłudziński of the position of President of the Management Board, Katarzyna Kreczmańska-Gigol - the position of Vice President of the Management Board (Finance), and Radosław Stach - the position of Vice President of the Management Board (Production).	17.3
23 July 2018	Assignment (until the date of appointment of Members of the Management Board of KGHM Polska Miedź S.A. selected under qualification proceedings) of Marcin Chłudziński, President of the Management Board, with the responsibilities of the Vice President of the Management Board (International Assets), and Katarzyna Kreczmańska-Gigol, Vice President of the Management Board (Finance) with the responsibilities of the Vice President of the Management Board (Development).	17.3
24 August 2018	Appointment to the composition of the Management Board of Adam Bugajczuk to the position Vice President of the Management Board (Development) and Paweł Gruza to the position Vice President of the Management Board (International Assets).	17.3
<b>Advancement of projects</b>		
27 June 2018	Negative decision by the government of Canada on advancement of the Ajax project as the project is likely to cause significant adverse environmental effects.	2.3
29 November 2018	Preliminary interest expressed towards the sale of the shares of PGE EJ1 sp. z o.o., owned by the Company, as a result of the preliminary interest expressed by the company PGE Polska Grupa Energetyczna S.A. in the purchase of all of the shares in the company PGE EJ1 sp. z o.o.	2.5
<b>Impairment of assets</b>		
19 January 2018	Identification of indications to verify the recoverable amount of international mining assets	6,7
21 February 2018	Information on the results of the conducted tests for impairment	6,7
11 January 2019	Identification of indications to verify the recoverable amount of international mining assets	6,7
5 March 2019	Information on completing the major work related to verifying the recoverable amount of international assets of the KGHM Polska Miedź S.A. Group as well as the joint venture, i.e. Sierra Gorda SCM	6,7
<b>Dividend</b>		
22 May 2018	The Management Board’s recommendation regarding the allocation of profit for 2017 by transferring all of the profit earned to the Company’s reserve capital.	11.3
6 July 2018	Decision of the Ordinary General Meeting of KGHM Polska Miedź S.A. to transfer all of the profit earned to the Company’s reserve capital.	11.3

Date	Event	Section
<b>Significant agreements</b>		
6 November 2018	Framework contract signed for the sale of copper cathodes produced by the Company in the years 2019-2023, between the Company and China Minmetals Nonferrous Metals Co. Ltd. (a company within the China Minmetals Corporation group).	14
27 February 2019	Signing with Bank Gospodarstwa Krajowego an unsecured, working capital facility agreement, with a financing period of up to 84 months, as a revolving credit line in the amount of USD 450 million for a period of 60 months, with the option to transform it into a non-revolving credit after 60 months.	6.6, 14
<b>Other</b>		
22 May 2018	Approval by the Supervisory Board of the Budget of KGHM Polska Miedź S.A. and the Budget of the KGHM Group for 2018	6.5
19 December 2018	Adoption by the Supervisory Board of the Strategy of KGHM Polska Miedź S.A. for the years 2019 - 2023 submitted by the Management Board.	5
10 January 2019	Approval by the Supervisory Board of the Budget of KGHM Polska Miedź S.A. and the Budget of the KGHM Group for 2019	6.5



## 1. Introduction

KGHM Polska Miedź S.A. is the Parent Entity of a Group which is a world-class producer of copper and silver with nearly 60 years of experience in the copper ore mining and processing sector. In Poland, KGHM Polska Miedź S.A. operates one of the world's largest copper deposits, guaranteeing continuous production in Poland for the next several decades. KGHM Polska Miedź S.A. also produces silver, gold, molybdenum, lead and rock salt, as well as being one of the leading exporters in the country and one of the largest companies in Poland.

The KGHM Polska Miedź S.A. Group is a global and innovative organisation, which conducts technologically advanced exploration-mining and metallurgical activities and has a geographically diversified portfolio of mining projects. KGHM's business model is divided into 7 areas, through which the Group ensures a complete chain of value creation, from exploration to the sale of finished products:

Deposits management	Processing	Sales
- exploration and evaluation	- ore enrichment	- products sales
- mining	- smelting and refining	
- restoration	- processing	

KGHM actively supports the realms of science, the arts and sport. Through its Foundation founded in 2003, KGHM Polska Miedź engages in charitable activities.

The KGHM Polska Miedź S.A. Group includes 75 entities. Uniformity in such a complex organisation is ensured by KGHM's values – zero harm, teamwork, results-driven, accountability and courage. For nearly 60 years they have been the Company's business compass, indicating the direction of development and the means of operation on the international market.

For over 20 years the Company has been listed on the Warsaw Stock Exchange. The Company is reflected in the WIG20 and WIG30 indices.

## 2. Group structure

### 2.1. Group structure

As at 31 December 2018, the Group was composed of KGHM Polska Miedź S.A. – the Parent Entity – and 75 subsidiaries (including five closed-end, non-public investment funds), located on four continents: Europe, North America, South America and Asia. Some of these subsidiaries form their own groups. The largest of these, in terms both of the number of entities as well as the value of equity, was the KGHM INTERNATIONAL LTD. Group, whose main assets are located in Canada, the USA and Chile. It was comprised of 25 subsidiaries. As at the end of the reporting period the KGHM Polska Miedź S.A. Group owned shares in two joint ventures - Sierra Gorda S.C.M. and NANO CARBON Sp. z o.o.

The detailed structure of the KGHM Polska Miedź S.A. Group, together with the relationships between entities, may be found in Appendices 1 and 2.

The Group's main entities, which are engaged in the mining sector, comprise three primary reporting segments which are independently evaluated by management bodies. These are: KGHM Polska Miedź S.A., KGHM INTERNATIONAL LTD. and Sierra Gorda S.C.M. Other companies, excluding Future 1 Sp. z o.o., Future 2 Sp. z o.o., Future 3 Sp. z o.o., Future 4 Sp. z o.o., Future 5 Sp. z o.o., Future 6 Sp. z o.o. and Future 7 Sp. z o.o., are part of the segment called Other segments.

The below diagram presents the significant production assets and projects underway within the reporting segments: KGHM Polska Miedź S.A., KGHM INTERNATIONAL LTD., Sierra Gorda S.C.M. and Other segments.

Diagram 1. Main reporting segments of the KGHM Polska Miedź S.A. Group

	KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Sierra Gorda S.C.M. Joint venture of KGHM INTERNATIONAL LTD. and Sumitomo Group companies	Other segments
<b>Activities</b>	- mined and metallurgical production of metals – Cu, Ag, Au	- mined production of metals - Cu, Ni, Au, Pt, Pd	- mined production of metals - Cu, Mo, Au, Ag	This item includes other Group companies (each company represents a separate operating segment).
<b>Main production assets</b>	- underground mines - Lubin mine - Polkowice-Sieroszowice mine - Rudna mine - metallurgical plants - Legnica Copper Smelter and Refinery - Głogów I Copper Smelter and Refinery and Głogów II Copper Smelter and Refinery - Cedynia Wire Rod Plant	- Robinson mine in the USA (open pit)	- Sierra Gorda mine in Chile (open pit)	
<b>Most important development projects</b>	- Głogów Głęboki-Przemysłowy (Deep Głogów) - pre-production projects and exploration projects in south-west Poland	- Victoria project in the Sudbury Basin in Canada - construction of an underground copper and nickel mine - Sierra Gorda Oxide project in Chile		

The following companies were not included in any of the aforementioned segments:

- Future 1 Sp. z o.o., which acts as a holding company with respect to the KGHM INTERNATIONAL LTD. Group,
- Future 2 Sp. z o.o., Future 3 Sp. z o.o., Future 4 Sp. z o.o., Future 5 Sp. z o.o., Future 6 Sp. z o.o., Future 7 Sp. z o.o., which operate in the structure related to the establishment of a Tax Group.

These companies do not conduct operating activities which could impact the results achieved by individual segments, and as a result their inclusion could distort the data presented in this part of the consolidated financial statements due to significant settlements with other Group companies.

### Changes in the basic principles for managing the Group

In 2018 amendments were introduced to the articles of association/statutes of Group companies which granted the employees of these companies the right to participate in the election or dismissal of employee representatives on the Supervisory Board of the Parent Entity, i.e. KGHM Polska Miedź S.A.

In addition, in 2018 there were no substantial changes to the principles of managing the KGHM Polska Miedź S.A. Group. Under the existing management model actions were undertaken aimed at strengthening oversight of companies and unifying solutions applied in this regard within the Group. Solutions adopted by the Parent Entity, or consistent with them, were implemented by Group companies. A „Financial Liquidity Management Policy in the Group” was introduced, which describes the processes and rules supporting the process of managing liquidity in the KGHM Group and represents part of the corporate culture of the Group. Also introduced were principles regulating the making of payments, using a split payments mechanism which regulates among others the question of payments between Group companies.

The Policy and procedure adopted by KGHM Polska Miedź S.A. with respect to the selection of the firm for the auditing of the financial statements also covers the key companies of the Group.

The regulations implemented by the Parent Entity in the entities of the Group also included solutions regarding areas such as ethics, anti-corruption activities, anti-doping, whistleblowing, safety and preventing losses.

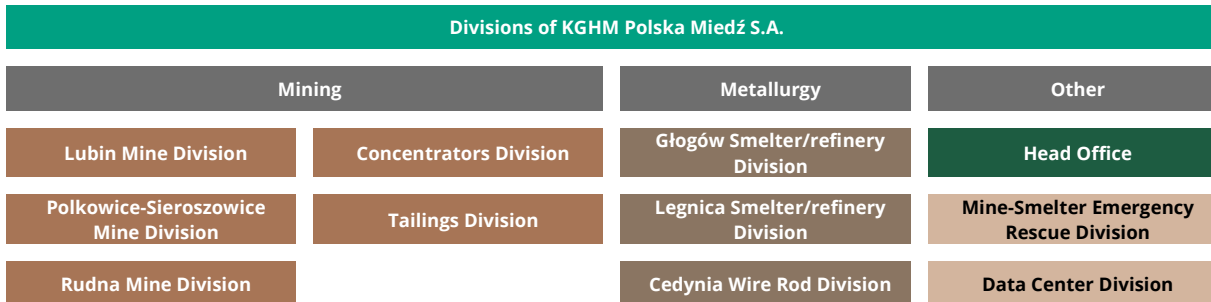
### Amendment in the Company's Statutes

On 26 June 2018, the Company's Ordinary General Meeting adopted a resolution regarding an amendment in the Statutes of KGHM Polska Miedź S.A., which came into force following the registration of these changes in the entrepreneur registry of the National Court Register, on 27 July 2018. The change in the Company's Statutes involved the addition of a clause stating that the Supervisory Board adopts the unified text of the Company's Statutes as prepared by the Management Board.

## 2.2. Organisational structure of KGHM Polska Miedź S.A.

In 2018, the multi-divisional organisational structure of the Company, acting under the name KGHM Polska Miedź S.A., comprised the Head Office of the Company and 10 Divisions.

Diagram 2. Organisational structure of the Company as at 31 December 2018

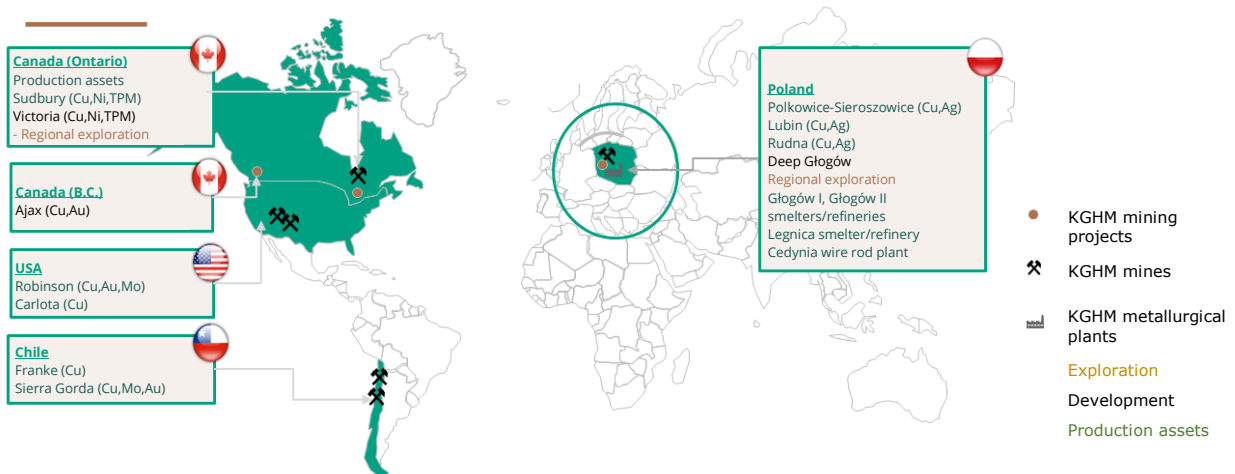


## 2.3. Major assets

The KGHM Polska Miedź S.A. Group holds geographically diversified mining assets located in low-risk countries. The copper, silver, molybdenum, nickel and precious metals mines of the Group are located in Poland, the USA, Chile and Canada. The key international asset – the Sierra Gorda mine, which is a joint venture between KGHM INTERNATIONAL LTD., Sumitomo Metal Mining and the Sumitomo Corporation – is located in Chile. In addition, the KGHM Polska Miedź S.A. Group has mine projects which are at the preproduction phase (Victoria, Sierra Gorda Oxide), as well as exploration projects.

The major assets of the KGHM Polska Miedź S.A. Group are presented in the diagram below.

Diagram 3. Location of mining assets of the KGHM Polska Miedź S.A. Group



### Poland:

#### Polkowice-Sieroszowice mine

Location	Lower Silesia, Poland
Ownership	KGHM Polska Miedź S.A. Division
Type of mine	underground
Main ore type	copper ore
Associated metals	silver, lead, rock salt, gold
Type of orebody	stratiform
End product	copper ore
Copper in extracted ore in 2018	195.7 thousand tonnes

The Polkowice-Sieroszowice mine is located in Lower Silesia, to the west of the town of Polkowice. Currently, it conducts mining works in four mining areas: Polkowice, Radwanice Wschodnie, Sieroszowice and in a part of the Głogów Głęboki – Przemysłowy (Deep Głogów) deposit.

Within the Sieroszowice deposit, there are also rich deposits of rock salt above the copper-bearing horizon.

Mining is conducted using room-and-pillar methods with natural roof settlement, using blasting technology. The Polkowice-Sieroszowice mine's current production capacity is around 12 million tonnes of ore per year.

**Rudna mine**

Location	Lower Silesia, Poland
Ownership	KGHM Polska Miedź S.A. Division
Type of mine	underground
Main ore type	copper ore
Associated metals	silver, lead, gold
Type of orebody	stratiform
End product	copper ore
Copper in extracted ore in 2018	186.2 thousand tonnes

The Rudna mine is located in Lower Silesia, to the north of the town of Polkowice. It mines the copper deposit in Rudna mining area as well as in parts of the mining areas of Sieroszowice, Lubin-Małomice and Głogów Głęboki-Przemysłowy (Deep Głogów).

The copper orebody in the currently mined deposit ranges from 844 meters to 1250 meters. Mining is conducted using room-and-pillar methods with natural roof settlement with hydraulic backfill, using blasting technology. The current average production capacity is approx. 12 million tonnes of ore per year.

**Lubin mine**

Location	Lower Silesia, Poland
Ownership	KGHM Polska Miedź S.A. Division
Type of mine	underground
Main ore type	copper ore
Associated metals	silver, lead, gold
Type of orebody	stratiform
End product	copper ore
Copper in extracted ore in 2018	70.1 thousand tonnes

The Lubin mine is located in Lower Silesia, Poland, to the north of the town of Lubin. The mines the copper deposit in the mining area Lubin-Małomice at a depth from 368 meters to 1006 meters.

Mining is conducted using room-and-pillar methods with natural roof settlement with hydraulic backfill, in the vicinity of the support pillar of the town of Lubin, using blasting technology.

The mine's current production capacity is around 8 million tonnes of ore per year.

**Głogów Copper Smelter and Refinery**

Location	Lower Silesia, Poland
Ownership	KGHM Polska Miedź S.A. Division
Type of metallurgical plant	smelter/refinery
End product	electrolytic copper
Electrolytic copper production in 2018	387.3 thousand tonnes

This complex of metallurgical plants located in Głogów comprises two copper concentrate smelting lines based on the one-stage smelting of concentrate in a flash furnace directly into blister copper. Apart from electrolytic copper, the Głogów Copper Smelter and Refinery produces crude lead (up to 30 thousand tonnes annually), silver (around 1200 tonnes), gold (around 2.6 tonnes) and sulphuric acid (over 507 thousand tonnes).

**Legnica Copper Smelter and Refinery**

Location	Lower Silesia, Poland
Ownership	KGHM Polska Miedź S.A. Division
Type of metallurgical plant	smelter/refinery
End product	electrolytic copper
Electrolytic copper production in 2018	114.5 thousand tonnes

The copper smelter and refinery located in Legnica has a current production capacity of 120 thousand tonnes of electrolytic copper. In operation since the 1950s based on shaft furnace technology. Apart from electrolytic copper, the plant also produces round billets, around 30 thousand tonnes annually of refined lead and also 115 thousand tonnes of sulphuric acid, as well as copper sulphate and nickel sulphate.

**Cedynia Wire Rod Plant**

Location	Lower Silesia, Poland
Ownership	KGHM Polska Miedź S.A. Division
Type of metallurgical plant	processing
End product	copper wire rod and Cu-OFE rod
Production in 2018	248.8 thousand tonnes of copper wire rod and 17.6 thousand tonnes of OFE rod

Production at the Cedynia Wire Rod Plant located in the vicinity of Orsk is based on the use of copper cathodes, 75% of which come from the Głogów Copper Smelter and Refinery and 25% from the Legnica Copper Smelter and Refinery. The basic product of the Cedynia Wire Rod Plant is copper wire rod produced in a Contirod line amounting to around 250 thousand tonnes annually and around 18 thousand tonnes annually of oxygen-free copper wire rod (OFE) produced in a UPCAST line, including oxygen-free, silver-bearing copper wire rod.

**The United States:****Robinson mine**

Location	Nevada, USA
Ownership	100% KGHM INTERNATIONAL LTD.
Type of mine	open pit
Main ore type	copper ore
Associated metals	gold and molybdenum
Type of orebody	porphyry/ skarn
End product	copper and gold concentrate, molybdenum concentrate
Payable copper production in 2018	48.0 thousand tonnes

The mine is located in White Pine county, Nevada, USA, around 11 km west of Ely (approx. 400 km north of Las Vegas), in the Egan range, at an average altitude of 2130 meters a.s.l., near highway no. 50.

The mine is comprised of 3 large pits: Liberty, Tripp-Veteran and Ruth. Currently, Ruth is in operation. The ore is extracted by conventional methods, and is then processed into a copper and gold concentrate, and separately into molybdenum concentrate in a concentrating plant.

**Carlota mine**

Location	Arizona, USA
Ownership	100% KGHM INTERNATIONAL LTD.
Type of mine	open pit
Main ore type	copper ore
Type of orebody	porphyry
End product	copper cathodes
Payable copper production in 2018	3.2 thousand tonnes

The Carlota mine is located in the Western part of the Miami-Globe mining region, in the state of Arizona at an altitude of 1 300 meters (4 200 feet) a.s.l. Surrounding the mine is mountainous, desert terrain.

Copper ore extraction by the Carlota mine is by conventional methods typical for open-pit metals mines, i.e. the ore is mined by blasting and then is transported by haulage trucks. In 2018 mining re-commenced in the Eder South area.

**Canada:****Sudbury Basin**

Location	Sudbury, Ontario, Canada
Ownership	100% KGHM INTERNATIONAL LTD.
Type of mine	underground
Main ore type	copper ore, nickel, platinum, palladium and gold
Type of orebody	footwall/contact Ni
End product	copper ore and nickel
Payable copper production in 2018	7.4 thousand tonnes

The Sudbury Basin is located in central Ontario in Canada, approx. 400 km north of Toronto. In this region KGHM INTERNATIONAL LTD. owns a variety of assets extracting copper and nickel ore along with precious metals. Amongst the most important assets are the Morrison/Levack and McCreedy West underground mines, utilising the Craig and Levack shafts and an adit. Extraction is through mining methods which are dependent on the geometry of the deposit – mainly a mechanised method of selective extraction using undercutting of successive levels from bottom to top at various mine levels. All of the ore extracted from the mine is processed in the Clarabelle plant in Sudbury, owned by Vale.

**Victoria project**

Location	Sudbury Basin, Ontario, Canada
Ownership	100% KGHM INTERNATIONAL LTD.
Type of mine	underground
Main ore type	copper-nickel ore
Associated metals	gold, platinum and palladium
Mine life	13 years
End product	copper, nickel and precious metals ore
Forecasted annual production	17 thousand tonnes Ni, 19 thousand tonnes Cu

This project is located in the Canadian province of Ontario, around 35 km west of the town of Sudbury. In 2002 rights were acquired to the Victoria mineral deposit and a campaign of exploration in this region commenced. All of the ore extracted from the mine will be processed in the Clarabelle plant in Sudbury, owned by Vale. The current development scenario for the project calls for the sinking of 2 shafts to access the deposit (a production shaft and a ventilation shaft). Exploration work performed thus far confirmed the continuity and characteristics of the mineralisation to the level of approximately 2200 meters below the surface.

Based on analytical work performed in 2017, the base scenario assumes the Victoria project will be developed in two stages, comprised of the sinking of a first shaft along with additional exploration, followed by a second shaft for production.

In 2018, required permits for the project were reviewed and work commenced on preparing necessary applications, mainly with respect to planned work related to the construction of selected elements of the project's infrastructure. The project team conducted work related to securing existing infrastructure and project terrain, the administrative and legal development of the project and maintaining relations with First Nations in Ontario, Canada.

#### Ajax project

Location	Kamloops, British Columbia, Canada
Ownership	KGHM INTERNATIONAL LTD, 80%; Abacus Mining and Exploration Inc. 20%
Type of mine	open pit
Main ore type	copper ore
Associated metals	precious metals (gold and silver)
Mine life	19 years
End product	copper concentrate
Forecasted annual production	53 thousand tonnes Cu, 114 thousand ounces Au

The Ajax project is located in British Columbia, Canada, 400 km north-east of Vancouver near the town of Kamloops. The project assumes the construction of an open-pit copper and gold mine and an ore processing plant, with associated infrastructure. In January 2012, the company Abacus Mining and Exploration Inc. prepared a feasibility study, based on which the preliminary economic parameters of this project were described. Due to the substantial risk of not receiving environmental permit based on the assumed technological parameters of the project, including the siting of basic mine plant infrastructure, the assumptions of the feasibility study from 2012 were reviewed in terms of identifying risk factors and the potential for increasing the project's value.

In January 2016, an Updated Feasibility Study was published, replacing the earlier version dated 6 January 2012. The Updated Feasibility Study reflects changes to the project, under which the mine's infrastructure was moved farther from the nearest buildings in the town of Kamloops, technology improvements were incorporated and the processing facility's throughput capacity was increased from 60 to 65 thousand tonnes of ore per day.

In December 2017, the Ministers of Environment and of Energy, Mines and Petroleum Resources of British Columbia (provincial authorities) decided against the granting of an Environmental Assessment Certificate for the Ajax project. In June 2018, the Government of Canada, through the Governor-in-Council (Cabinet) issued a negative decision regarding the Ajax project as the project is likely to cause significant adverse environmental effects.

The decisions were made through the environmental impact assessment process, and reflect the substantial engagement of provincial and federal governmental agencies, First Nations and a broad spectrum of stakeholders, including thousands of local citizens.

In 2018, work was carried out related to requisite monitoring and securing existing infrastructure.

#### Chile:

##### Sierra Gorda mine and Sierra Gorda Oxide project

Location	Region II, Chile
Ownership	55% KGHM INTERNATIONAL LTD, 45% Sumitomo Group companies: -Sumitomo Metal Mining Co., Ltd. (31.5%) -Sumitomo Corporation (13.5%)
Type of mine	open pit
Main ore type	copper ore
Associated metals	molybdenum, gold
Mine life	25 years for the current deposit based on phase I of the investment, including actions to remove bottlenecks. Moreover, there is a possibility to extend the mine's life using new deposits.
End product	copper concentrate, molybdenum concentrate
Payable production in 2018	96.9 thousand tonnes of copper in concentrate, 26.7 million pounds of molybdenum in concentrate – on a 100% basis, share of KGHM Polska Miedź S.A. is 55%.

The Sierra Gorda mine is located in the Atacama desert, in the Sierra Gorda administrative area in the Antofagasta region, in northern Chile, approx. 60 km south-west of the city of Calama. The mine is situated at an altitude of 1 700 meters a.s.l. and 4 km from the town of Sierra Gorda.

The ore mined in the Sierra Gorda mine is processed into copper and molybdenum concentrates.

In April 2015 the molybdenum installation commenced production, and from 1 July 2015 the Sierra Gorda mine has commenced commercial production (since then it has prepared statements of profit or loss). In 2018, work was carried out related to optimising the processing of the sulphide ore. The actions taken were aimed at stabilising the volumes and technological parameters of ore processing, as well as stabilising the work of the processing plant and increasing metals recovery.

At present work is aimed at developing the mine based on phase I of the investment along with actions aimed at optimising the production line, which should lead to increased production capacity.

The Sierra Gorda Oxide project involves the leaching of the copper oxide ore of Sierra Gorda on a permanent heap and the production of high-quality copper cathodes SX-EW installation, over a period of 10 years. Average copper production will be approx. 30 thousand tonnes/year. Most of the oxide ore assumed for the project is currently stored, near the site of the planned heap, on the grounds of the Sierra Gorda mine. In 2018, work was carried out aimed at minimising potential project risk and increasing its efficiency, mainly by analysing the option of preliminary crushing of the ore prior to the process of leaching. This analysis included crushing tests. In addition, tests involving the leaching of the crushed ore in columns were carried out. Preliminary verification of the procedure related to altering the project's permits was also carried out.

Franke mine		
Location	Antofagasta Region, Chile	The mine is located in a desert area of northern Chile, in the Altamira region, near the southern boundary of the Antofagasta region, near a public road connecting the mine with the Pan-American highway.
Ownership	100% KGHM INTERNATIONAL LTD.	
Type of mine	open pit	Mining is conducted by conventional open-pit methods. Due to the nature of the ore, it is processed using the heap leach, solvent-extraction and electrowinning method. The end product is electrolytic copper in the form of cathodes.
Type of orebody	IOCG (ore type containing iron, copper and gold)	
End product	copper cathodes	
Payable copper production in 2018	20.2 thousand tonnes	

### Other assets

In terms of assuring the operations of the core business of KGHM Polska Miedź S.A., of significance are investments in domestic companies acting on its behalf, such as:

- PeBeKa S.A. – mining work contractor,
- KGHM ZANAM S.A. – a supplier and service provider for mining machinery, and also provides production maintenance services in selected areas and participates in investment tasks,
- KGHM Metraco S.A. – a supplier of copper scrap,
- „Energetyka” sp. z o.o. – this company secures part of the energy needs of KGHM Polska Miedź S.A.

In terms of the amount of capital committed, an important investment are also the shares of TAURON Polska Energia S.A., a company listed on the Warsaw Stock Exchange.

Investments in closed-end investment funds are a tool used to diversify the investment risk for KGHM Polska Miedź S.A. In advancing the strategy of the Group, they fill a role in the management of selected non-core assets and are a tool in the advancement of projects aimed at increasing value. A significant portion of these funds' assets are investments in the general field of health.

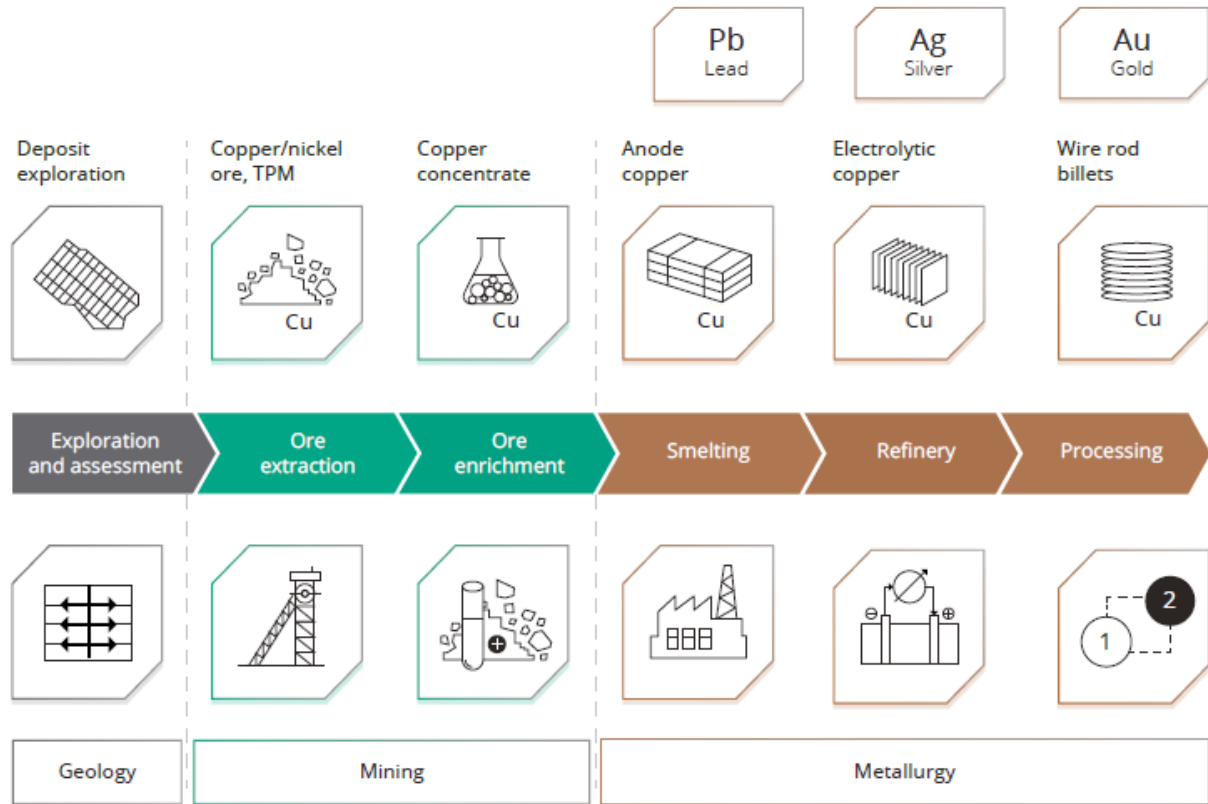
In addition, amongst the international companies is a group of companies under the DMC Mining Services brand: FNX Mining Company Inc., Raise Boring Mining Services S.A. de C.V., DMC Mining Services Corporation, DMC Mining Services Colombia S.A.S. and DMC Mining Services (UK) Ltd., which provide services in shaft sinking, mine development work, above-ground and underground mine facilities, mine drilling, tunnel drilling for general construction purposes and engineering services.



## 2.4. Production process

Production in the Group is based on the processes illustrated in the following two diagrams:

Diagram 4. Integrated mining, processing, smelting and refining processes in KGHM Polska Miedź S.A.



Production in KGHM Polska Miedź S.A. is a fully integrated process, in which the end product of one technological phase is the starting material (half-finished product) used in the next phase. Mining in KGHM Polska Miedź S.A. is performed by three mining Divisions: Lubin, Rudna and Polkowice-Sieroszowice. In the subsequent phase the Concentrators Division prepares concentrate for the smelters and refineries, while the Tailings Division is responsible for storing and managing the tailings generated by the copper ore enrichment process. The organisational structure of KGHM includes two metallurgical facilities: the Legnica Copper Smelter and Refinery and the Głogów Copper Smelter and Refinery, as well as the Cedynia copper wire rod plant.

### Mining

The technology of mining the copper ore in all 3 mines is based on the room-and-pillar system with the use of blasting technology for ore extraction. This involves access and preparatory work, comprised of the excavation of a drift network on all sides of the site to be mined, cutting of the unmined rock mass with rooms and drifts separating a number of operating pillars, as well as extraction of the ore followed by the transport of the ore to underground dumping stations, where the large rocks are crushed and sifted through a grate, and then the crushed muck is transported to the storage areas near the shafts, from which it is transported to the surface by skip hoisting shafts.

The work related to mining of the copper ore is fully mechanised, in a 4-shift labour system, with the use of motorised mining rigs, most of which are equipped with air-conditioned cabins and systems supporting the work of the operators. Mining work is conducted in the following cycle: drilling the blasting holes with the support of motorised drilling rigs, loading blasting material into drilled holes by drilling rigs, group blasting in mining divisions, followed by the ventilation of the areas blasted (from 30 minutes to 2 hours; in seismically-sensitive areas this time is longer). The next stage involves the loading of the muck using motorised loaders into haulage vehicles and its transport to dumping stations, along with protection of the exposed face by roof anchor bolts using bolting rigs. The crushed muck is transported by conveyor belts or mine rail trolleys to the storage sites near the shafts, and is then transported to the surface. After the muck is unloaded at the shaft top, it is transported by conveyor belts or railway to the ore concentrators located at each of the three mines.

The operations and processes applied at each of the three ore concentrators are the same. However, due to the varied lithological and mineralogical composition of the ore from individual mines, the production layout of each facility differs. The enrichment technologies applied include the following individual operations: screening and crushing, milling and classification, flotation and drying of the concentrate.



The flotation process results in concentrate with an average copper content of approx. 22-23%, and flotation waste. The Rudna mine concentrator produces concentrate with the highest copper content (approx. 26%), while the lowest is at the Lubin mine concentrator (approx. 13%). The Polkowice mine concentrator produces concentrate of approx. 25% copper content.

The dried concentrate of approx. 8.5% water content is transported by rail to the following smelter/refineries: the Legnica Copper Smelter and Refinery located in Legnica, the Głogów I Copper Smelter and Refinery and the Głogów II Copper Smelter and Refinery, located in Głogów.

The flotation waste, in the form of slimes, are transported through pipelines to the Żelazny Most Tailings Storage Facility, where the sedimentation of the solid particles takes place and the clarified water is collected and redirected to the ore concentrators. The storage site also serves as a retention-dosage reservoir for excess mine water. Excess water is hydrotechnically discharged (periodically) to the Odra River. This method was developed and implemented in partnership with research institutions, and it has been officially approved for use under the provisions of the Water Law. Studies demonstrate that the discharging of mine and process water to the Odra River cannot result in any changes that would make the proper functioning of water ecosystems impossible or prevent conformance with the applicable water quality requirements.

### Metallurgy

The copper smelters/refineries produce electrolytic copper from own concentrates as well as from purchased metal-bearing material (copper concentrates, copper scrap, blister copper).

The Legnica Copper Smelter and Refinery uses a multi-stage process whose main stages include: preparation of the charge material, its reduction smelting in shaft furnaces to the form of matte copper, conversion to the form of blister copper with approx. 98.5% Cu content; fire refining in anode furnaces to produce anodes of 99.2% Cu content; and electrorefining. The final product is electrolytic copper cathodes with 99.99% Cu content.

The Głogów Copper Smelter and Refinery applies one-stage flash furnace technology based on a license from the Finnish company Outokumpu. The dried concentrate, with a moisture content of 0.3% H<sub>2</sub>O, is smelted in a flash furnace into blister copper containing around 98.6% Cu, which is subject to fire refining in anode furnaces. The slag, which still contains on approximately 14% copper, is sent to an electric furnace, where the copper is removed while the CuPbFe alloy obtained is sent to the converters, from which the resulting copper is sent for refining in anode furnaces. The copper anodes produced from fire refining are then sent for electrorefining, and the end product is electrolytic copper in the form of cathodes containing 99.99% Cu.

Approx. 45% of the electrolytic copper produced by KGHM's smelters and refineries are further processed in the Cedynia Copper Wire Rod Division, where copper wire rod is produced by a continuous smelting, casting and rolling process as well as oxygen-free copper rod and oxygen-free, low-alloy, silver-bearing copper rod based on UPCAST technology are produced.

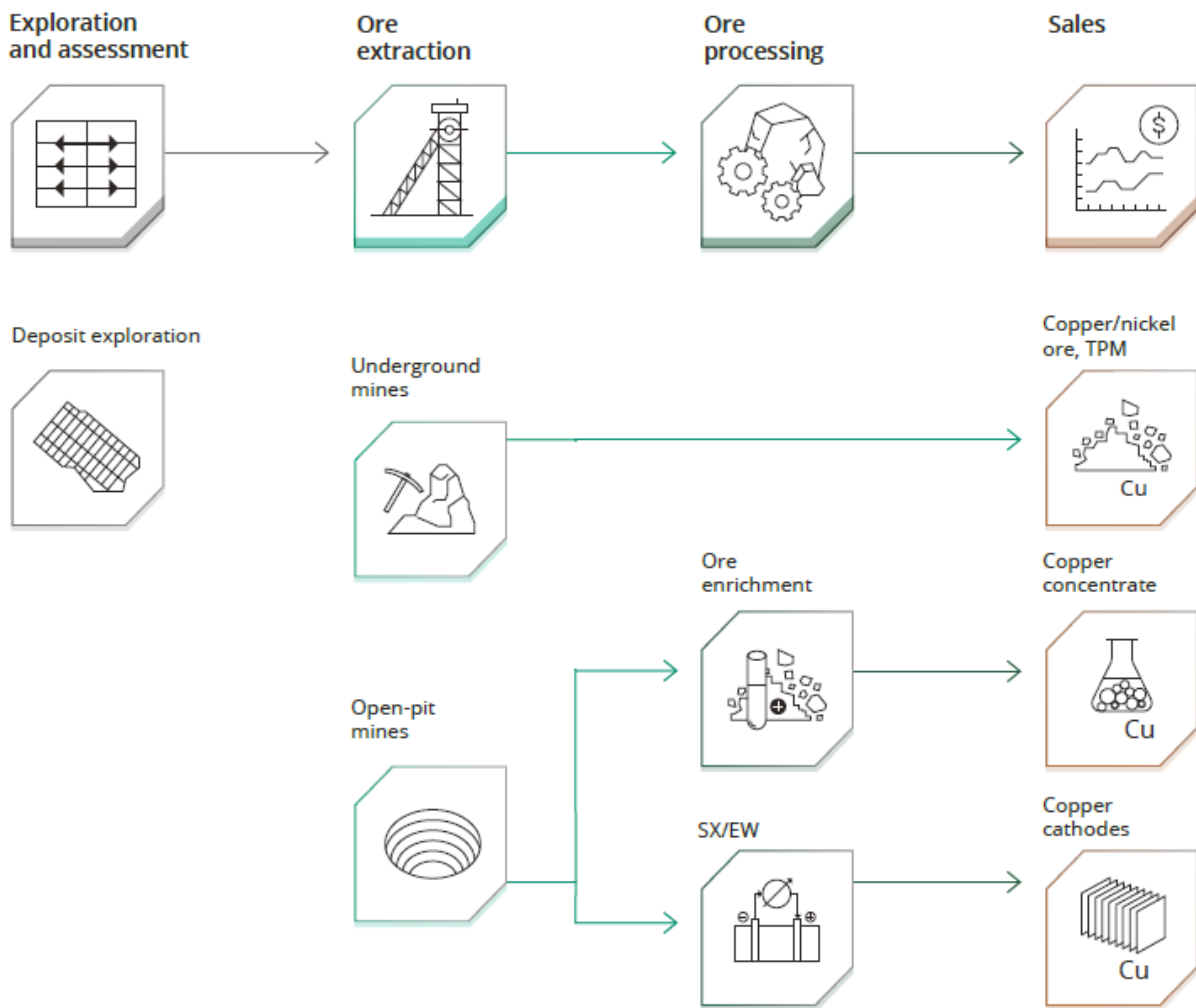
The anode slime produced during the electrorefining process at KGHM's smelters and refineries contains precious metals, and is the raw material used by the Precious Metals Plant at the Głogów Copper Smelter and Refinery to produce the following products: refined silver, gold, palladium-platinum concentrate and selenium. The electrolyte in the Tank Hall, once the copper is removed, is used to produce crude nickel sulphate.

The lead-bearing dust and slimes collected as a result of the removal of dust from technological exhaust gases at the smelters and refineries are smelted, together with decopperised convertor slag from the flash furnace production line, in Dörschel furnaces at the Lead Section of the Głogów Copper Smelter and Refinery into crude lead containing 99.3% Pb. This crude lead is then refined at the Legnica Copper Smelter and Refinery to obtain the end product - refined lead containing 99.85 % Pb.

### The segment KGHM INTERNATIONAL LTD.

The core business of the KGHM INTERNATIONAL LTD. Group of companies is the mined production of metals, such as copper, nickel, gold, platinum and palladium, from both open-pit and underground mines, as well as advancement of mining and exploration projects. The following drawing shows a simplified flowchart of core business of the KGHM INTERNATIONAL LTD. Group.

Diagram 5. Simplified flowchart of core business of the KGHM INTERNATIONAL LTD. Group



## 2.5. Changes in Group structure, equity investments and their financing

### Equity investments in domestic assets

In 2018, total capital expenditures by KGHM Polska Miedź S.A. in Poland amounted to PLN 148 million, including PLN 142 million on the purchase of Investment Certificates and PLN 6 million on the acquisition of shares in PGE EJ 1 Sp. z o.o. (as described below). The purchase of the Investment Certificates of KGHM VI and KGHM VII FIZAN was financed by funds from the retirement of Investment Certificates from the liquidated KGHM I FIZAN Fund. In order to correlate the payment for the Investment Certificates of the new funds with the inflow of funds from redemption of the Investment Certificates of the liquidated KGHM I FIZAN fund, the date for payment for a substantial amount of the Certificates issued in 2018 – PLN 133 million – was set as the end of January 2019.

Table 1. Changes in the Group's structure and organisation in 2018

Equity investment, changes in fund structure	
<b>Acquisition of Investment Certificates:</b> - KGHM VI FIZAN, - KGHM VII FIZAN <b>and changes in the funds</b>	<ul style="list-style-type: none"> <li>- In 2018, KGHM Polska Miedź S.A. acquired Investment Certificates from the first issuance, i.e. Series A and Series B, of the newly-founded funds: KGHM VI FIZAN and KGHM VII FIZAN, for the total amount of PLN 142 million. The funds were registered in the Investment Funds Registry in August 2018. KGHM Polska Miedź S.A. is the sole participant in the funds.</li> <li>- The founding of the aforementioned Funds and the acquisition of Investment Certificates Series A and B issued by them in 2018 as well as the acquisition in January 2019 of Investment Certificates Series C, is related to the liquidation of the KGHM I FIZAN Fund.</li> <li>- The funds from the payout of the Certificates were used to finance the acquisition by the new funds of all of the deposits remaining in the liquidated KGHM I FIZAN Fund.</li> <li>- In 2018, the funds KGHM VI FIZAN and KGHM VII FIZAN acquired from KGHM I FIZAN in liquidation all of the following blocks of shares:                             <ul style="list-style-type: none"> <li>- KGHM VI FIZAN – acquired shares in entities related to the hotel sector (Inteferie Medical SPA Sp. z o.o. and special purpose fund companies: Fundusz Hotele 01 Sp. z o.o. and Fundusz Hotele 01 Sp. z o.o. SKA, holding shares of INTERFERIE S.A.);</li> </ul> </li> </ul>

	- KGHM VII FIZAN - acquired shares in spa-type and other entities (including: Uzdrowiska Kłodzkie S.A. – Grupa PGU, Staropolanka Spółka z o.o., Uzdrowisko Połczyn Grupa PGU S.A., Uzdrowisko Świeradów-Czerniawa Sp. z o.o. – Grupa PGU, Uzdrowisko Cieplice Sp. z o.o. – Grupa PGU, Polska Grupa Uzdrowisk Sp. z o.o., NANO CARBON Sp. z o.o. ).
<b>Acquisition of employees' shares in Świeradów-Czerniawa Sp. z o.o. – Grupa PGU</b>	In January 2018, as a result of the acquisition of employees' shares, the interest of the Fund KGHM I FIZAN in liquidation in the spa company Uzdrowisko Świeradów-Czerniawa Sp. z o.o. – Grupa PGU slightly increased from 99.12% to 99.19%.
<b>PGE EJ 1 Spółka z ograniczoną odpowiedzialnością</b>	In August 2018, KGHM Polska Miedź S.A. acquired shares in the increased share capital of PGE EJ 1 Sp. z o.o., proportionally to the interest held in the share capital of this company, or 10%, and paid for them in cash in the approximate amount of PLN 6 million. The company PGE EJ 1 Sp. z o.o. is a special purpose company responsible for the preparation and execution of an investment aimed at building and operating the first Polish nuclear power plant.  On 29 November 2018 the Company expressed preliminary interest towards the sale of the shares owned in PGE EJ1 sp. z o.o., as a result of the preliminary interest expressed by the company PGE Polska Grupa Energetyczna S.A. in the purchase of all of the shares in the company PGE EJ1 sp. z o.o.
<b>Liquidation of entities</b>	
<b>KGHM I FIZAN</b>	In February 2018 liquidation of the KGHM I FIZAN fund commenced due to the expiry of the founding period of the fund (i.e. 8 years counting from the date of registration of the fund).  In January 2019 the fund's Investment Certificates held by KGHM Polska Miedź S.A. were redeemed. As a result of this the Company received the amount of PLN 390 million and was removed from the registry of participants in the Fund.
<b>„Elektrownia Blachownia Nowa” sp. z o.o.</b>	In March 2018 the process of liquidating the company „Elektrownia Blachownia Nowa” sp. z o.o. in liquidation was completed (removal of the entity from the KRS, or National Court Register), which began in October 2016 as a result of the decision not to advance the project to build a gas-steam block.
<b>KGHM V FIZAN</b>	In October 2018, the General Meeting of KGHM V FIZAN resolved to dissolve the Fund due to the lack of deposits in the fund (all of the fund's deposits were transferred in 2017 to the KGHM I FIZAN Fund) and to the lack of investment plans for the fund.  In January 2019 the fund's Investment Certificates held by KGHM Polska Miedź S.A. were redeemed. As a result of this the Company received the amount of PLN 0.7 million and was removed from the registry of participants in the Fund.

### Equity investments in international assets

Equity investments carried out in 2018 were mainly aimed at financing Sierra Gorda S.C.M. and were made by the granting of loans and/or increases in share capital.

In 2018, in terms of financing for Sierra Gorda S.C.M., KGHM Polska Miedź S.A. granted the company Quadra FNX FFI S.à r.l. (an indirect subsidiary) loans in the total amount of USD 181.5 million (PLN 682 million at the average exchange rate of the NBP from 31 December 2018). Subsequently the funds were transferred in the form of loans to the company Quadra FNX Holdings Chile Limitada (an indirect subsidiary), and next, in the form of increases in share capital, to the company Sierra Gorda S.C.M.

The increases in the share capital of the Group's companies aimed among others at financing Sierra Gorda S.C.M. are described below.

<b>Sierra Gorda S.C.M.</b> USD 181.5 million (PLN 682 million)	In 2018, as a result of financing for this company, there were increases in share capital in the total amount of USD 330 million (PLN 1 241 million at the average exchange rate of the NBP from 31 December 2018). Proportionally to the equity interest held in the company Sierra Gorda S.C.M., the company Quadra FNX Holdings Chile Limitada acquired 55% of the shares in the increased share capital, while 45% were acquired by SMM SIERRA GORDA INVERSIONES LIMITADA (a company from the Sumitomo Group).
<b>Quadra FNX FFI S.à r.l.</b> CAD 1.5 million (PLN 6 million)	In order to ensure that Quadra FNX FFI S.à r.l. retains the status of a Foreign Financial Institution under Chilean law, it was necessary to increase the share capital of the company to the level stipulated under the aforementioned law. As a result, KGHM Holdings Ltd. acquired 1 500 000 shares in the increased share capital of the company Quadra FNX FFI S.à r.l.
<b>KGHMI Holdings Ltd.</b> CAD 1.9 million (PLN 5 million)	As a result of the need to increase the share capital of the company Quadra FNX FFI S.à r.l., KGHM INTERNATIONAL LTD. increased the share capital of the company KGHMI Holdings Ltd. by CAD 1 928 400 (being the equivalent of USD 1 500 000). As a result, KGHM INTERNATIONAL LTD. acquired 1 928 400 shares in the increased share capital of the company KGHMI Holdings Ltd.

In addition, in May 2018 the liquidation of the company Malmbjerg Molybdenum A/S in liquidation with its registered head office in Greenland, which had commenced in November 2017, was completed.

### 3. Primary Group products



#### Copper cathodes

Copper cathodes made from electrolytic copper with a minimum copper content of 99.99% are the basic product of KGHM Polska Miedź S.A. They meet the highest quality requirements and are registered as Grade „A” on the London Metal Exchange (LME) under three brands: HMG-S, HMG-B and HML and on the Futures Contracts Exchange in Shanghai.

Copper cathodes are also the primary product of the Carlota mine in the USA and the Franke mine in Chile, both part of the KGHM INTERNATIONAL LTD. Group.

The main customers for the cathodes are producers of wire rod, other rods, flat bars, pipes, sheets and conveyor belts.



#### Copper wire rod

The second copper product, in terms of volume, produced by KGHM Polska Miedź S.A. is 8 mm copper wire rod manufactured through the Contirod® continuous process of melting, casting and drawing. Depending on the needs of the customer, wire rod is produced in various classes of quality. The main customers for wire rod are the cable, electrical goods and electrotechnical industries.



#### Silver

Electrolytic silver is produced mainly by KGHM Polska Miedź S.A. in the form of bars (ingots, billets) and grains containing 99.99% silver. Silver bars (weighing approx. 32 kg) hold a certificate registered on NYMEX in New York as well as a Good Delivery certificate issued by the London Bullion Market Association. Granule silver is packed in bags weighing 25 kg or 500 kg. The main customers for silver are financial institutions, the jewellery industry, photographic industry, and the electronics and electrical industries as well as producers of coins and medallions.



#### Copper concentrate

Produced by the Robinson mine in the USA, part of the KGHM INTERNATIONAL LTD. Group, containing over 20% of copper. This product is also produced by the Sierra Gorda mine in Chile (copper content is above 20%). Both of these concentrates also include gold as an additional product. The copper concentrates are sold for further processing as a commodity product. Occasionally KGHM Polska Miedź S.A. also sells copper concentrate produced by the Lubin, Rudna and Polkowice-Sieroszowice mines (average copper content, depending on the type of concentrate, is from approx. 13% to approx. 25%).



#### Molybdenum concentrate

Another commercial product (apart from copper concentrate) produced by the Robinson mine in the USA, part of the KGHM INTERNATIONAL LTD. Group. Production of molybdenum concentrate is derivative from the process of copper concentrate production.



#### Molybdenum oxides

One of the main commercial products of Sierra Gorda is molybdenum oxide, arising from the processing of the molybdenum sulphide concentrate (containing approx. 48% Mo) produced by the Sierra Gorda mine. Molybdenum is used in the aircraft, defense, oil, nuclear and electronics industries.



#### Gold

Gold in the form of bars weighing approximately 0.5 kg, 1 kg, 4 kg, 6 kg and 12 kg containing 99.99% gold is produced by KGHM Polska Miedź S.A. Gold is used in the jewellery industry, by banks and in the electrical industry.



#### Ore containing copper, nickel and TPM (precious metals – gold, platinum, palladium)

Produced by the mines in the Sudbury Basin in Canada, part of the KGHM INTERNATIONAL LTD. Group. The ore containing copper, nickel and TPM is sold for further processing to a smelter and refinery in the Sudbury Basin.



#### Oxygen-free copper rod

Two types of rod are produced: Cu-OFE oxygen-free rod and CuAg(OF) oxygen-free, silver-bearing rod. Rod is produced using UPCAST® technology, in diameters from 8 mm to 25 mm (8 mm, 12.7 mm, 16 mm, 20 mm, 22 mm, 24 mm and 25 mm). Customers for this product are in the cable industry, with application in the form of thin wires, enamelled wires and fire-resistant cables, as well as cables for transmitting audio and video signals. In addition, oxygen-free, silver-bearing rod is used in the manufacture of trolleys and commutators.



#### Round copper billets

Round copper billets produced from copper cathodes cast in the classification Cu-ETP1 and Cu-ETP, and from oxygen-free phosphorus-containing copper cathodes in the classification Cu-HCP, Cu-PHC, Cu-DLP and Cu-DHP are used in the construction industry (to manufacture pipes) and the electrotechnical industry (to manufacture belts, rods and profiles).



#### Refined lead

Refined lead in the form of bars (dimensions: 615 x 95 x 80 mm) has been produced by KGHM Polska Miedź S.A. since 2007. It has been registered on the London Metal Exchange since 2014 under the brand „KGHM”. Refined lead is mainly used to produce batteries and lead oxides.

## 4. Analysis of the global market for the Group's primary products

The primary products of the KGHM Polska Miedź S.A. Group, i.e. copper concentrates, cathodes, copper wire rod and silver in the form of bars and grains are traded on the highly-competitive global market as well as in reference to the commodity markets. Individual markets for the products offered by KGHM have varied rules and customs concerning trading and standard prices. Their incomparability is also due to the characteristics of individual products, which impacts their usage and the diversification of market participants.

### 4.1. Copper

The primary copper products offered by the companies of the KGHM Group are concentrates, cathodes and copper wire rod. They are products of individual stages of copper ore processing. For all of these products, the price benchmark (i.e. the global benchmark of copper prices for physical sales contracts of copper-bearing materials and products) is stock quotations, with the cash settlement of the London Metal Exchange (LME) being most commonly used. Less commonly used are alternative quotations of copper on stock exchanges in New York (COMEX) and Shanghai (Shanghai Futures Exchange). Grade "A" type, with a copper content of at least 99.99% (standard BS:EN 1978:1998 - Cu-CATH-1) are quoted on the LME. In order to be able to apply stock exchange prices to purchase/sale transactions of the products to which this quality standard is not applicable (i.e. all types of copper-bearing materials like copper concentrates, copper scrap or more processed products like copper wire rod), market participants have developed a premium and discount system, which adjusts stock quotations. It allows setting of a market price for a product which takes into account its processing stage, its physical state and chemical makeup, as well as costs of insurance and transport to an agreed delivery destination and the current availability of the metal in a given location.

#### Copper concentrates

Copper concentrate is a product made by processing copper ore, which usually has a relatively low metal content and is not suitable for direct metallurgical processing. Usually, copper content in concentrate varies from percentages in the teens to several tens percent, which enables further processing in copper smelters and refineries. The cost of transporting products with a lower copper content basically eliminates them from trade in the global market (with certain exceptions), therefore it may be assumed that copper concentrate is the first product of processing copper ore that may be generally traded. The main participants of the concentrate markets are mines supplying the product on the market and smelters and refineries, for which the concentrates are materials for production. As a result of metallurgical processes copper is produced as well as the by-products of processing (mainly precious metals, sulphuric acid, lead etc). Trading companies intermediating in the purchase/sale transactions and offering additional services expected by the parties also play a significant role on this international market. In 2018, the total global production of copper in Cu concentrate is estimated at 16.8 million tonnes (according to CRU).



Chart 1. Geographical breakdown of copper concentrates production in 2018  
(source: CRU, KGHM Polska Miedź S.A.)

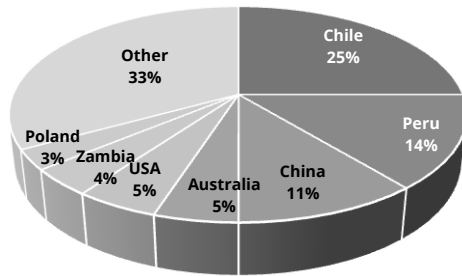
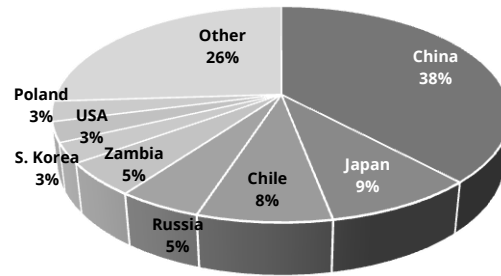


Chart 2. Geographical breakdown of copper blister production from copper concentrates in 2018  
(source: CRU, KGHM Polska Miedź S.A.)



Copper concentrates require processing into refined copper, which leads to incurring processing costs and the incomplete recovery of metals in individual production stages. Therefore, the transaction price should have a set of discounts as compared to quoted prices for refined copper. The benchmark of these discounts (for TC/RC) is determined during negotiations with the main producers of concentrates (Freeport McMoRan, Antofagasta) and their customers (mainly Chinese and Japanese smelters and refineries).

Companies of the KGHM Group participate in the copper concentrate markets mainly by selling concentrate from Sierra Gorda in Chile and from Robinson in the USA. Occasionally, KGHM Polska Miedź S.A. also sells copper concentrate produced by the Lubin, Rudna and Polkowice-Sieroszowice mines. At the same time the Company purchases copper concentrates from the market with characteristics suitable for more efficient utilisation of the production capabilities of the smelters and refineries in Poland.

### Copper cathodes

Refined copper in the form of copper cathodes is the end product of the smelting and refining processes, to which the copper-bearing materials are subjected (including concentrates, copper blister, anodes and copper scrap). Primary commodities exchanges (including the LME and SHFE) enable cathodes to be registered (Grade A type, with a copper content of at least 99.99% under the BS:EN 1978:1998 - Cu-CATH-1 standard), and therefore their trading on exchanges and through LME-approved warehouses. The copper cathodes produced by KGHM are registered on the LME as well as on SHFE, under the brands: HML, HMG-B and HMG-S. Unregistered cathodes are also traded on the physical market (for example those that do not meet quality parameters or the minimal yearly production conditions set by exchanges). One example of unregistered cathodes produced by KGHM are those from Carlota and Franke mines. The main participants in the cathodes market are mining and smelting companies producing copper in the form of cathodes and wire rod plants and other companies engaged in copper processing, which use cathodes to produce wire rod, other rods, flat bars, pipes, sheets and belts. Trading companies and financial institutions intermediating in the cathodes trade are also important participants in the market. In 2018, total global production of refined copper is estimated by CRU at 23.8 million tonnes.

Chart 3. Geographical breakdown of refined copper production in 2018 (source: CRU, KGHM Polska Miedź S.A.)

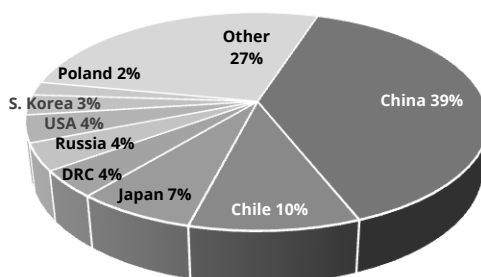
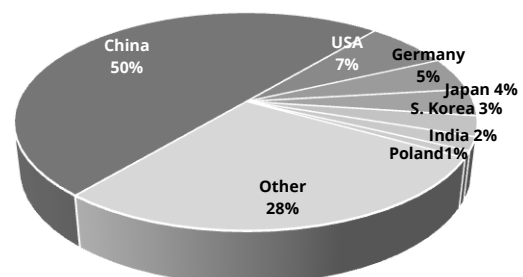


Chart 4. Geographical breakdown of refined copper consumption in 2018 (source: CRU, KGHM Polska Miedź S.A.)



It is a standard practice on the Grade "A" copper cathodes market to add a producer's premium to the prices set by global exchanges. Its level allows the producer to cover the cost of transport and insurance to the agreed delivery destination, and it also includes the premium for quality (of a given cathodes brand) and supply-demand situation on a given market.

The companies of the KGHM Group participate on the cathodes market mainly by selling cathodes from the Group's Polish assets. The Głogów Copper Smelter and Refinery produces cathodes of the HMG-S and HMG-B brands, while the Legnica Copper Smelter and Refinery produces cathodes of the HML brand. Moreover, the KGHM Group offers cathodes produced through the leaching and electrowinning process (SX/EW) in the Franke mine in Chile and in the Carlota mine in the United States. Production of refined copper in the companies of the KGHM Group amounted to 525.2 thousand tonnes, which represents approx. 2.2% of global production.

## Copper wire rod

Copper wire rod is manufactured in the continuous process of melting, casting and drawing in plants processing refined copper in the form of cathodes (although higher-grade copper scrap may also be used). Wire rod is a half-finished product used in the production of single wires and multiple wires used to produce conducting vines in cables and electric cables (for example: enamelled cable, car cables, power cords etc.). Similarly as for copper cathodes, trading companies are also involved in the physical trading of copper wire rod, apart from companies with wire rod plants and cable-producing companies. The wire rod market, due to the quality characteristics of the product, is more of a local market than the cathodes or copper concentrate markets. In 2018, total global production of copper in the form of wire rod is estimated by CRU at 18.3 million tonnes.

Chart 5. Geographical breakdown of copper wire rod production in 2018 (source: CRU, KGHM Polska Miedź S.A.)

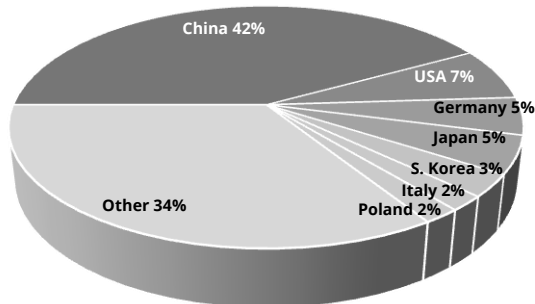
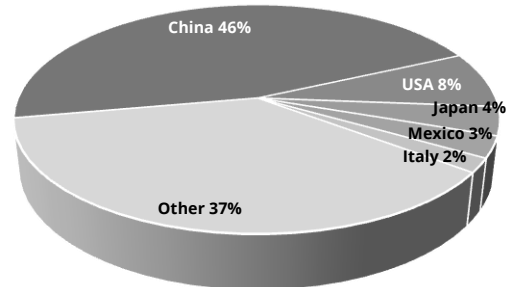


Chart 6. Geographical breakdown of global wire rod consumption in 2018 (source: CRU, KGHM Polska Miedź S.A.)



Wire rod's price structure, apart from the copper quotations on the London Metals Exchange, also includes a producer's fee (added to cathodes) and the refining charges due to the costs of processing cathodes into wire rod. KGHM produces wire rod in the Cedynia Wire Rod Plant in Orsk.

## 4.2. Silver

Approx. 75% of global metallic silver production is a by-product of mining ores of other metals. Silver, due to its unique physical characteristics, is used in the jewellery, electronics and electrical industries, as well as in medicine, optics, the energy industry, the automotive industry and many others. In total, industry utilises approx. 40% of global silver production. It is also a valued investment metal. According to CRU estimates, in 2018 global production of mined silver amounted to 26.7 thousand tonnes.

Chart 7. Geographical breakdown of global mined silver production in 2018 (source: CRU, KGHM Polska Miedź S.A.)

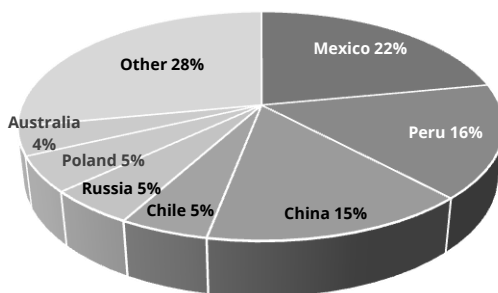
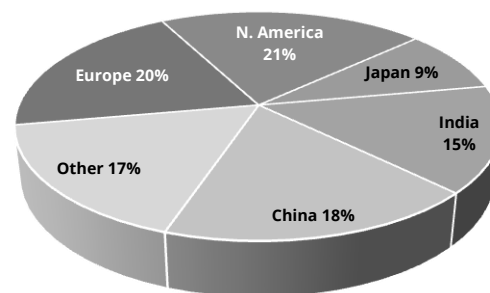


Chart 8. Geographical breakdown of global silver consumption in 2018 (source: CRU, KGHM Polska Miedź S.A.)



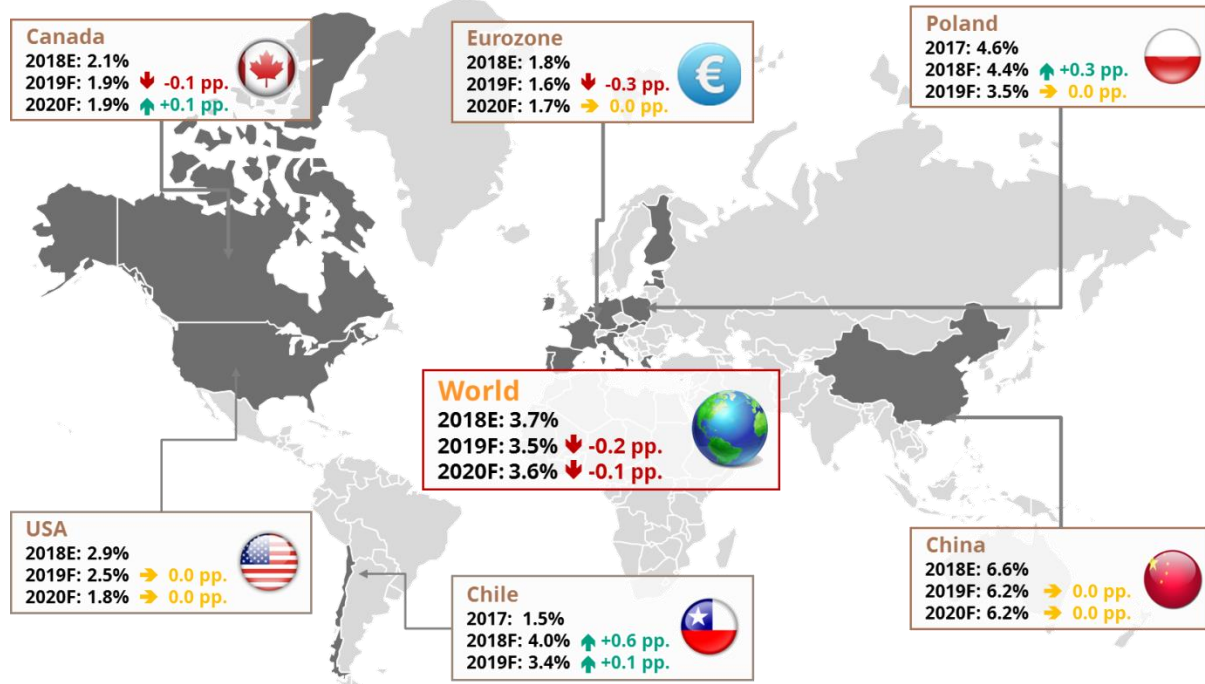
Usually, participants in the silver market make use of London Bullion Market Association quotations when setting the price for silver in physical transactions, after adjusting for current market conditions.

KGHM sells silver in the form of bars and grains (produced at the Głogów Copper Smelter and Refinery) and is one of the largest producers of metallic silver. Yearly, the Company produces approx. 1.2 thousand tonnes of this valuable metal. Silver in the form of bars is registered under the brand KGHM HG and has a registered certificate on the New York Mercantile Exchange (NYMEX) as well as Good Delivery certificates issued by the London Bullion Market Association. Silver is supplied in the form of grains to the photographic, jewellery and metals industries, which produce alloys containing silver. Silver in the form of bars (ingots) is mainly purchased by financial institutions.

### 4.3. 2018 macroeconomic environment

Since the start of 2018, the global economic growth forecasts published by the International Monetary Fund (IMF) have been systematically lowered. At the beginning of 2019 there was another negative revision of the global economic growth forecast for the years 2019-2020. Emerging markets were the most affected by this change. However, the forecast also anticipates a greater slowdown in the eurozone. Despite this decrease in economic activity and the variety of threats foreseen by the IMF, the expected rate of global economic growth remains at a solid level.

Chart 9. Current forecasts of real GDP growth per the International Monetary Fund versus previous forecasts



According to the latest estimates, while global GDP growth in 2018 amounted to 3.7% (versus 3.8% growth in 2017), the rate of growth in the next several years is expected to decline. There was a slight slowdown in the forecasted rate of growth in developed economies (2.3% in 2018 from 2.4% in 2017), and acceleration in emerging markets (4.7% in 2018 from 4.6% in 2017). The result of the United States in 2018, a key economy in this regard, is estimated at 2.9% (2.2% in 2017). The American economy's rate of growth continued to accelerate from its start in the second half of 2016, despite weaker investor sentiment related among others to the escalation of the trade conflict and further tightening of monetary policy despite the evident disapproval of the president of the USA. The signing by the administration of Donald Trump of the USMCA (*United States - Mexico - Canada Agreement*), which is supposed to replace NAFTA, and the agreement reached during the G20 summit obliging China and the USA to refrain from the introduction of further tariffs during the negotiations, was met by a positive reaction from the markets, raising hopes of a positive resolution of the conflict. The American economy is however approaching its full potential, as is shown among others by the unemployment rate, whose monthly readings during most of 2018 were below 4%.

If 2017 was symbolised by synchronised growth which exceeded expectations, then 2018 brought an equally coordinated process of slower growth. The numerous challenges and threats to the world's economy cooled investor appetite for risk. The trade war, Brexit negotiations and a slowing Chinese economy all had a hand in deteriorated market sentiment. This was especially evident in the second half of the year when the disagreement between the USA and China worsened. Fears associated with international trade and the impact of volatility in this regard on the stability of global economic growth resulted in lower prices on stock and commodities markets.

The desynchronised growth of the global economy and the observed strengthening of the US dollar had a quite negative impact on the prices of individual commodities. On a yearly scale the Bloomberg Commodity Index (BCOM) declined by 13%, mainly due to the prices of industrial metals (-21%), energy commodities (-14%) and agricultural goods (-13%). Precious metals lost the least, declining year on year by 6%.

From the macroeconomic perspective, the main reason for the downturn was the heightened protectionist rhetoric and – consequently – the systematic introduction to the international commercial order of further election campaign statements and promises by president Donald Trump. The financial markets reacted very nervously, and each successive iteration of discussions by the powers increased aversion to risk. This was especially true of the commodities market which, being one of the leading barometers of volatility on the financial markets, is exceptionally exposed to risk-on and risk-off phases.



While signals arising from international commerce do not directly affect the copper market as much, export and import do nonetheless affect calculations of GDP, particularly in open economies such as China and the European Union. It therefore appears that the main fears related to a slowdown and/or trade restrictions have played a part in the downturn on the financial markets, including the copper market.

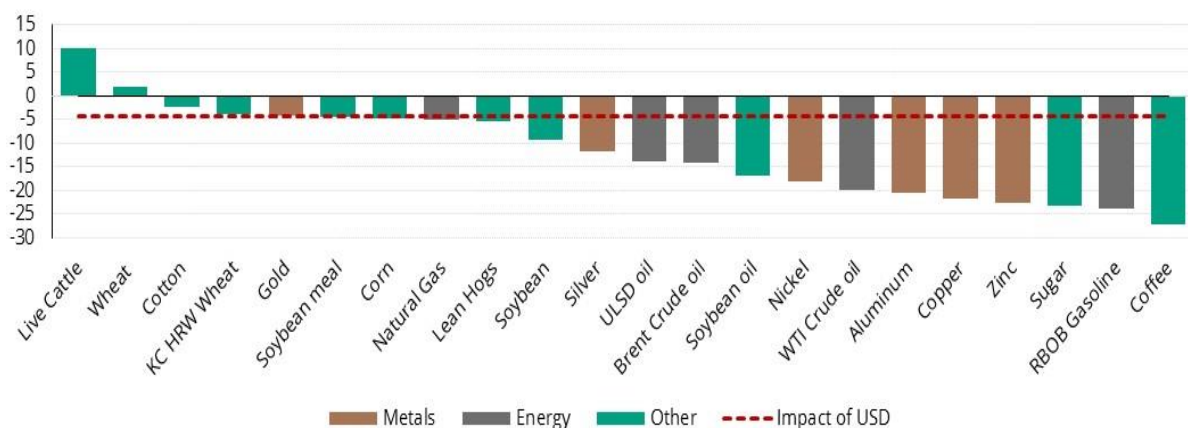
Another factor which has had a negative impact on the valuations of certain assets has been the appreciation of the USD, whose rate is negatively correlated with the prices of most commodities. The American Federal Reserve has consistently, compared to the plan announced at the end of 2017, carried out successive interest rate hikes. Altogether the scale of tightening amounted to 100 base points, while 3-month LIBOR USD at the end of the year was above 2.80% (compared to 1.69% a year earlier). Apart from the „classic“ monetary tightening policy, the Fed commenced the sale of assets it had acquired since 2008 (quantitative tightening), in terms both of US Treasuries as well as MBS (Mortgage-Backed Securities), which also had an impact on the tightening of monetary conditions.

In terms of the market, one of the most important events which initiated the downturn in the price of copper was the closure of a massive speculative position (valued at more than USD 3 billion) by a Chinese investor around the middle of 2018. This was probably one of the most important factors which over the summer impacted the scale of the downturn on the copper market.

In fundamental terms, it should be noted that demand reached one of its highest points over the last several years, especially in China. If we focus however on the supply side, market participants had to deal with a reversal of the historic, regrettable tendency of interruptions to mine production. In 2018, there were substantially more negative events on the metallurgical side. At the start of the year there was quite a bit of attention attached to potential interruptions, which after 2017 and the well-publicised strike at the Escondida mine, appeared to be a definite point of the agenda for 2018. And yet, besides problems of a technical nature, no such „spectacular“ shutdowns occurred. Environmental controls in China and the closure of smelters in India significantly restricted refined copper production potential and negatively affected mining companies' exposure to the concentrates market. The result was a sharp jump in TC/RC processing premiums (meaning an increase in the discount compared to the LME market price). In China a transformation is underway in terms of environmental protection, which resulted in a substantial decrease in imports of category 7 scrap (being of poorer quality, with low copper content) and further remodelling of the physical market (higher demand for higher-quality scrap from Europe, while in Europe there has been higher absorption of scrap from the USA as a result of tariffs imposed by China on American material). At the end of September there was also an evident increase in physical premiums on cathodes, due to a stronger physical market related to the adaptation of Chilean smelters at the start of 2019 to new environmental standards and to fears about the availability of material. In terms of copper supply, also worth noting is the trend in respect of inventories, which at the beginning of April 2018 systematically decreased, falling from over 900 thousand tonnes to just over 350 thousand tonnes at the end of December, using data from official market warehouses as the data analysis source.

The last quarter of 2018 brought a bit of hope to the market, as the meeting of the G20 resulted in a preliminary agreement between the USA and China and the lack of further escalation of tariffs policy. On the other hand, fears exist about global economic activity and macroeconomic data, which indicate a slowdown in the rate of global economic growth as mentioned in the analysis by the IMF. Events in the first quarter of 2019 and the speed of reaction in economic policy in the key copper-consuming countries will impact the pricing environment for the red metal in 2019.

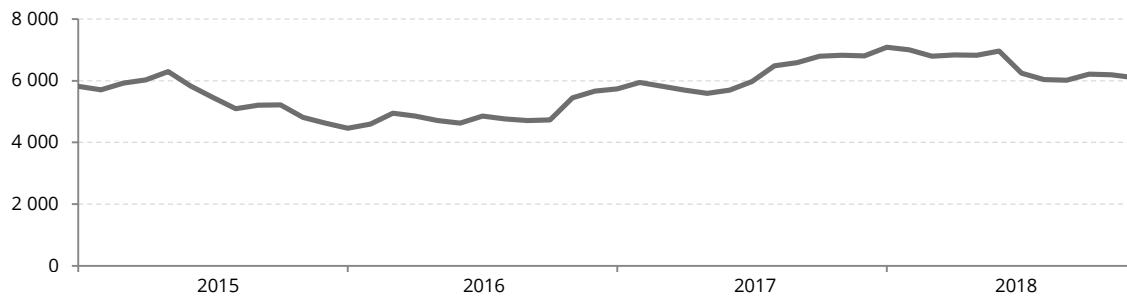
Chart 10. Change in commodities prices in 2018



Source: Bloomberg, KGHM Polska Miedź S.A.

The average annual price of copper on the London Metal Exchange (LME) in 2018 was 6 523 USD/t, 6% above the average price in 2017 (6 166 USD/t).

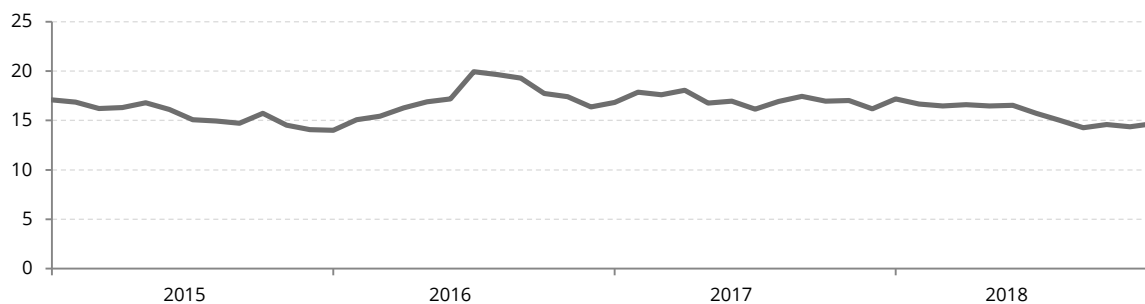
Chart 11. Copper price per the LME (USD/t)



The strengthening of the USD in the second half of 2018 led to a fall in the silver price below 14 USD/oz t in September 2018, or the lowest level since January 2016. In subsequent months, despite the numerous threats to the stability of the global economy, assets generally considered as safe were not particularly in demand by investors. Only in the final weeks of the year did the downturn on the US stock market and the growing expectations of a slowdown in the policy of monetary easing by the Fed led to growth on the precious metals market, which continued into the first weeks of 2019. The price of silver ended 2018 at the level of 15.47 USD/oz t.

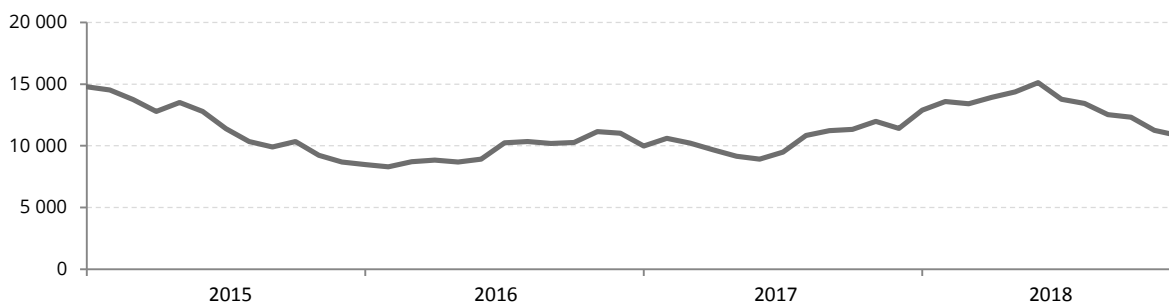
The average price of silver according to the London Bullion Market Association (LBMA) fell in 2018 by 8% and averaged 15.71 USD/oz t as compared to 17.05 USD/oz t in 2017.

Chart 12. Silver price per the LBMA (USD/oz t)



The average annual price of nickel on the LME in 2018 amounted to 13 122 USD/t and was 26% higher than the average price recorded in 2017 (10 411 USD/t), and at the end of the year amounted to 10 595 USD/t. The level of 15 000 USD/t, the highest since 2015, was reached in June, on a wave of fears that American sanctions would seriously impact Russian metal producers, and at the same time severely limiting supply. However, in the second half of 2018, following many of the other base metals, the price of nickel began to fall, mainly due to fears about the condition of the Chinese economy under the impact of American tariffs. The price of nickel nonetheless remains supported by solid market fundamentals and by potential growth in demand for the metal from the dynamically developing electric vehicles battery sector. On the other hand, a more dynamic increase in prices was slowed by the still-high global inventories of this metal.

Chart 13. Nickel price per the LME (USD/t)



In the first half of 2018, following many of the other base metals, the price of molybdenum was also pushed up, with significant increases in this period. After a temporary price collapse in the June-July timeframe, the price again rose above 12 USD/lb and remained at this level until the end of the year. The price of molybdenum was supported by the fundamental market situation and by falling production in the Chuquicamata mine (related to the transformation of this mine from open-pit to underground), which was partially offset by higher production in other mines in Latin America. The steel industry, which is crucial for molybdenum, despite weaker results in Europe, continues to generate substantial

demand for this metal in the United States and China. The average monthly price of molybdenum during the year ranged between 10.85 USD/lb (January 2018) and 12.86 USD/lb (March 2018).

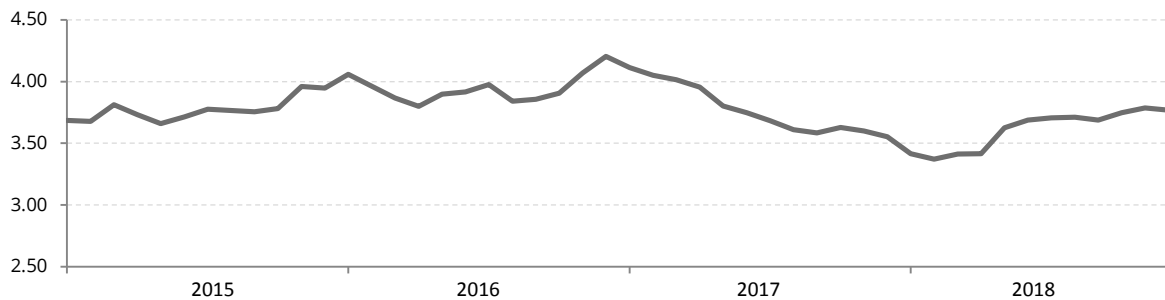
As a result, the average price of this metal in 2018 amounted to 12.14 USD/lb and was more than 48% higher than the average price in 2017 (8.22 USD/lb).

Chart 14. Molybdenum price per the CRU (USD/lb)



The USD in 2018 strengthened substantially as compared to other world currencies – the value of the USD as compared to the currency basket (the so-called dollar index) increased by more than 4%. This appreciation of the USD was driven by the continued tightening of monetary policy by the Fed and the continued positive readings from the US economy. The USD/PLN exchange rate, after reaching its lowest level since 2014 (around 3.35 USD/PLN) at the turn of January and February 2018, saw a dynamic increase in the second quarter of the year, and at the end of 2018 reached the level of 3.76 USD/PLN. The average USD/PLN exchange rate (per the NBP) in 2018 amounted to 3.6117 USD/PLN and was lower by 4% than the rate in 2017 (3.7782 USD/PLN).

Chart 15. USD/PLN exchange rate per the NBP



Both the Canadian dollar and the Chilean peso in 2018 recorded a slight appreciation as compared to the USD. The average USD/CAD exchange rate (per the Bank of Canada) in 2018 amounted to 1.2957 and was slightly lower (by 0.22%) than the rate recorded in 2017 (1.2986). The average annual USD/CLP exchange rate (per the Bank of Chile) in 2018 amounted to 640, meaning a strengthening of the local currency as compared to the USD by 1.39% (649 in 2017).

Chart 16. USD/CAD exchange rate per the Bank of Canada

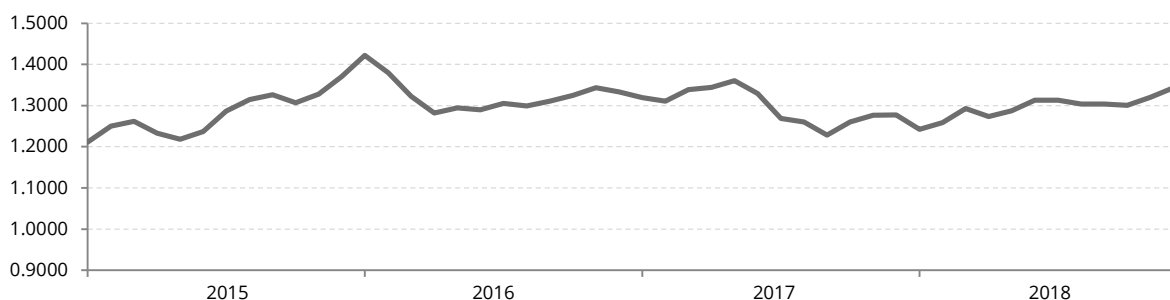
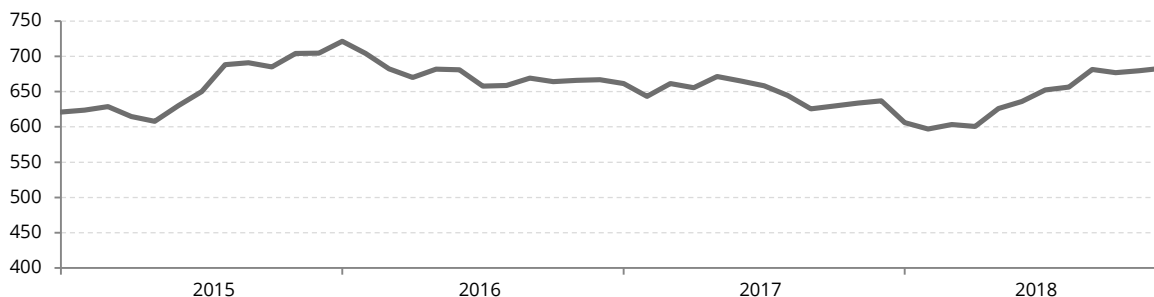


Chart 17. USD/CLP exchange rate per the Bank of Chile



The macroeconomic factors of the greatest significance for the operations of the Company are presented in the following table.

Table 2. Macroeconomic factors significant for the operations of the KGHM Polska Miedź S.A. Group – average prices

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Copper price on the LME	USD/t	6 523	6 166	+5.8	6 172	6 105	6 872	6 961
Copper price on the LME in PLN	PLN/t	23 520	23 212	+1.3	23 255	22 609	24 581	23 669
Silver price per the LBMA	USD/oz t	15.71	17.05	(7.9)	14.54	15.02	16.53	16.77
Nickel price on the LME	USD/t	13 122	10 411	+26.0	11 516	13 266	14 476	13 276
Molybdenum price per the CRU	USD/lb	12.14	8.22	+47.7	12.21	12.07	12.41	11.85
USD/PLN exchange rate per the NBP		3.6117	3.7782	(4.4)	3.7671	3.7018	3.5778	3.4009
USD/CAD exchange rate per the Bank of Canada		1.2957	1.2986	(0.2)	1.3204	1.3070	1.2911	1.2647
USD/CLP exchange rate per the Bank of Chile		640	649	(1.4)	679	662	621	602

## 5. Strategy of KGHM Polska Miedź S.A.

### 5.1. Basic elements and realisation of the Strategy of KGHM Polska Miedź S.A.

Until 19 December 2018 KGHM Polska Miedź S.A. ("the Company") advanced the Business Strategy adopted in May 2017 and published in the document: „Strategy of KGHM Polska Miedź S.A. for the years 2017-2021 with an outlook to 2040”.

In the fourth quarter of 2018, based on a variety of indicators, mainly macroeconomic and those related to global megatrends, the Management Board of the Company decided that it was necessary to conduct a strategy review. The objective of the strategy review was to ensure the cohesion of the Company's Strategy with current market conditions and the needs of the KGHM Polska Miedź S.A. Group.

As a result of this work, the „Strategy of KGHM Polska Miedź S.A. for the years 2019-2023” was developed and subsequently approved and publically announced on 19 December 2018.

The Strategy identifies four key development directions for the Company:

<b>Elasticity</b>	mainly encompassing the concepts related to the 4.0 industry, digitalisation and electromobility,
<b>Efficiency</b>	a response to the increasing competitiveness in the production and mining industries and the 4.0 industry,
<b>Ecology</b>	based on electromobility, development of pro-ecological legislation, closed-circuit industry and environmentally-friendly production,
<b>E-industry</b>	based on automation, digitalisation, a knowledge-based society and concepts of the 4.0 industry.

Diagram 6. Development directions arising from the Strategy of KGHM Polska Miedź S.A.



The aforementioned directions were reflected in individual strategic areas with individual main targets. Each of the main targets was broken down into operational goals, aimed at the realisation of the main target. Each of the six strategic areas

was correlated to the four aforementioned development directions, which resulted in the creation of the initiatives matrix. Each of the strategic areas was measured by the following KPIs (Key Performance Indicators):

Strategic area	Main goal	Key Performance Indicator (KPI)
<b>Production</b>	Maintain cost-effective Polish and international production	<ul style="list-style-type: none"> <li>- Mining production in Poland at the level of 450 thousand tonnes of copper in ore, with an average yearly C1 cost not higher than 3800 USD/t in the years 2019-2023.</li> <li>- Average annual daily ore processing in Sierra Gorda at the level of at least 130 thousand tonnes – from 2020.</li> <li>- Average yearly metallurgical production in Poland at the level of 540 thousand tonnes in the years 2019-2023.</li> </ul>
<b>Development</b>	Increase the efficiency and flexibility of the KGHM Group's Polish and international assets	<ul style="list-style-type: none"> <li>- Ensure the possibility of basing 35% of metallurgical production on purchased copper-bearing materials, including scrap, to 2030.</li> <li>- Increase the share of highly processed copper products (OFE-Cu rod, OFE-Cu granulate and end-application products) in the KGHM Group's total sales to the level of 10% at the end of 2030.</li> <li>- Satisfy 50% of KGHM Polska Miedź S.A.'s demand for electricity from its own sources of energy generation and renewable energy sources by the end of 2030.</li> </ul>
<b>Innovation</b>	Increase the KGHM Group's efficiency through innovation	<ul style="list-style-type: none"> <li>- Ensure that 100% of innovation projects are realised pursuant to the rules of a coherent model of innovation management and research and development work (R&amp;D) in the KGHM Group, in the years 2019-2023.</li> <li>- Increase expenditures on innovation and R&amp;D work to the level of 1% of KGHM Polska Miedź S.A.'s revenues by 2023.</li> <li>- Allocation of at least 75% of funds for R&amp;D and innovation in the years 2019-2023 to meet the challenges faced by KGHM Polska Miedź S.A. in the Core Business.</li> </ul>
<b>Financial Stability</b>	Ensure long-term financial stability and the development of mechanisms supporting further development	<ul style="list-style-type: none"> <li>- Basing the KGHM Group's financing on long-term instruments.</li> <li>- Shorter cash conversion cycle.</li> <li>- Efficient management of market and credit risk by the KGHM Group.</li> </ul>
<b>Efficient Organisation</b>	Implement systemic solutions aimed at increasing the KGHM Group's value	<ul style="list-style-type: none"> <li>- Ensure the financial stability of the Polish-based KGHM Group companies, on the basis of their own activities, from 2022.</li> <li>- Increase the efficiency of support functions by 20% as a result of centralisation and digitalisation of key back-office processes by 2023.</li> <li>- Achievement of key strategic targets, at the level of at least 80% of the yearly goals assigned to them, in each of the years the strategy is in force.</li> <li>- Flexible reaction to volatile macroeconomic, geological and mining conditions. A halt in the Morrison mine's production in Sudbury is being considered.</li> </ul>
<b>People and the Environment</b>	Growth based on the idea of sustainable development and safety as well as enhancing the KGHM Group's image of social responsibility	<ul style="list-style-type: none"> <li>- Annual improvement of the Lost-time injury frequency rate (LTIFR – for Polish assets) and the Total Recordable Incident Rate (TRIR – for international assets) by at least 20%.</li> <li>- Maintain a participation budget at the level of 20% of the amount of deductions for donations from the minerals extraction tax by 2020.</li> <li>- Achievement of a 70% level of commitment and satisfaction of the KGHM Group's employees by 2023.</li> </ul>

The Strategy adopted in December 2018 does not change the Company's current approach to business operations. KGHM Polska Miedź S.A. upholds its responsible approach and its long-term thinking about the company's future.

### Policy regarding the development directions of the KGHM Polska Miedź S.A. Group

During the reporting period, policy regarding the development directions of the KGHM Group was continued for the domestic companies. It was focused on implementing solutions aimed at enhancing the value of the KGHM Polska Miedź S.A. Group and comprised the coordination of key entities, their cooperation and at eliminating overlapping activities, as well as increasing oversight of the portfolio of investment projects in companies which are of key importance for maintaining and supporting the Core Business of KGHM Polska Miedź S.A. In terms of implementation of the Strategy being advanced by KGHM Polska Miedź S.A., emphasis was placed on improving and synchronising the functioning of organisational processes and management standards in force within the KGHM Polska Miedź S.A. Group.

In the case of the international assets of the KGHM Group, in the third and fourth quarters of 2018 work was carried out on a review of these assets, the conclusions from which were included in the Strategy of KGHM for the years 2019-2023. In terms of implementation of the Strategy being advanced by KGHM Polska Miedź S.A. with respect to the Group's

international assets, KGHM is aiming at the development of cohesive reporting standards and coherent internal regulations, as well as standardised solutions with respect to individual functional areas in the international entities.

### Directions regarding equity investments

In the case of the domestic companies, investment goals are aimed at ensuring continuity of production and safe working conditions in the Core Business of KGHM Polska Miedź S.A.

In the case of the international part of the Group, the Company is concentrating on maximising the value of its assets portfolio. With respect to the international development projects, in accordance with the Company's Strategy, it is assumed that they will be advanced if a financial surplus can be secured.

### Investment intentions regarding capital expenditures

Investment activities in 2018 involved the advancement of projects comprising the replacement of equipment, maintaining mine production and development:

- Projects involving replacing equipment represented 36% of total realised expenditures.
- Projects involving maintaining mine production represented 26% of total realised expenditures.
- Projects involving development represented 38% of total realised expenditures.

In terms of the continuation of the adopted directions for capital expenditures, investments by the Company mainly involved projects related to the Company's core business, meaning the production of copper.

In 2018 the most important actions related to capital expenditures were:

- The Deposit Access Program.
- The Change in the L-VI shaft's function to a material – transport shaft (Lubin mine infrastructure).
- The program to adapt the technological installations of KGHM to the requirements of BAT Conclusions for the non-ferrous metals industry and to restrict emissions of arsenic (BATAs).
- Development of the Żelazny Most Tailings Storage Facility.
- Construction of the RCR furnace for processing copper scrap at the Legnica Copper Smelter and Refinery.
- The Metallurgy Development Program at the Głogów Copper Smelter and Refinery.
- KGHM 4.0.
- Exploration projects.

## 5.2. Advancement of the strategy in 2018

Until 19 December 2018 KGHM Polska Miedź S.A. ("the Company") advanced the Business Strategy adopted in May 2017 and published in the document: „Strategy of KGHM Polska Miedź S.A. for the years 2017-2021 with an outlook to 2040”.

The Strategy for the years 2017 – 2021 with an outlook to 2040 was based on three executory strategies: Development of Domestic and International Assets, Production and Safety and Coherent Organisation, as well as three support strategies: Corporate Social Responsibility, Innovation and Financial Stability.

The Strategy was based on the mission „To always have copper” and the vision „To use our resources efficiently to become a leader in sustainable development”.

The actions undertaken since 2017 were also focused on achieving a main goal, targeting the achievement of EBITDA at the level of PLN 7 billion in 2021 and an EBITDA margin for the Group on average above 20% in the years 2017 – 2021.

Adopted indicators: in 2018, EBITDA for the Group and EBITDA for KGHM Polska Miedź S.A. exceeded the levels planned in the budget. This situation applied to the entire KGHM Polska Miedź S.A. Group, including to the largest degree KGHM Polska Miedź S.A.

In 2018, the Company aimed at maintaining a stable level of production from its domestic and international assets as well as costs at a level guaranteeing financial security, while maintaining safe working conditions and minimising its impact on the environment and its surroundings, in accordance with the concept of sustainable development.



### Strategic programs of KGHM Polska Miedź S.A.

In 2018, the advancement of Strategic Programs continued, which are aimed at achieving the key goals of the Strategy of KGHM Polska Miedź S.A. and allow attention to be focused on tasks which create the greatest value for the Company:

Name of program	Description	Degree of advancement
<b>Program to adapt the technological installations of KGHM to the requirements of BAT Conclusions for the nonferrous metals industry and to restrict emissions of arsenic (BATAs)</b>	The BATAs Program is a response to the need to adapt the technological installations of the Metallurgical Divisions – the Legnica Copper Smelter and Refinery and the Głogów Copper Smelter and Refinery – to the requirements of BAT Conclusions for the non-ferrous metals industry together with restricting arsenic emissions to the environment.	The BATAs Program portfolio comprises 26 new investment projects, including 20 at the Głogów Copper Smelter and Refinery and 6 at the Legnica Copper Smelter and Refinery. In addition, 20 projects related with the BATAs Program (12 at the Głogów Copper Smelter and Refinery and 8 at the Legnica Copper Smelter and Refinery) will also be advanced. Advancement of the entire program is expected to last until August 2023, although key projects related to improving environmental impact will be completed by June 2020.  To the end of December 2018, 11 projects were commenced, including 9 from the Głogów Copper Smelter and Refinery and 2 from the Legnica Copper Smelter and Refinery. In addition, 10 tender proceedings are underway, while 3 projects are being re-designed. It was decided that 2 of the projects carried out at the Głogów Copper Smelter and Refinery would be cancelled.
<b>Metallurgy Development Program (MDP)</b>	The MDP was established to optimally adapt the metallurgical structure of KGHM Polska Miedź S.A. as well as technology ensuring an increase in the capacity to process own and imported concentrates as well as purchased metal-bearing scrap.	In 2018, construction and assembly work was carried out on technological links under the Program's key investment tasks: <ul style="list-style-type: none"> <li>- Steam Drier - the stage of technological trials was completed. Following the maintenance shutdown of the Głogów II Copper Smelter and Refinery (June 2018), production has been underway with the full use of the newly-built steam drier. The process of final settlement and handover is underway.</li> <li>- In order to start operations by the copper concentrate roasting installation at the Głogów I Copper Smelter and Refinery the installation is being adapted. Start-up trials are underway.</li> <li>- Basic tasks were completed with respect to projects related to adapting technical infrastructure to changes in the metallurgical technology at the Głogów I Copper Smelter and Refinery. Work continues on procedures involving final handovers and settlements, as well as obtaining administrative decisions.</li> <li>- Technical documentation is being developed with respect to modernisation of the Tank Hall at the Głogów I Copper Smelter and Refinery. The process of obtaining a building permit is underway.</li> </ul>
<b>Deposit Access Program (DAP)</b>	The goal of the DAP is to create the conditions necessary to maintain mine production at the level set in the Production Plan of KGHM Polska Miedź S.A. and to optimise production of raw materials to ensure the Company's profitability by gaining access to a new area of the deposit, ensuring prolongation of the working life of KGHM in the Copper Basin in Lower Silesia to the year 2042.	Under the Program work continues on the sinking of the GG-1 shaft for material-transport and a target depth of 1 350 meters with a diameter of 7.5 meters. The shaft's depth has reached 1 070 meters (as at 31 December 2018). Injection of the main dolomite layer continues. Completion of work related to injection of the shaft is planned in March 2019. Sinking of the shaft is expected to re-commence in April 2019.  In 2018 an agreement was signed with the Gmina (municipality) of Żukowice and procedures commenced related to amending planning documentation with respect to the planned construction of the GG-2 „Odra” shaft.  In 2018, 45 302.5 meters of tunneling were excavated in the Rudna and Polkowice-Sieroszowice mines, representing nearly 80% of the total amount of access and development tunnels in KGHM.  Construction of Heavy Machinery Chambers (KMC) – KMC H-10/T-169a and KMC – H 32 – is underway.  In 2018, construction began on the Surface-based Central Air Conditioning System (PSK). A decision was received with respect to environmental conditions to advance the PSK as well as a building permit.  With respect to the project to build an Ice Water Transportation System (IWTS), in 2018 work continued related to advancing the construction project and on obtaining an environmental decision to advance the IWTS.
<b>KGHM 4.0 Program</b>	The KGHM 4.0 Program is a venture which addresses the Industry 4.0. concept, while its principles represent an implementation of the Industry 4.0 idea within the technical-organisational environment of KGHM Polska Miedź S.A.  The Program assumes the advancement of projects aimed at the unified	The Management Board of KGHM accepted the updated Definition of the KGHM 4.0 Program and issued a positive general decision as to the continuation of the KGHM 4.0 Program in subsequent years.  With respect to developing the area of electromobility, an electric vehicle charging station open to the public was created in Lubin. The creation of this stationary electric vehicle charging station is the result of last year's agreement with the company Tauron, which foresees the cooperation between the companies in the area of electromobility, including the construction of vehicle charging station infrastructure for car-sharing services (so-called “auta na minuty”), and mutual pro-ecological activities.  In terms of ICT (Information and Communications Technology) a group of projects was identified related to reducing technological debt. They represent a base element

	management of production and the utilisation of data in order to improve productivity and efficiency.	<p>for advancing many other program projects. Tasks which are gradually being pushed forward include the exchange of obsolete technology for new solutions reflecting the standard for corporate architecture. In 2018 the corporate network was modernised.</p> <p><b>„Internet of Things“ in KGHM:</b></p> <p>The application of new temperature measurement techniques in the area of flash furnace P-22 and electric furnace of section P-23. This project is being advanced at the Głogów Copper Smelter and Refinery at the flash furnace and the electric furnace. The measurement technique involves building fiber optic units for measuring temperature into the furnaces, using a designed, dedicated measurement unit.</p> <p>Robotisation of production and auxiliary processes. The goal of this R&amp;D project is to build a robot which, using scanning heads, will be able to continuously transmit information on the grade of copper and other metals/minerals from the most hazardous locations (e.g. from the mining face prior to roof bolting).</p>
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### Execution of the main strategic tasks in 2018

Following are the most important projects and initiatives, including the degree of their advancement, in accordance with the Strategy in force in the Company until 19 December 2018.

#### Exploration program of KGHM Polska Miedź S.A. in Poland:

<b>Radwanice-Gaworzyce</b>	Exploration is not currently being conducted within the Radwanice-Gaworzyce deposit. Due to the wide variability in geological and mining conditions, it is planned that in future the areas Radwanice Zachód and Radwanice Północ will be explored from the underground mine works, conducted mainly in areas of copper mineralisation. The date for commencing this work depends on the progress of mining in the areas Sieroszowice and Radwanice Wschodnie. Within this deposit mining is underway in the areas Radwanice Wschodnie and Gaworzyce.
<b>Synklina Grodziecka and Konrad</b>	<p>Given the fact that the costs associated among others with dewatering the projected mine play a critical role in determining the economic feasibility of the project; a hydrogeological research is conducted, planned to be performed in the years 2018-2020.</p> <p>Administrative proceedings which were conducted in respect of the concession-granting body involving the possibility of continuing the geological work under the Synklina Grodziecka concession were concluded on 24 January 2019 with the issuance of a new concession decision. Work in the area subject to the concession will be carried out in parallel with hydrogeological research within the Konrad concession.</p>
<b>Retków-Ścinawa and Głogów</b>	The Company is continuing to advance stage 2 of exploration and evaluation work within the Retków-Ścinawa concession, under which three exploratory drillholes have been sunk to date. At the end of August 2018 a decision was received altering the Retków-Ścinawa concession which permits the drilling of another drillhole. In the second half of 2018 drilling of hole no. S-727 commenced within the Retków-Ścinawa concession. With respect to the Głogów concession, in 2018 surface-based geophysical research was performed. At the end of 2018 additional information was prepared for the Geological Work Project and a request was submitted to the concession-granting body to extend the life of the concession.

#### Exploration projects in the preparatory phase:

<b>Bytom Odrzański Kulów-Luboszyce</b>	As a result of a decision by the Supreme Administrative Court, which dismissed cassation appeals in respect of the concessions Bytom Odrzański and Kulów-Luboszyce, a decision as to the granting of concessions for the areas in question requires a reconsideration by the concession-granting body. In 2018, the concession-granting body did not reconsider this matter.
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#### Other concessions:

<b>Puck region</b>	<p>Based on a new reinterpretation of the geological profile of the region as well as on an economic and technical feasibility study conducted on the possibility of mining the studied potassium-magnesium salt deposits reflecting the mine model and processing technology, it was decided to conduct further geological work. In 2018, drilling work was continued. In March 2018, Addition no. 1 to the Geological Works Project was submitted to the Ministry of the Environment (ME), in which the sinking of another drillhole was proposed.</p> <p>The Supreme Administrative Court at a hearing on 27 February 2019 dismissed the cassation appeals of a competing company which had filed a complaint against the concession granted to KGHM.</p>
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#### Key development projects of the Core Business in Poland:

<b>Pyrometallurgy Modernisation Program at the Głogów Copper Smelter and Refinery</b>	<p>Production by the flash furnace of the Głogów I Copper Smelter and Refinery was stabilised in accordance with the current production plan.</p> <p>Settlement procedures and the final handovers of contracts and orders with respect to the Pyrometallurgy Modernisation Program are near completion.</p>
<b>Increasing cathode production at the Legnica Copper Smelter and Refinery to 160 kt/year (RCR+ISA)</b>	Work continues on the construction of a Revolving Casting-Refining furnace (RCR) at the Legnica Copper Smelter and Refinery. Assembly of equipment continues: the RCR furnace, post combustion chamber, full evaporation tower, casting machinery, the installation to provide utilities, electrical installation and the APKiA ("Aparatury Kontrolno-Pomiarowej i Automatyki", or Control-Measurement and Automation Apparatus). The planned date of technological commissioning is the second quarter of 2019.



<b>Development of the Żelazny Most Tailings Storage Facility</b>	<p>Based on the permit received in 2016 to develop the Main Facility to a crown height of 195 meters a.s.l. and a permit to further operate the Tailings Storage Facility, the dam is being built up successively as part of the ongoing operations of the Division.</p> <p>In March 2018, a building permit was issued for the Southern Quarter. Construction of the Southern Quarter will enable the additional deposition of waste tailings in the amount of around 170 million m<sup>3</sup>.</p> <p>In May 2018, an agreement was signed for the construction of the Southern Quarter. Construction work is underway which is expected to be completed at the end of December 2021.</p> <p>A "Substitute Building Permit" for the Tailings Segregation and Thickening Station was received. Construction work commenced on building the Tailings Segregation and Thickening Station, whose commissioning is planned for 30 June 2020.</p>
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#### Development of international assets:

<b>Victoria Project</b> <i>(Sudbury Basin, Canada)</i> KGHM Polska Miedź S.A. Group 100%	<p>In 2018 required permits for the project were reviewed and work commenced on preparing applications to obtain them. The project team also conducted work related to securing existing infrastructure and project terrain, questions of an administrative and legal nature and maintaining relations with First nations in Ontario in Canada. Infrastructure under the Victoria project will be built if the Company can secure a financial surplus.</p>
<b>Sierra Gorda Oxide</b> <i>(Chile)</i> KGHM INTERNATIONAL LTD. Group 100%. Sumitomo Metal Mining and Sumitomo Corporation hold an option to acquire in total a 45% stake in the project.	<p>In 2018, work was performed aimed at minimising potential project risks and enhancing its efficiency, mainly by analysing the option of preparing the ore for the heap leaching process by preliminary crushing. This analysis also included crushing tests. In addition, column leaching tests of the crushed material were carried out. Initial verification of the procedures involved in amending the required permits for the project was also carried out.</p>
<b>Ajax Project</b> <i>(British Columbia, Canada)</i> KGHM Polska Miedź S.A. Group 80% Abacus Mining and Exploration Corp. 20%	<p>As a result of the negative decisions received from the Government of Canada and the provincial authorities of British Columbia against the granting of an Environmental Assessment Certificate for the Ajax project, in 2018 only necessary work related to securing existing infrastructure and required monitoring of the terrain was carried out.</p>

#### Production:

<b>Sierra Gorda Mine – Phase 1</b> <i>(Chile)</i> KGHM INTERNATIONAL LTD. Group 55%, Sumitomo Metal Mining and Sumitomo Corporation 45%	<ul style="list-style-type: none"> <li>- Production of copper in concentrate in 2018 amounted to 96.9 thousand tonnes, while production of molybdenum in concentrate amounted to 26.75 million pounds (on a 100% basis).</li> <li>- In 2018, work was carried out related to optimising the processing of the sulphide ore. The actions taken were concentrated on stabilising the volume and production parameters of the ore processing process as well as on stabilising the work of the processing plant and increasing metals recovery.</li> <li>- At present work is aimed at developing the mine based on phase I of the investment along with actions aimed at optimising the production line, which should lead to increased production capacity.</li> </ul>
<b>Improving efficiency in the core business in Poland</b>	<ul style="list-style-type: none"> <li>- In 2018, initiatives aimed at automating production in the Mining Divisions of KGHM continued.</li> <li>- In addition, projects related to automating production, which were added to the KGHM 4.0 program in the area INDUSTRY, commenced realisation:             <ul style="list-style-type: none"> <li>- The placement and identification of machinery and persons in underground mines (pilot version and proof of proper functioning),</li> <li>- Broad-band data transmission in underground mines,</li> <li>- Monitoring of utilities - power, ventilation, water,</li> <li>- Robotisation of production and auxiliary processes,</li> <li>- Monitoring of mining vehicle parameters – continuation of the SYNAPSA project,</li> <li>- Multidimensional data analysis of production processes – Centre of Advanced Data Analysis (Centrum Zaawansowanych Analiz Danych - CZAD).</li> </ul> </li> <li>- To achieve savings through the acquisition of free energy efficiency certificates, three ventures were designated which meet the requirements of the new energy efficiency law. At present energy efficiency audits and appropriate documentation are being prepared for them, which will represent appendices to the application on the granting of white certificates.</li> </ul>

- Tasks aimed at reducing energy consumption in KGHM Polska Miedź S.A. are advancing in accordance with the schedule under the Energy Management System implemented in the Company in compliance with PN-EN ISO50001:2012 and with the Energy Savings Program (ESP). During the reported period, as a result of the realisation of tasks identified under the aforementioned actions conducted in the Divisions, energy consumption was reduced by 65.7 GWh.
- In order to optimise underground machinery management and to improve their operating efficiency ratios, the Company is aiming to stabilise the long-term trend of replacement of mining vehicles at the level of at least 16% annually and to stabilise the availability of primary machinery at the level of at least 74.5%. In 2018, actions were continued aimed at achieving the planned level of machinery replacement, which in the period from 1 January 2016 to 31 December 2018 amounted on an accrued basis to 15.3%, as well as actions aimed at improving availability, which in the period from 1 January 2016 to 31 December 2018 amounted on an accrued basis to 72.9%.
- The Company has joined the Polish Committee for Standardization, where it is involved in tasks aimed at creating standards, thanks to which it can improve its own Energy Management System based on the newest versions of international standards (e.g. updated standard ISO50001:2018), while at the same time monitoring the actions of the International Organization for Standardization (ISO) which remain of interest to KGHM.

#### **Improvement in occupational health and safety**

- In 2018, the Company recorded a decrease in the total number of workplace accidents, calculated on a year-on-year basis from 300 to 297 injured. Most of the registered workplace accidents (approx. 98.7%) were characterised as light injuries, with the main causes being in order: contact (striking) with or by moveable/ immovable objects, loss of balance by employees, rock falls and injuries related to using workplace tools. At the same time the number of days absent caused by workplace accidents decreased by 7.5% yoy. The ratio LTIR<sub>KGHM</sub> (Lost Time Injury Frequency Rate KGHM) in 2018, or the total number of workplace accidents, being the number of accidents per million hours worked for the entire core business of KGHM Polska Miedź S.A., decreased as compared to 2017 and amounted to 10.3 (2017 = 10.4).
- During the reporting period the Company continued work involving implementation of the multi-year Occupational Health and Safety Program in KGHM Polska Miedź S.A. Further reconstructions of selected workplace accidents in the Divisions of KGHM Polska Miedź S.A., instruction films and an educational film were prepared. Further editions of the so-called safety passport were developed as well as educational materials on industrial hygiene. New technical solutions were tested in the Divisions of KGHM aimed at improving OHS, and new formulas of cooperation with subcontractors were implemented. The Company is continuing to advance the goals of „Zero accidents due to human and technical reasons, zero occupational illnesses among our employees and contractors“.

#### **Initiatives aimed at enhancing knowledge and innovation in KGHM Polska Miedź S.A.:**

##### **Main R&D initiatives**

- In the third quarter of 2018, the project „Utrzymanie Kopalni i Sprzętu” (Maintained Mine & Machine) was initiated, subsidised under KIC Raw Materials. Its goal is to build a management processes support system to maintain mine production and mine machinery. KGHM Polska Miedź S.A. is responsible for defining research problems.
- During the reporting period a subsidy was received from KIC Raw Materials for the project „Monitoring pracy maszyn do kruszenia minerałów” („Operation monitoring of mineral crushing machinery”). Initiation is expected at the start of 2019.
- The AMCO project continues, subsidised under the auspices of KIC Raw Materials, aimed at building an innovative automated microscope system for analysing metals ore. The project concluded in January 2019. The result of the project was the development of an automated, user-friendly and intuitive microscope system enabling the rapid measurement of useful minerals content. The system correctly identifies minerals and moderately identifies barren rock, and may serve as a supplement to the solutions already applied by KGHM Polska Miedź S.A.
- Under the Horizon 2020 Program, the Company participates in the subsidised research project INTMET („Integrated innovative metallurgical system to efficiently enrich polymetallic, complex and low-grade ores and concentrates”), under which technology for the processing of, among others, metal ores are being developed.
- Advancement of the subsidised project BioMore („New mining concept for extracting metals from deep ore deposits using biotechnology”) was concluded, in which the Company played the key role of coordinator. As a result of advancement of this project a technology for the bioleaching of a deposit in-situ under actual conditions was effectively verified. Due to the specific nature of the deposits currently being mined by KGHM Polska Miedź S.A., this bioleaching technology is not sufficiently effective.
- The Company, together with international consortiums, submitted a subsidy application under the Horizon 2020 Program for the project FineFuture, under which research is planned to improve mineral particulate flotation. The application was positively reviewed by the European Commission structures, which granted financing for the project.
- Advanced work is underway to prepare applications for subsidising from the Horizon 2020 Program in the areas: management of Big Data from industrial infrastructure, and technology to recover cobalt from slag from the blister copper conversion process.
- Under preparation are proposals for financing by the KIC Raw Materials program in the following areas:
  - Development of a new generation of working elements of flotation machinery,
  - Flotation of thick grains,

	<ul style="list-style-type: none"> <li>- Improvement of the efficiency of the dewatering process,</li> <li>- Management of production processes.</li> </ul> <ul style="list-style-type: none"> <li>- An „Implementation Doctorates Program in KGHM” was commenced for 35 Candidates. Under this initiative, the following actions were taken: <ul style="list-style-type: none"> <li>- Principles for and the form of managing the Implementation Doctorates Program were developed,</li> <li>- Organisational, operational and substantive support was ensured for the Program’s Participants during external recruiting and qualification interviews at 5 public institutions of higher learning,</li> <li>- Funds were ensured to carry out R&amp;D work under the implementation doctorates program,</li> <li>- A year-long agreement was signed with KGHM CUPRUM sp. z o.o. Centrum Badawczo-Rozwojowe to coordinate the Program, monitor the progress of the doctoral students and cooperate with institutions of higher learning.</li> </ul> </li> </ul>
<b>CuBR Program</b>	<ul style="list-style-type: none"> <li>- 20 R&amp;D projects having a total value of around PLN 150 million are being advanced under the CuBR Joint Venture, co-financed by the National Centre for Research and Development (NCRD).</li> <li>- Together with the National Centre for Research and Development, applications submitted under the fourth CuBR competition were verified. 4 of the proposed projects qualified for negotiation. The negotiations and the signing of agreements are planned for the first half of 2019.</li> </ul>
<b>Intellectual property</b>	<ul style="list-style-type: none"> <li>- In 2018, 3 inventions arising from R&amp;D work were submitted to the Patent Office of the Republic of Poland.</li> <li>- Conditional approval was received for the granting of a patent for invention no. P.404821 called „Means for indicating the placement of moveable parts of equipment or machinery as well as a unit for indicating the placement of moveable parts of equipment or machinery” arising from R&amp;D work.</li> <li>- KGHM Polska Miedź S.A. is a co-proprietor of European patent no. EP2873475 "Method of manufacturing wires of Cu-Ag alloys" delivered and advanced under a CuBR project, whose validation is planned in the following countries: Austria, Belgium, Czechia, Estonia, France, Germany, Hungary, Italy, Latvia, Lithuania, Romania, Slovakia, Slovenia, Spain, the United Kingdom and Poland.</li> <li>- An entry was made in the registry of co- proprietors from submission no. P397200 (delivered and advanced under a CuBR project); for patent PL 221274; in the EUIPO (European Union Intellectual Property Office) rights from the registration of 6 community models: Power overhead line conductor.</li> <li>- Proceedings are underway in the matter of defending the KGHM’s written and graphic trademark in China and registration of the KGHM trademark in Canada.</li> <li>- During the reporting period the Company was awarded the title Mistrz Techniki (Engineering Champion) and Dolnośląski Mistrz Techniki (Lower Silesian Engineering Champion) for a „System to manage energy in KGHM Polska Miedź S.A.” and the title Wicemistrz Techniki (Vice Engineering Champion) for its solution: „Dyspozytornia ONE CONTROL ROOM”; the title Złoty Laur Innowacyjności 2018 (Golden Laureate of Innovation 2018) was awarded for the solution One Control Room.</li> </ul>

## 6. Economic performance of the Group

### 6.1. Production

The decrease in production of payable copper in 2018 by 3.4% as compared to 2017 was mainly due to the lower production of cathodes by KGHM Polska Miedź S.A. due to the maintenance shutdown of the concentrate smelting installation at the Głogów II Copper Smelter and Refinery in the third quarter of 2018. Production was also lower in KGHM INTERNATIONAL LTD. due to:

- a lower copper ore grade in the Sudbury Basin,
- a lower copper ore grade and lower recovery by the Robinson mine.

The slightly lower production by Sierra Gorda SCM was due to lower extraction and lower copper ore grade, which was not offset by higher recovery.

Detailed information on production results may be found in the sections dedicated to individual segments. The Group's production is shown below.

Table 3. Production in the Group

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
<b>Payable copper (kt)</b>							
<b>Group</b>	<b>633.9</b>	<b>656.4</b>	<b>(3.4)</b>	<b>168.5</b>	<b>170.7</b>	<b>151.7</b>	<b>142.9</b>
- KGHM Polska Miedź S.A.	501.8	522.0	(3.9)	135.4	138.9	116.7	110.8
- KGHM INTERNATIONAL LTD.	78.8	81.0	(2.7)	18.0	18.2	22.5	20.1
- Sierra Gorda S.C.M. <sup>1</sup>	53.3	53.4	(0.2)	15.1	13.6	12.5	12.0
<b>TPM – precious metals (koz t)</b>							
<b>Group</b>	<b>174.0</b>	<b>219.4</b>	<b>(20.7)</b>	<b>44.8</b>	<b>46.9</b>	<b>43.6</b>	<b>38.7</b>
- KGHM Polska Miedź S.A.	83.2	117.3	(29.1)	21.1	23.7	20.1	18.3
- KGHM INTERNATIONAL LTD.	67.6	74.0	(8.6)	16.3	16.7	18.8	15.8
- Sierra Gorda S.C.M. <sup>1</sup>	23.2	28.0	(17.1)	7.4	6.5	4.7	4.6
<b>Silver (t)</b>							
<b>Group</b>	<b>1 204.9</b>	<b>1 234.1</b>	<b>(2.4)</b>	<b>357.2</b>	<b>362.3</b>	<b>242.6</b>	<b>242.8</b>
- KGHM Polska Miedź S.A.	1 188.8	1 218.1	(2.4)	352.6	357.8	239.1	239.3
- KGHM INTERNATIONAL LTD.	1.6	1.6	-	0.5	0.4	0.4	0.3
- Sierra Gorda S.C.M. <sup>1</sup>	14.5	14.4	+0.7	4.1	4.1	3.1	3.2
<b>Molybdenum (million pounds)</b>							
<b>Group</b>	<b>15.3</b>	<b>20.3</b>	<b>(24.6)</b>	<b>4.2</b>	<b>3.2</b>	<b>3.8</b>	<b>4.1</b>
- KGHM Polska Miedź S.A.	-	-	x	-	-	-	-
- KGHM INTERNATIONAL LTD.	0.6	0.7	(14.3)	0.2	0.2	0.1	0.1
- Sierra Gorda S.C.M. <sup>1</sup>	14.7	19.7	(25.4)	4.0	3.0	3.7	4.0

<sup>1</sup> 55% share of the Group

## 6.2. Structure of consolidated sales revenue

The geographic and product structure of the consolidated sales revenue of the Group are presented in the following charts. In accordance with the adopted principle of consolidation by the equity method, sales revenue do not include revenues of the segment Sierra Gorda S.C.M. Detailed information on segment sales is presented in the sections devoted to the results of individual segments.

Chart 18. Geographic structure of Group sales

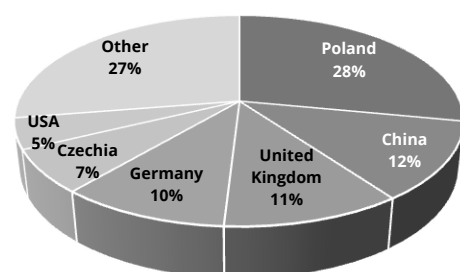
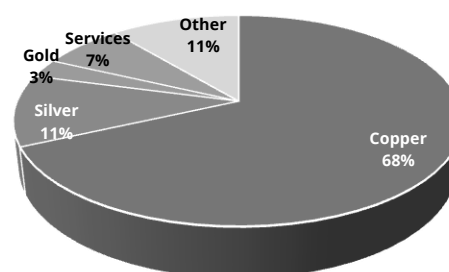


Chart 19. Product structure of Group sales



## 6.3. C1 cost in the Group

Unit costs by Group segments are presented in the table below. Detailed descriptions of individual items are presented in the sections devoted to individual segments.

Table 4. C1 cost of producing copper in concentrate in the Group (USD/lb)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
<b>Group</b>	<b>1.81</b>	<b>1.59</b>	<b>+13.8</b>	<b>1.81</b>	<b>1.78</b>	<b>1.85</b>	<b>1.80</b>
- KGHM Polska Miedź S.A.	1.85	1.52	+21.7	1.79	1.82	1.96	1.83
- KGHM INTERNATIONAL LTD.	1.92	1.92	-	2.04	1.89	1.84	1.89
- Sierra Gorda S.C.M.	1.31	1.67	(21.6)	1.56	1.29	0.83	1.43

## 6.4. Financial results

### Statement of profit or loss

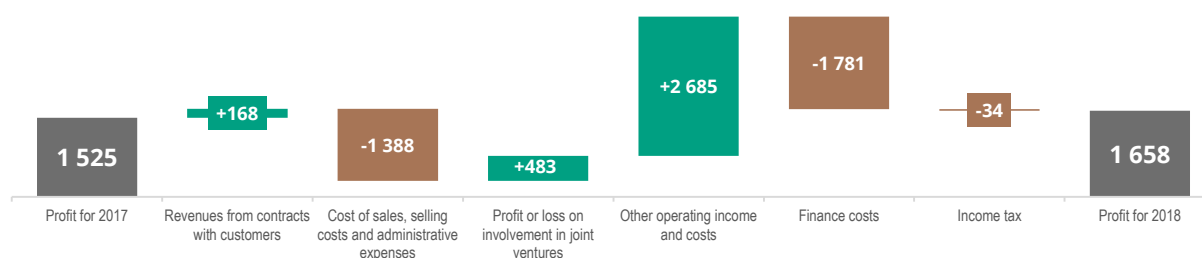
Table 5. Financial results of the Group (PLN million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Revenues from contracts with customers	20 526	20 358	+0.8	5 739	5 364	5 157	4 266
Cost of sales, selling costs and administrative expenses	(17 935)	(16 547)	+8.4	(5 147)	(4 717)	(4 464)	(3 607)
<b>Profit on sales</b>	<b>2 591</b>	<b>3 811</b>	<b>(32.0)</b>	<b>592</b>	<b>647</b>	<b>693</b>	<b>659</b>
Profit or loss on involvement in joint ventures	328	(155)	x	394	62	(209)	81
Other operating income and (costs)	308	(2 377)	x	129	(184)	554	(191)
Finance income / (costs)	(761)	1 020	x	(241)	83	(715)	112
<b>Profit before income tax</b>	<b>2 466</b>	<b>2 299</b>	<b>+7.3</b>	<b>874</b>	<b>608</b>	<b>323</b>	<b>661</b>
Income tax expense	(808)	(774)	+4.4	(192)	(243)	(151)	(222)
<b>PROFIT FOR THE PERIOD</b>	<b>1 658</b>	<b>1 525</b>	<b>+8.7</b>	<b>682</b>	<b>365</b>	<b>172</b>	<b>439</b>
<b>Adjusted EBITDA<sup>1</sup></b>	<b>4 972</b>	<b>5 753</b>	<b>(13.6)</b>	<b>1 182</b>	<b>1 225</b>	<b>1 391</b>	<b>1 174</b>

<sup>1</sup> Adjusted EBITDA = EBIT + depreciation/amortisation (recognised in profit or loss) + impairment loss (-reversal of impairment losses) on non-current assets recognised in cost of sales, selling costs and administrative expenses according to part 2 of the consolidated financial statements – together with Sierra Gorda S.C.M.

Item	Impact on change of profit or loss (PLN million)	Description
<b>Revenues from contracts with customers</b>	+168	Revenues from contracts with customers remained at an essentially unchanged level (an increase by 0.8%) including: <ul style="list-style-type: none"> <li>- KGHM Polska Miedź S.A.: - PLN 267 million,</li> <li>- KGHM INTERNATIONAL LTD. + PLN 254 million.</li> </ul> Detailed reasons for the change in revenues in both of the aforementioned segments are described in sections 7 and 8 of this report.
<b>Cost of sales, selling costs and administrative expenses</b>	(1 388)	The Group's cost of sales, selling costs and administrative expenses increased by PLN 1 388 million, including: <ul style="list-style-type: none"> <li>- KGHM Polska Miedź S.A.: +PLN 561 million,</li> <li>- KGHM INTERNATIONAL LTD. +PLN 606 million.</li> </ul> Detailed reasons for the increase in costs in both of the aforementioned segments are described in sections 7 and 8 of this report.
<b>Profit or loss on involvement in joint ventures</b>	+483	The increase in the profit or loss on involvement in joint ventures of PLN 483 million was due to: <ul style="list-style-type: none"> <li>- gains due to the reversal of allowances for impairment of loans granted to joint ventures: PLN +733 million,</li> <li>- a higher by PLN 188 million share of losses of joint ventures accounted for using the equity method,</li> <li>- lower interest income on loans granted to a joint venture by PLN 62 million.</li> </ul>
<b>Other operating income and costs</b>	+2 685	The increase in the result on other operating income and costs was mainly due to: <ul style="list-style-type: none"> <li>- an increase by PLN 2 059 million in the result due to exchange differences,</li> <li>- a decrease in income by PLN 81 million due to the release of unused provisions,</li> <li>- an increase in costs by PLN 131 million due to the recognition of provisions,</li> <li>- a decrease by PLN 713 million in the impairment loss on fixed assets under construction and intangible assets not net available for use,</li> <li>- a decrease by PLN 172 million in the loss due to measurement and realisation of financial assets.</li> </ul>
<b>Finance income/(costs)</b>	(1 781)	The increase in finance costs by PLN 1 781 million was mainly due to a decrease in the result due to exchange differences by PLN 1 844 million.

Chart 20. Change in profit/loss for the period of the Group in 2018 (PLN million)



## Cash flow

Table 6. Cash flow of the Group (PLN million)

	2018	2017	Change (%)	IVQ'18	IIIQ'18	IIQ'18	IQ'18
Profit or loss before income tax	2 466	2 299	+7.3	874	608	323	661
Depreciation/amortisation recognised in profit or loss	1 796	1 609	+11.6	480	452	514	350
Share of losses of joint ventures accounted for using the equity method	662	474	+39.7	404	4	254	-
Gains due to the reversal of allowances for impairment of loans granted to joint ventures	(733)	-	x	(733)			
Interest on loans granted to joint ventures	(257)	(319)	(19.4)	(65)	(66)	(45)	(81)
Interest and other costs of borrowings	109	148	(26.4)	(13)	52	36	34
Other impairment losses/(reversal of impairment losses) on non-current assets	69	503	(86.3)	55	-	4	10
Exchange differences	(36)	210	x	11	5	(39)	(13)
Change in provisions and employee benefits liabilities	244	(25)	x	(6)	19	218	13
Change in derivatives	(121)	202	x	22	21	(105)	(59)
Other adjustments	62	(68)	x	6	(26)	(61)	143
Exclusions of income and costs, total	1 795	2 734	(34.3)	161	461	776	397
Income tax paid	(802)	(983)	(18.4)	(195)	(194)	(246)	(167)
Change in working capital	367	(996)	x	1 164	243	(138)	(902)
<b>Net cash generated from operating activities</b>	<b>3 826</b>	<b>3 054</b>	<b>+25.3</b>	<b>2 004</b>	<b>1 118</b>	<b>715</b>	<b>(11)</b>
Expenditures on mining and metallurgical assets	(2 609)	(2 527)	+3.2	(865)	(591)	(552)	(601)
Expenditures on other property, plant and equipment and intangible assets	(266)	(269)	(1.1)	(92)	(53)	(47)	(74)
Acquisition of newly - issued shares of joint ventures	(666)	(461)	+44.5	(404)	-	(262)	-
Other expenses	(83)	(123)	(32.5)	(16)	(21)	(12)	(34)
Total expenses	(3 624)	(3 380)	+7.2	(1 377)	(665)	(873)	(709)
Proceeds	85	40	x2.1	9	7	38	31
<b>Net cash used in investing activities</b>	<b>(3 539)</b>	<b>(3 340)</b>	<b>+6.0</b>	<b>(1 368)</b>	<b>(658)</b>	<b>(835)</b>	<b>(678)</b>
Proceeds from borrowings	2 276	2 442	(6.8)	221	(10)	934	1 131
Other proceeds	19	6	x3.2	16	1	1	1
Total proceeds	2 295	2 448	(6.3)	237	(9)	935	1 132
Repayments of borrowings	(2 110)	(2 072)	+1.8	(699)	(246)	(673)	(492)
Dividends paid to shareholders of the Parent Entity	-	(200)	x	-	-	-	-
Interest paid and other costs of borrowings	(119)	(157)	(24.2)	(3)	(46)	(38)	(32)
Other expenses	-	(1)	x	-	-	-	-
Total expenses	(2 229)	(2 430)	(8.3)	(702)	(292)	(711)	(524)
<b>Net cash generated from/(used in) financing activities</b>	<b>66</b>	<b>18</b>	<b>x3.7</b>	<b>(465)</b>	<b>(301)</b>	<b>224</b>	<b>608</b>
<b>TOTAL NET CASH FLOW</b>	<b>353</b>	<b>(268)</b>	<b>x</b>	<b>171</b>	<b>159</b>	<b>104</b>	<b>(81)</b>
Foreign exchange gains/(losses)	18	(6)	x	(3)	20	(17)	18
Cash and cash equivalents at beginning of the period	586	860	(31.9)	789	610	523	586
<b>Cash and cash equivalents at end of the period</b>	<b>957</b>	<b>586</b>	<b>+63.3</b>	<b>957</b>	<b>789</b>	<b>610</b>	<b>523</b>

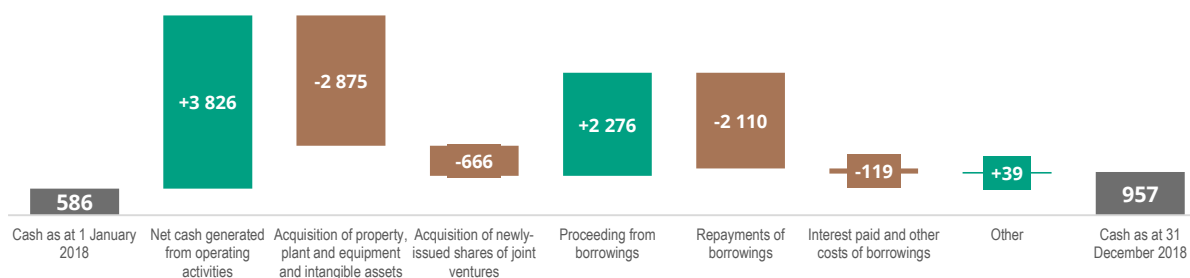
Net cash generated from operating activities in 2018 amounted to PLN 3 826 million and mainly comprised profit before income tax in the amount of PLN 2 466 million adjusted by depreciation/amortisation in the amount of PLN 1 796 million, the share of losses of joint ventures accounted for using the equity method in the amount of PLN 662 million, gains due to the reversal of allowances for impairment of loans granted to joint ventures of PLN 733 million, income tax paid in the amount of PLN 802 million and the change in working capital in the amount of PLN 367 million.

Net cash used in investing activities in 2018 amounted to PLN 3 539 million and mainly comprised expenditures on property, plant and equipment and intangible assets in the amount of PLN 2 875 million and expenditures on the acquisition of newly-issued shares of joint ventures in the amount of PLN 666 million.

Net cash generated from financing activities in 2018 amounted to PLN 66 million and mainly comprised proceeds from borrowings in the amount of PLN 2 276 million and repayments of borrowings in the amount of PLN 2 110 million as well as interest paid and other costs of borrowings in the amount of PLN 119 million.

After reflecting exchange differences on cash and cash equivalents, at the end of 2018 cash and cash equivalents increased by PLN 371 million and amounts to PLN 957 million.

Chart 21. Cash flow of the Group in 2018 (PLN million)



## Assets, equity and liabilities

Table 7. Consolidated assets (PLN million)

	31.12.2018	31.12.2017	Change (%)	30.09.2018	30.06.2018	31.03.2018
Mining and metallurgical property, plant and equipment	17 507	16 296	+7.4	16 660	16 469	16 305
Mining and metallurgical intangible assets	1 657	1 447	+14.5	1 628	1 557	1 456
Other property, plant and equipment	2 789	2 679	+4.1	2 725	2 746	2 682
Other intangible assets	224	209	+7.2	207	207	221
Joint ventures accounted for using the equity method	4	8	(50.0)	5	6	8
Loans granted to joint ventures	5 199	3 889	+33.7	4 303	4 316	3 895
Derivatives	320	110	+2.9	399	329	213
Other financial instruments measured at fair value	541	614	(11.9)	438	527	553
Other financial instruments measured at amortised cost	716	762	(6.0)	778	781	804
Deferred tax assets	309	389	(20.6)	420	542	487
Other non-financial assets	109	112	(2.7)	121	109	111
<b>Non-current assets</b>	<b>29 375</b>	<b>26 515</b>	<b>+10.8</b>	<b>27 684</b>	<b>27 589</b>	<b>26 735</b>
Inventories	4 983	4 562	+9.2	5 519	5 568	5 468
Trade receivables	799	1 522	(47.5)	1 229	1 222	1 192
Tax assets	417	277	+50.5	233	226	213
Derivatives	301	196	+53.6	244	158	264
Other financial assets	273	265	+3.0	266	296	239
Other non-financial assets	132	199	(33.7)	257	402	270
Cash and cash equivalents	957	586	+63.3	789	610	523
<b>Current assets</b>	<b>7 862</b>	<b>7 607</b>	<b>+3.4</b>	<b>8 537</b>	<b>8 482</b>	<b>8 169</b>
<b>Total assets</b>	<b>37 237</b>	<b>34 122</b>	<b>+9.1</b>	<b>36 221</b>	<b>36 071</b>	<b>34 904</b>

As at 31 December 2018, assets in the consolidated statement of financial position amounted to PLN 37 237 million and were higher as compared to 31 December 2017 by PLN 3 115 million.

The increase in non-current assets by PLN 2 860 million was mainly due to an increase in property, plant and equipment and intangible assets by PLN 1 546 million, an increase in the value of loans granted to joint ventures by PLN 1 310 million and an increase in the value of derivatives by PLN 210 million alongside a decrease in the value of deferred tax assets by PLN 80 million.

The increase in current assets by PLN 255 million was mainly due to an increase in inventories by PLN 421 million and cash and cash equivalents by PLN 371 million alongside a simultaneous decrease in trade receivables by PLN 723 million.

Chart 22. Change in assets of the Group in 2018 (PLN million)

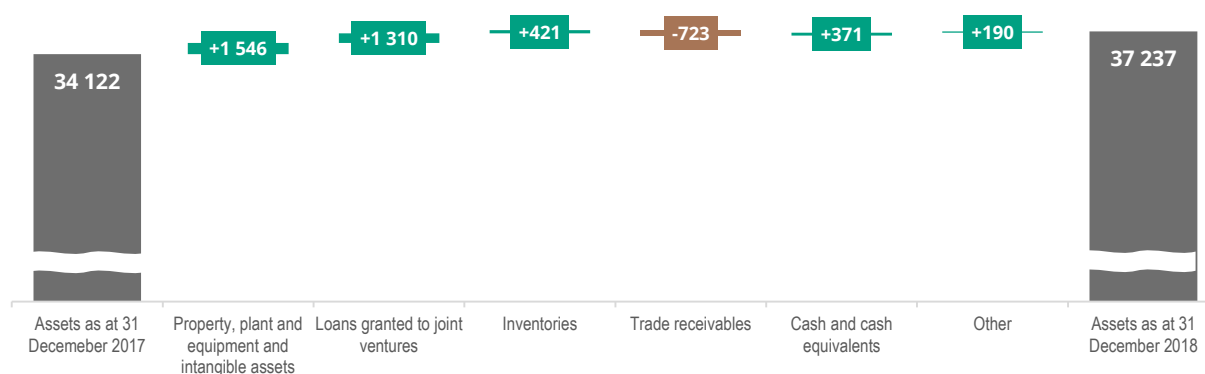


Table 8. Consolidated equity and liabilities (PLN million)

	31.12.2018	31.12.2017	Change (%)	30.09.2018	30.06.2018	31.03.2018
Share capital	2 000	2 000	-	2 000	2 000	2 000
Other reserves from measurement of financial instruments	(444)	158	x	(537)	(636)	(556)
Accumulated other comprehensive income	2 005	2 427	(17.4)	2 172	2 094	2 313
Retained earnings	15 572	13 109	+18.8	14 889	14 525	14 354
<b>Equity attributable to shareholders of the Parent Entity</b>	<b>19 133</b>	<b>17 694</b>	<b>+8.1</b>	<b>18 524</b>	<b>17 983</b>	<b>18 111</b>
<b>Equity attributable to non-controlling interest</b>	<b>92</b>	<b>91</b>	<b>+1.1</b>	<b>93</b>	<b>91</b>	<b>90</b>
<b>Equity</b>	<b>19 225</b>	<b>17 785</b>	<b>+8.1</b>	<b>18 617</b>	<b>18 074</b>	<b>18 201</b>
Borrowings	6 878	6 191	+11.1	7 134	7 472	5 986
Derivatives	162	208	(22.1)	183	204	178
Employee benefits liabilities	2 447	2 063	+18.6	2 318	2 328	2 234
Provisions for decommissioning costs of mines and other facilities	1 564	1 351	+15.8	1 357	1 418	1 328
Deferred tax liabilities	498	347	+43.5	447	495	431
Other liabilities	598	718	(16.7)	610	605	617
<b>Non-current liabilities</b>	<b>12 147</b>	<b>10 878</b>	<b>+11.7</b>	<b>12 049</b>	<b>12 522</b>	<b>10 774</b>
Borrowings	1 071	965	+11.0	1 087	1 151	1 673
Derivatives	43	110	(60.9)	45	51	75
Trade payables	2 053	1 823	+12.6	1 657	1 394	1 476
Employee benefits liabilities	808	842	(4.0)	932	820	1 110
Tax liabilities	585	630	(7.1)	505	738	623
Provisions for liabilities and other charges	271	114	+137.7	287	283	117
Other liabilities	1 034	975	+6.1	1 042	1 038	855
<b>Current liabilities</b>	<b>5 865</b>	<b>5 459</b>	<b>+7.4</b>	<b>5 555</b>	<b>5 475</b>	<b>5 929</b>
<b>Non-current and current liabilities</b>	<b>18 012</b>	<b>16 337</b>	<b>+10.3</b>	<b>17 604</b>	<b>17 997</b>	<b>16 703</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>37 237</b>	<b>34 122</b>	<b>+9.1</b>	<b>36 221</b>	<b>36 071</b>	<b>34 904</b>

Equity as at 31 December 2018 amounted to PLN 19 225 million and was higher by PLN 1 440 million than at the end of 2017, mainly due to an increase in retained earnings by PLN 2 463 million alongside a decrease in other reserves from the measurement of financial instruments by PLN 602 million and a decrease in accumulated other comprehensive income by PLN 422 million.

Non-current liabilities of the KGHM Polska Miedź S.A. Group as at 31 December 2018 amounted to PLN 12 147 million and were higher by PLN 1 269 million mainly due to an increase in borrowings by PLN 687 million, an increase in employee benefits liabilities by PLN 384 million, an increase in provisions for decommissioning costs of mines and other facilities by PLN 213 million and an increase in deferred tax liabilities by PLN 151 million alongside a decrease in other non-current liabilities by PLN 166 million.

Current liabilities of the KGHM Polska Miedź S.A. Group as at 31 December 2018 amounted to PLN 5 865 million and were higher by PLN 406 million mainly due to an increase in trade payables by PLN 230 million, an increase in provisions for liabilities and other charges by PLN 157 million and an increase in borrowings by PLN 106 million alongside a decrease in other current liabilities by PLN 87 million.



Chart 23. Change in equity and liabilities of the Group in 2018 (PLN million)



### Contingent assets and liabilities

At the end of 2018, contingent assets amounted to PLN 565 million and related mainly to guarantees received by the Group with respect to the proper performance of agreements in the amount of PLN 250 million and promissory notes receivables in the amount of PLN 121 million.

At the end of 2018, contingent liabilities amounted to PLN 3 240 million and concerned:

- guarantees and letters of credit in the amount of PLN 2 878 million, including:
  - a letter of credit in the amount of PLN 517 million, granted to secure the obligations due to a long-term contract for the off-take of electricity by Sierra Gorda S.C.M.,
  - corporate guarantees in the amount of PLN 125 million, granted to secure the payments from lease agreements entered into by Sierra Gorda S.C.M.,
  - a guarantee in the amount of PLN 160 million, securing the proper performance of future environmental obligations of the Parent Entity to restore the area, following the conclusion of operations of the Żelazny Most tailings storage facility,
  - guarantees and letters of credit in the total amount of PLN 401 million securing the proper performance of future environmental obligations to restore the area following the conclusion of operations of the Robinson mine, Podolsky mine and the Victoria project, and liabilities related to the proper performance of the signed contracts/agreements,
  - corporate guarantees in the amount of PLN 496 million, securing the repayment of short-term working capital facilities of Sierra Gorda S.C.M.,
  - a corporate guarantee in the amount of PLN 677 million, securing repayment of a specified part of payment to guarantees set by Sumitomo Metal Mining Co., Ltd. and Sumitomo Corporation, securing repayment of a corporate loan drawn by the joint venture Sierra Gorda S.C.M.,
  - guarantees in the amount of PLN 188 million, securing proper performance by DMC Mining Services (UK) Ltd. and DMC Mining Services Ltd. of a contract for sinking shafts under a project underway in the United Kingdom,
- a promissory note liability, securing the proper performance of future environmental obligations of KGHM Polska Miedź S.A. to restore the area, following the conclusion of operations of the Żelazny Most tailings storage facility in the amount of PLN 160 million,
- other in the amount of PLN 202 million.

Other liabilities not recognised in the statement of financial position in the amount of PLN 470 million, comprised of:

- liabilities due to operating leases in the amount of PLN 357 million, and
- liabilities towards local government entities due to expansion of the tailings storage facility by KGHM Polska Miedź S.A. in the amount of PLN 113 million.

## 6.5. 2018 targets versus achievements and targets for 2019

KGHM Polska Miedź S.A. did not publish a forecast of financial results. However, in regulatory filings dated 22 May 2018 and 10 January 2019 the Company published its basic Budget targets for 2018 and 2019. Achievement of the targets for 2018 and the targets for 2019 are presented in the table below.

Table 9. 2018 targets versus achievements and targets for 2019

		2018	Budget 2018	Execution (%)	Budget 2019	Change (%)
<b>KGHM Polska Miedź S.A.</b>						
Production of copper in concentrate	kt	401.3	389.0	+3.2	397.0	(1.0)
Production of silver in concentrate	t	1 264.3	1 179.0	+7.2	1 238.0	(2.1)
Electrolytic copper production, including:	kt	501.8	494.0	+1.6	559.0	+11.4
- from own concentrate	kt	385.3	381.0	+1.1	406.0	+5.5
Metallic silver production	t	1 188.8	1 166.0	+2.0	1 341.0	+12.8
Copper products sales volume	kt	514.4	506.0	+1.7	601.0	+16.8
- including in concentrate	kt	22.3	22.0	+1.4	41.0	+83.9
Silver products sales volume	t	1 227.3	1 208.0	+1.6	1 454.0	+18.5
- including in concentrate	t	80.6	78.0	+3.3	97.0	+20.3
Total unit cost of electrolytic copper production from own concentrate	PLN/t	17 578	19 100	(8.0)	20 000	+13.8
Capital expenditures on property, plant and equipment <sup>1</sup>	PLN mn	2 127	2 670	(20.3)	2 516	+18.3
Other expenditures, including loans <sup>2</sup>	PLN mn	697	657	+6.1	<sup>(3)</sup> 1 074	+54.1
<b>KGHM INTERNATIONAL LTD.</b>						
Payable copper production	kt	78.8	82.0	(3.9)	75.0	(5.1)
TPM production	koz t	67.6	86.0	(21.4)	88.0	+29.4
<b>Sierra Gorda (55%)</b>						
Payable copper production	kt	53.3	59.0	(9.7)	57.0	+6.9
Molybdenum production	mn lbs	14.7	17.0	(13.5)	11.0	(26.7)

<sup>1</sup> excluding expenditures on development work - uncompleted

<sup>2</sup> acquisition of shares and investment certificates of subsidiaries and loans granted

<sup>3</sup> excluding the purchase of investment certificates related to restructurisation of FIZAN in the amount of PLN 388 mn, which will be offset by proceeds in this regard

### Achievement of targets in 2018

In 2018, production of electrolytic copper by the Company was 7.8 thousand tonnes Cu (+1.6%) higher than the target in the 2018 Budget. This increase in production was mainly due to production from purchased metal-bearing materials. Silver production was higher by 23 t (+2%).

Achievement of the planned sales volume to a large extent reflects the production results – sales of both copper and silver were higher by 1.7% than planned.

The total unit cost of electrolytic copper production from own concentrate was lower by 8% than planned, mainly due to higher production from own concentrate by 4.3 thousand tonnes.

Capital expenditures on property, plant and equipment in 2018 amounted to PLN 543 million (-20%) and were lower than planned, mainly due to the deferred execution of investments, while other expenditures were higher by PLN 40 million (+6%).

The decrease in production of payable copper by 3,2 thousand t (-4%) and of precious metals by 18 thousand troy ounces (-21%) by KGHM INTERNATIONAL LTD. was due to the lower production of these metals in the mines of the Sudbury Basin (among others due to deterioration of geological and mining conditions).

Sierra Gorda ended 2018 with production of payable copper 10% lower than planned in the Budget, mainly due to lower than planned processing of ore and metals grade.

### Targets for 2019

The Budget for 2019 assumes an increase in electrolytic copper production by 57.2 thousand tonnes (+11%), including 36.5 thousand tonnes from purchased metal-bearing materials and 20.7 thousand tonnes from own concentrate.

Copper sales were higher by 86.6 thousand tonnes (+17%), due to higher production and to a higher volume of sales of copper in concentrate (+18.7 thousand tonnes, +84%).

The Company is targeting a higher total unit cost of electrolytic copper production from own concentrate by 14%, mainly due to an increase in expenses by nature, including mainly materials, fuel and energy, labour costs, as well as depreciation/amortisation.

The increase in capital expenditures by PLN 389 million (+18%) is mainly due to commencement of the main stage of construction of the Southern Quarter of the Tailings Storage Facility and deferment of the planned schedule of investments for 2018.

The Budget for 2019 assumes a decrease in copper production by KGHM INTERNATIONAL LTD. by 4 thousand tonnes (-5%), mainly due to the planned halt in extraction by the Morrison mine. The increase in precious metals production is due to the McCreedy West mine in the Sudbury Basin.

The Budget assumes that in 2019 there will be an increase in copper production by Sierra Gorda of 7% compared to the amount produced in 2018. According to the plan, the mine is expected to extract from areas characterised by lower molybdenum content, and therefore the Budget expects a decrease in the production of this metal by 28%. In terms of investments, expenditures have been updated to reflect higher processing capacity to 130/140 thousand tonnes of ore per day in subsequent years.

## 6.6. Financing in the Group

The Group manages its financial resources based on the approved Financial Liquidity Management Policy in the KGHM Group. Its primary goal is to ensure continuous operations by securing the availability of funds required to achieve the Group's business goals, while optimising incurred costs. Moreover, the Policy regulates the Group's borrowing principles, the principles of managing debt and for monitoring the level of the Group's debt, and provides for the centralisation of borrowing at the level of the Parent Entity. Financial liquidity management involves securing an appropriate amount of cash and available lines of credit in the short, medium and long term.

### Net debt in the Group

Total debt of the Group at the end of 2018 amounted to PLN 7 949 million and increased as compared to the end of 2017 by PLN 793 million (+11%) mainly due to an increase in the USD/PLN exchange rate.

The Group's cash and cash equivalents, which at 31 December 2018 amounted to PLN 949 million, are of a short term nature.

Table 10. Net debt structure of the Group (PLN million)

	31.12.18	31.12.17	Change (%)	30.09.18	30.06.18	31.03.18
<b>Liabilities due to:</b>	<b>7 949</b>	<b>7 156</b>	<b>+11.1</b>	<b>8 221</b>	<b>8 623</b>	<b>7 659</b>
Bank loans <sup>1</sup>	5 676	5 179	+9.6	5 973	6 303	5 737
Other loans	2 246	1 967	+14.2	2 226	2 298	1 903
Leases	27	10	×2.7	22	22	19
<b>Free cash and cash equivalents</b>	<b>949</b>	<b>579</b>	<b>+63.9</b>	<b>782</b>	<b>604</b>	<b>517</b>
<b>Net debt</b>	<b>7 000</b>	<b>6 577</b>	<b>+6.4</b>	<b>7 439</b>	<b>8 019</b>	<b>7 142</b>

<sup>1</sup> includes the preparation fee paid which decreases financial liabilities due to bank loans received

Table 11. Net debt structure of the Company (PLN million)

	31.12.18	31.12.17	Change (%)	30.09.18	30.06.18	31.03.18
<b>Liabilities due to:</b>	<b>7 873</b>	<b>7 168</b>	<b>+9.8</b>	<b>8 175</b>	<b>8 574</b>	<b>7 710</b>
Bank loans <sup>1</sup>	5 576	5 067	+10.0	5 867	6 185	5 615
Other loans	2 217	1 941	+14.2	2 198	2 269	1 875
Cash pooling	80	160	(50.0)	110	120	220
<b>Free cash and cash equivalents</b>	<b>625</b>	<b>231</b>	<b>×2.7</b>	<b>428</b>	<b>247</b>	<b>213</b>
<b>Net debt</b>	<b>7 248</b>	<b>6 937</b>	<b>+4.5</b>	<b>7 747</b>	<b>8 327</b>	<b>7 497</b>

<sup>1</sup> includes the preparation fee paid which decreases financial liabilities due to bank loans received

### Sources of financing in the Group

As at 31 December 2018, the Group held open lines of credit and loans with a total available amount of PLN 16 023 million, out of which PLN 7 937 million had been drawn.

<b>Unsecured, revolving syndicated credit facility in the amount of USD 2.5 billion</b>	<p>This financing agreement was signed by the Parent Entity with a syndicate banks group in 2014 in the amount of USD 2 500 million. The final repayment deadline is 9 July 2021.</p> <p>The funds drawn were used to finance general corporate goals, including the continuation of investment projects and to refinance the debt of KGHM INTERNATIONAL LTD in 2015.</p>
<b>Investment loans from the European Investment Bank in the total amount of PLN 2.9 billion with a financing periods of 12 years</b>	<p>Financing agreements signed by the Parent Entity with the European Investment Bank:</p> <ul style="list-style-type: none"> <li>- in August 2014 in the amount of PLN 2 billion, which was drawn in the form of three instalments to the full available amount. The deadlines for repaying the instalments drawn are 30 October 2026, 30 August 2028 and 23 May 2029. The funds acquired through this loan are being used to finance the Company's investment projects related to modernisation of metallurgy and development of the Żelazny Most tailings storage facility,</li> <li>- in December 2017 in the amount of PLN 0.9 billion, with availability of 22 months from the date the agreement was signed. In the first half of 2018 the Parent Entity drew an instalment in the amount of USD 65 million with maturity falling on 28 June 2030. The funds acquired through this loan are being used to finance the Parent Entity's development and replacement projects at various stages of the production line.</li> </ul>

<b>Bilateral bank loans in the amount of up to PLN 3.7 billion</b>	<p>The Group has open lines of credit in the form of bilateral agreements in the total amount of PLN 3.7 billion. These are working capital facilities and overdraft facilities with availability of up to 2 years, the maturities of which are successively extended for subsequent periods, as well as long-term investment bank loans.</p> <p>The funds obtained under the aforementioned bank loan agreements are used to finance working capital, are a tool supporting the management of current financial liquidity and support the financing of investments advanced by the Group's companies.</p>
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*Detailed information on the above loans is presented in notes 8.4.3 of the financial statements.*

The aforementioned sources cover the current, medium- and long-term liquidity needs of the Group. In 2018, the Group made use of borrowings which were available from all of the above pillars.

On 27 February 2019, the Parent Entity signed an unsecured, working capital facility agreement with Bank Gospodarstwa Krajowego with a financing period of up to 84 months, as a revolving credit line in the amount of USD 450 million for a period of 60 months, with the option to transform it into a non-revolving credit after 60 months. The credit will supplement the above-mentioned sources of financing.

### Debt position as at 31 December 2018

The following table presents a structure of borrowings used by the KGHM Polska Miedź S.A. Group and the extent to which they were utilised.

Table 12. Amount available and drawn by the Group (PLN million)

	Amount drawn as at <sup>1</sup> 31.12.18	Amount drawn as at <sup>1</sup> 31.12.17	Change (%)	Amount available as at 31.12.18	Utilisation (%)
Unsecured, revolving syndicated credit facility	4 136	3 483	+18.7	9 399	44.0
Loans	2 246	1 967	+14.2	2 932	76.6
Bilateral bank loans	1 555	1 727	(10.0)	3 692	42.1
<b>Total</b>	<b>7 937</b>	<b>7 177</b>	<b>+10.6</b>	<b>16 023</b>	<b>49.5</b>

<sup>1</sup> amount drawn includes accrued interest, unpaid as at the reporting date and excludes costs related to entering a syndicated credit facility agreement, which decrease the initial value of liabilities due to the bank loan.

As at 31 December 2018, 96% of the Group's debt came from loans drawn in USD, 2% in EUR and 2% in PLN.

### Evaluation of financial resources management

In 2018, the KGHM Polska Miedź S.A. Group was fully capable of meeting its obligations with respect to liabilities drawn from other entities. The cash and cash equivalents held by the Group along with the external financing obtained ensure that liquidity will be maintained and enable the achievement of investment goals.

As at 31 December 2018, the Group held PLN 949 million of free cash and cash equivalents and had open credit lines for total available financing of PLN 16 023 million, out of which PLN 7 937 million had been drawn. In 2018, the Group made use of bank loans in the form of overdraft facilities, credit account and investment loans.

With respect to the unsecured syndicated credit facility, a bilateral bank loan from one of the banks and the investment loans from the European Investment Bank, the Group is obliged to maintain financial covenants at specified levels.

Moreover, in order to maintain financial liquidity, the Group aims to maintain the net debt/EBITDA ratio at a level of up to 2.0 in the long term.

Table 13. Net debt / EBITDA of the Group

	31.12.18	31.12.17	Change (%)	30.09.18	30.06.18	31.03.18
<b>Net debt / EBITDA<sup>1</sup></b>	<b>1.6</b>	<b>1.3</b>	<b>+23.1</b>	<b>1.6</b>	<b>1.7</b>	<b>1.5</b>

<sup>1</sup> adjusted EBITDA for the year, excluding EBITDA of the joint venture Sierra Gorda S.C.M.

### Loans granted by Group companies

In 2018, KGHM Polska Miedź S.A. granted the following loans:

- to the company PGE EJ1 in the amount of PLN 5 million with maturity of 3 March 2021. Interest on the loan is based on a fixed interest rate,
- to the company Quadra FNX FFI S.à r.l. in the total amount of USD 182 million (PLN 682 million at the average exchange rate announced by the NBP as at 31 December 2018), to finance Sierra Gorda S.C.M. Interest on the loan is based on a fixed interest rate, with maturity of 31 December 2024.

The below table presents the major loans granted between Group companies together with balance of liabilities as at the end of 2018 (including accrued interest, write-offs and impairment allowances).

Table 14. Loans granted by companies of the Group as at 31 December 2018

Lender	Borrower	Year granted	Total loans granted	Total balance as at 31.12.2018		Maturity
<b>Loans granted within the Group</b>						
KGHM Polska Miedź S.A.	„Energetyka” sp. z o.o.	2009	PLN 50 mn		PLN 5 mn	31.12.2019
KGHM Polska Miedź S.A.	Zagłębie Lubin S.A.	2014-2016	PLN 19 mn		PLN 15 mn	31.12.2026
KGHM Polska Miedź S.A.	PGE EJ1 Sp. z o.o.	2017-2018	PLN 8 mn		PLN 3 mn PLN 5 mn	06.11.2020 02.03.2021
KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD. <sup>1</sup>	2014-2017	USD 142 mn	USD 148 mn	PLN 556 mn	31.12.2024 31.12.2027
KGHM Polska Miedź S.A.	Future 1 Sp. z o.o.	2013-2016	USD 874 mn	USD 1 004 mn	PLN 3 776 mn	31.12.2024
		2017	PLN 9 mn		PLN 10 mn	31.12.2019 31.08.2019
KGHM Polska Miedź S.A.	Quadra FNX Holdings Chile Limitada	2015-2017	USD 442 mn	USD 0 mn	PLN 0 mn	31.12.2024
KGHM Polska Miedź S.A.	KGHM Chile SpA	2015	USD 3 mn	USD 4 mn	PLN 14 mn	31.12.2024
KGHM Polska Miedź S.A.	Quadra FNX FFI S.à r.l. <sup>2</sup>	2017-2018	USD 728 mn	USD 401 mn	PLN 1 508 mn	15.12.2024 31.12.2024
Future 1 Sp. z o.o.	KGHM INTERNATIONAL LTD. <sup>3</sup>	2012	USD 453 mn	USD 480 mn	PLN 1 803 mn	31.12.2027
Future 1 Sp. z o.o.	Quadra FNX FFI S.à r.l. <sup>4</sup>	2017	USD 1 419 mn	USD 786 mn	PLN 2 954 mn	15.12.2024
KGHM INTERNATIONAL LTD.	Sociedad Contractual Minera Franke	2010	USD 100 mn	USD 92 mn	PLN 344 mn	on demand
KGHM INTERNATIONAL LTD.	0899196 B.C.Ltd.	2011	CAD 0.01 mn	CAD 0.008 mn	PLN 0.022 mn	on demand
KGHM INTERNATIONAL LTD.	FNX Mining Company Inc.	2015	USD 140 mn	USD 81 mn	PLN 305 mn	on demand
FNX Mining Company Inc.	KGHM Chile SpA	2012	USD 56 mn	USD 67 mn	PLN 253 mn	on demand
FNX Mining Company Inc.	KGHM INTERNATIONAL LTD.	2014	USD 200 mn	USD 118 mn	PLN 443 mn	on demand, no later than to 30.06.2025
FNX Mining Company Inc.	Quadra FNX Holdings Chile Limitada	2015	USD 3 mn	USD 3 mn	PLN 11 mn	on demand
KGHM AJAX MINING INC.	Sugarloaf Ranches Ltd.	2012	CAD 6 mn	CAD 4 mn	PLN 11 mn	on demand
Carlota Copper Company	Robinson Holdings USA Ltd.	2016	USD 10 mn	USD 2 mn	PLN 9 mn	on demand
Robinson Nevada Mining Company	Robinson Holdings USA Ltd.	2016	USD 200 mn	USD 106 mn	PLN 399 mn	on demand
Wendover Bulk Transshipment Company	Robinson Holdings USA Ltd.	2016	USD 10 mn	USD 2 mn	PLN 6 mn	on demand
Robinson Holdings USA Ltd.	KGHM INTERNATIONAL LTD.	2018	USD 100 mn	USD 25 mn	PLN 95 mn	30.06.2025
Quadra FNX Holdings Chile Limitada	KGHM Chile SpA	2016-2017	USD 5 mn	USD 6 mn	PLN 24 mn	31.12.2024
Sociedad Contractual Minera Franke	KGHM Chile SpA	2017	USD 14 mn	USD 3 mn	PLN 9 mn	on demand
Sociedad Contractual Minera Franke	Quadra FNX Holdings Chile Limitada	2018	USD 5 mn	USD 1 mn	PLN 2 mn	on demand
Quadra FNX FFI S.à r.l.	Quadra FNX Holdings Chile Limitada	2018	USD 182 mn	USD 185 mn	PLN 696 mn	31.12.2024
<b>Loans granted to other entities</b>						
Quadra FNX FFI S.à r.l.	Sierra Gorda S.C.M.	2012	USD 1 700 mn	USD 2 431 mn	PLN 9 138 mn	15.12.2024
KGHM INTERNATIONAL LTD.	Abacus Mining & Exploration Corporation	2015	CAD 12 mn	CAD 16 mn	PLN 44 mn	31.12.2020

<sup>1</sup> As part of the reorganisation of financing flows to the international investments of the KGHM Polska Miedź S.A. Group which began in 2017, certain existing intra-Group balances were paid through a direction payment and set-off agreement institution between the companies KGHM Polska Miedź S.A., KGHM International Ltd., Quadra FNX FFI S.à r.l. and Future 1 Sp. z o.o., including among others KGHM Polska Miedź S.A. and KGHM International Ltd. which settled their mutual claims, and therefore the total amount of loans represents the total actual amount of principal reflecting the aforementioned settlements.

<sup>2</sup> Including a loan in the amount of USD 547 million entered into as part of the reorganisation of financing flows to the international investments of the KGHM Polska Miedź S.A. Group dated 29 December 2017: 1<sup>st</sup> instalment in the amount of USD 41 million paid in 2017, 2<sup>nd</sup> instalment in the amount of USD 506 million paid in 2018. The transaction was of a non-cash nature – certain existing intra-Group balances were paid through a direction payment and set-off agreement institution between the companies KGHM Polska Miedź S.A., KGHM International Ltd., Quadra FNX FFI S.à r.l. and Future 1 Sp. z o.o.

<sup>3</sup> As part of the reorganisation of financing flows to the international investments of the KGHM Polska Miedź S.A. Group which began in 2017, certain existing intra-Group balances were paid through a direction payment and set-off agreement institution between the companies KGHM Polska Miedź S.A., KGHM International Ltd., Quadra FNX FFI S.à r.l. and Future 1 Sp. z o.o., including among others Future 1 Sp. z o.o. and KGHM International Ltd., which settled their mutual claims, and therefore the amount of the loan represents the actual amount of principal reflecting the aforementioned settlement.

<sup>4</sup> On 29 December 2017, as part of the reorganisation of financing flows to the international investments of the KGHM Polska Miedź S.A. Group, the company Future 1 Sp. z o.o. – a direct subsidiary of KGHM Polska Miedź S.A. – entered into a loan agreement with an indirect subsidiary of KGHM Polska Miedź S.A. – Quadra FNX FFI S.à r.l. – for the amount of USD 1 419 million: 1<sup>st</sup> instalment in the amount of USD 135 million paid in 2017, 2<sup>nd</sup> instalment in the amount of USD 1 284 million paid in 2018. The transaction was of a non-cash nature – certain existing intra-Group balances were paid through a direction payment and set-off agreement institution between the companies KGHM Polska Miedź S.A., KGHM International Ltd., Quadra FNX FFI S.à r.l. and Future 1 Sp. z o.o..

The above table presents loans granted by the Company as well as by the Group. As at 31 December 2018, the balance of loans granted by the Company amounted to PLN 6 279 million, while the balance of loans granted by the Group amounted to PLN 5 222 million.

## Cash pooling in the Group

In managing its financial liquidity, the Group utilises tools which support its efficiency. One of the basic instruments used by the Group is the cash pooling management system - domestically in PLN, USD and EUR and abroad in USD, while services in CAD were commenced in the KGHM INTERNATIONAL LTD. Group. The cash pooling system is aimed at optimising cash management, limiting interest costs, the effective financing of current needs in terms of working capital and supporting short term financial liquidity in the Group.

## 7. Economic results of KGHM Polska Miedź S.A.

### 7.1. Production

The main goals set by the Management Board in terms of production and occupational health and safety for 2018 were:

- optimal utilisation of the resource base and of the production capacity of the Company, and
- optimisation of Cu content in ore and concentrate.

The goals set required completion or continuation of the following actions:

<b>in mining</b>	<ul style="list-style-type: none"> <li>- expanding mining operations within the Deep Głogów (Głogów Głęboki-Przemysłowy) area,</li> <li>- improvement of the ore selection technology, greater mining efficiency and improved occupational health and safety, by:               <ul style="list-style-type: none"> <li>- adapting the geometry of mining systems to local geological and mining conditions,</li> <li>- improving the efficiency of technological and active methods of limiting the threat of rock bursts and of other associated natural threats, and,</li> <li>- proper barren rock management in mining areas (selective extraction, siting of rock, mechanical ore mining),</li> </ul> </li> <li>- a greater scope of work with respect to identifying gas-related threats and the use of new technical solutions and means of prevention to counteract this threat,</li> <li>- commencing work related to assessing the Retków copper ore deposit in the Grodziszczce area,</li> <li>- work aimed at achieving a ventilation connection between the near-shaft zone of the SW-4 shaft and the E declines T/W-359 drifts as well as a ventilation connection between the SG-2 shaft and the T/W-145 drifts in the salt deposit of the Polkowice-Sieroszowice mine,</li> <li>- continued work on connecting the T/W-169 tunnel network with the projected sub-shaft area of the GG-1 shaft,</li> <li>- construction of the GG-1 shaft, shaft sinking has reached a depth of 1070 meters,</li> <li>- commencement of construction of the central air conditioning station at the GG-1 shaft,</li> <li>- advancement of Stage 1 of the Project „Construction of the GG-2 shaft” – an agreement was signed with the Gmina (municipality) of Żukowice and work related to planning commenced,</li> <li>- realisation of the planned scope of mine development and access work using the commissioning system at the level of 57.3 thousand meters,</li> </ul>
<b>in ore processing</b>	<ul style="list-style-type: none"> <li>- maintaining the production capacity of individual Concentrators Division Areas to process the amount and quality of ore supplied,</li> <li>- maintaining the production of concentrates in an amount and quality necessary for optimal use of the production capacity of the furnace sections of the smelters and refineries,</li> <li>- continuation at the Rudna Concentrator Division of separating the concentrate produced into two concentrates with varied organic carbon content,</li> <li>- improving flotation technology,</li> </ul>
<b>in metallurgy</b>	<ul style="list-style-type: none"> <li>- optimum utilisation of infrastructure enabled production targets to be fully met with respect to basic products,</li> <li>- advancement of the Metallurgy Development Program (MDP), with respect to:               <ul style="list-style-type: none"> <li>- continued construction and assembly work on key technological links under the program's component investment tasks, including the concentrate roasting installation,</li> <li>- completion of construction of a Steam Drier at the Głogów II Copper Smelter and Refinery,</li> </ul> </li> <li>- achievement of the targeted copper recovery level in the core flash furnace production line by implementing new technological solutions, such as improving the process of de-copperizing convertor slag,</li> <li>- increasing the availability of revolving-reverberatory furnaces at the Lead Section, resulting in high lead recovery alongside lower Pb content in charge materials,</li> </ul>



<b>in occupational health and safety</b>	-	advancement of the adopted Program to improve occupational health and safety in KGHM Polska Miedź S.A. to the year 2020,
	-	constant monitoring of occupational hazards and achievement of organisational and technical goals aimed at limiting occupational risks and accidents,
	-	continuous improvement of the occupational safety and hygiene management system by the Divisions of KGHM Polska Miedź S.A.,
	-	implementation in the Company's mines of a system for the professional adaptation of new employees, and
	-	commencing new organisational and research initiatives aimed at improving occupational health and safety, in particular in the Company's mines.

### Mine production

In 2018 extraction of ore (dry weight) amounted to 30.3 million tonnes, which was 0.9 million tonnes less than in 2017.

Average copper content in extracted ore amounted to 1.49% and was lower than the level achieved in 2017 due to mining in regions with a lower copper ore content. In the case of silver in ore, content was higher and amounted to 48.6 g/t.

As a result the amount of copper in extracted ore was lower than in 2017 by 14.8 thousand tonnes of Cu and amounted to 452.0 thousand tonnes. The volume of silver in ore decreased by 18 tonnes and amounted to 1 471 tonnes.

In 2018, 30.3 million tonnes of ore (dry weight) were processed (or 1 247 thousand tonnes less than in 2017). The lower amount of ore extracted by the mines directly affected the amount of copper in concentrate, which amounted to 401.3 thousand tonnes.

The production of concentrate (dry weight) decreased as compared to 2017 by 72 thousand tonnes (a decrease from 1 833 thousand tonnes to 1 761 thousand tonnes).

The amount of silver in concentrate was lower than the amount produced in 2017 by 2%.

Table 15. Mine production of KGHM Polska Miedź S.A.

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Mined ore (wet weight)	mn t	31.8	32.8	(3.0)	7.6	8.1	8.0	8.1
Mined ore (dry weight)	mn t	30.3	31.2	(2.9)	7.3	7.7	7.6	7.7
Copper grade	%	1.49	1.50	(0.7)	1.47	1.49	1.52	1.50
Copper in ore	kt	452.0	466.8	(3.2)	106.6	114.2	114.8	116.4
Silver grade	g/t	48.6	47.8	+1.7	48.4	48.9	48.7	48.5
Silver in ore	t	1 471.4	1 489.7	(1.2)	351.8	375.3	368.8	375.4
Production of concentrate (dry weight)	kt	1 761	1 833	(3.9)	423	442	448	447
Copper in concentrate	kt	401.3	419.3	(4.3)	95.3	101.0	102.3	102.7
Silver in concentrate	t	1 264.3	1 289.9	(2.0)	304.0	320.8	317.7	321.8

### Metallurgical production

The production of electrolytic copper as compared to 2017 decreased by 20.2 thousand tonnes, or by 3.9%. The lower production of electrolytic copper was due to the maintenance shutdown of the concentrate smelting installation at the Głogów II Copper Smelter and Refinery, which lasted from 8 April to 25 June. Production re-commenced 8 days sooner than projected by the initial schedules. By supplementing own concentrate with purchased metal-bearing materials in the form of scrap, copper blister and imported concentrate, existing technological capacity was effectively used.

The production of other metallurgical products (silver, wire rod, OFE rod and round billets) derives from the level of electrolytic copper production and depends on the type of raw material used, and above all on market demand.

In comparison to 2017, the production of metallic gold decreased by 1 061 kg, or 29%, and metallic silver production was lower by 29 tonnes, closing the year at 1 189 tonnes.

Table 16. Metallurgical production of KGHM Polska Miedź S.A.

	Unit	2018	2017	Change(%)	4Q'18	3Q'18	2Q'18	1Q'18
Electrolytic copper, including:	kt	501.8	522.0	(3.9)	135.4	138.9	116.7	110.8
- from own concentrates	kt	385.3	358.9	+7.4	103.6	110.4	85.3	86.0
- from purchased metal-bearing materials	kt	116.5	148.0	(21.3)	31.8	28.5	31.4	24.8
- from third party processing	kt	-	15.1	x	-	-	-	-
Wire rod, OFE and CuAg rod	kt	266.4	257.9	+3.3	62.3	72.0	65.9	66.2
Round billets	kt	15.8	13.7	+15.3	3.7	3.9	4.3	3.9
Metallic silver	t	1 188.8	1 218.0	(2.4)	352.6	357.8	239.1	239.3
Metallic gold	koz t	83.2	117.3	(29.1)	21.1	23.7	20.1	18.3
Refined lead	kt	30.1	30.0	+0.3	8.2	6.9	7.6	7.5



## Main production goals

The main goals set by the Management Board in terms of production and occupational health and safety for 2019 are a continuation of actions taken in 2018, i.e.:

- optimal utilisation of the resource base and of the production capacity of the Company, and
- optimisation of Cu content in ore and concentrate.

Key tasks in 2019:

<b>in mining</b>	<ul style="list-style-type: none"> <li>- access and development work to intersect the ore in the Deep Głogów area,</li> <li>- continuation of work related to exploration of the Retków copper ore deposit in the Grodziszczce area,</li> <li>- continuation of work related to prevention of gas-related threats (hydrogen sulphide and methane) and the use of new technical solutions and means of prevention to counteract this threat,</li> <li>- continuation of work related to utilising the capacity of the input and output ventilation shafts in the interconnected mine ventilation system,</li> <li>- achieving a level of dilution of the extracted ore which is adequate to the deposit's parameters,</li> <li>- continuation of the GG-1 shaft construction project,</li> <li>- continued construction of the central air conditioning system at the GG-1 shaft,</li> <li>- continuation of Stage 1 of the Project „Construction of the GG-2 shaft” – continuation of planning work, acquisition of legal title to land,</li> <li>- realisation of the planned scope of mine development and access work using the commissioning system in 2019 at the level of 59 thousand meters,</li> </ul>
<b>in ore processing</b>	<ul style="list-style-type: none"> <li>- modernising the classification systems,</li> <li>- improving the energy performance of the machinery park in the Concentrators Division,</li> <li>- optimising the concentration process in terms of decreasing the impact of changes in ore quantity-quality parameters by applying the FloVis system,</li> <li>- continued separation of concentrate produced into two products with varied organic carbon content at the Rudna Concentrator Division,</li> <li>- optimising control of the milling units based on visual product parameters and a mill's sound and vibration characteristics at the Concentrators Division (using the MillVis and ConVis systems),</li> <li>- modernising the carbonate removal installation in the flotation process of the Polkowice Concentrator Division,</li> <li>- optimising the milling, classification and flotation process,</li> <li>- maintaining the availability of the machine park and the production capacity of individual Concentrators Division Areas to the amount of ore supplied,</li> <li>- maintaining the production of concentrates in an amount and quality necessary for optimal use of the production capacity of the smelters and refineries,</li> </ul>
<b>in metallurgy</b>	<ul style="list-style-type: none"> <li>- minimising environmental impact by actions directed towards improving the effectiveness of the dedusting and hermetic sealing processes to decrease fugitive emissions,</li> <li>- maintaining recovery levels of copper and silver in metallurgical processes and the availability of metallurgical equipment,</li> <li>- improving the productivity of the flash furnace complex at the Głogów I Copper Smelter and Refinery as a result of the commissioning of the concentrate roasting installation planned for the second half of 2019,</li> <li>- increasing the share of recycling in production thanks to the start-up of the revolving-casting-refining (RCR) furnace for processing copper scrap at the Legnica Copper Smelter and Refinery in April 2019,</li> <li>- stage I of renovation of the Tank Hall at the Głogów I Copper Smelter and Refinery, and</li> <li>- optimum management of half-finished products between the metallurgical facilities,</li> </ul>
<b>in occupational health and safety</b>	<ul style="list-style-type: none"> <li>- monitoring occupational hazards and achieving organisational, technical and investment goals aimed at limiting occupational risks and workplace accidents,</li> <li>- advancing the adopted training program to optimise the knowledge and skills of KGHM Polska Miedź S.A.'s employees,</li> <li>- unifying the approach to advancement of the Program to improve workplace safety by applying consistent messaging about safety,</li> <li>- searching for new initiatives involving organisational and technical solutions enabling the achievement of a higher level of safety amongst employees in the Company's Divisions,</li> <li>- optimising health care for KGHM Polska Miedź S.A.'s employees, in particular after accidents at work.</li> </ul>

## 7.2. Sales

In 2018, the sales volume of copper and copper products produced by KGHM Polska Miedź S.A. amounted to 514.4 thousand tonnes and was comparable to the sales volume in 2017 (+2%), although in 2018 there were sales of copper concentrate in the amount of 149.5 thousand tonnes dry weight (of which 22.3 thousand tonnes was Cu). There was however a decrease in the volume of cathodes sold by 19.2 thousand tonnes (-8%). Sales of copper wire rod increased by 2.8 thousand tonnes (+1%) and OFE rod by 2.1 thousand tonnes (+16%).

Sales of metallic silver in KGHM Polska Miedź S.A. in 2018 amounted to 1 147 tonnes and were lower than the level of sales in 2017 by 38 tonnes (-3%). In 2018 there also occurred the sale of silver in concentrate (81 tonnes).

The volume of gold sales in 2018 amounted to 83.8 thousand troy ounces, or a decrease by 28% as compared to 2017 (117.1 thousand troy ounces).

Table 17. Sales volume of basic products of KGHM Polska Miedź S.A.

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Cathodes and cathode parts	kt	214.3	233.5	(8.2)	74.1	58.4	47.3	34.5
Copper wire rod and OFE rod	kt	264.6	259.9	+1.8	66.4	68.3	65.2	64.7
Payable copper in concentrate <sup>1</sup>	kt	22.3	(0.3)	x	4.2	6.8	11.3	-
Other copper products	kt	13.2	12.9	+2.3	3.0	3.6	3.3	3.3
<b>Total copper and copper products</b>	<b>kt</b>	<b>514.4</b>	<b>506.0</b>	<b>+1.7</b>	<b>147.7</b>	<b>137.1</b>	<b>127.1</b>	<b>102.5</b>
Metallic silver	t	1 146.8	1 185.0	(3.2)	344.8	349.9	245.0	207.0
Payable silver in concentrate	t	80.6	-	x	13.5	33.2	33.8	-
Metallic gold	koz t	83.8	117.1	(28.4)	21.9	22.7	18.9	20.3
Refined lead	kt	30.5	29.6	+3.0	8.6	7.8	6.7	7.4

<sup>1</sup> negative values result from settlement of prior-year contracts

Total sales revenue of KGHM Polska Miedź S.A. in 2018 amounted to PLN 15 757 million and was comparable to the revenues achieved in 2017 (a decrease by 2%, in 2017: PLN 16 024 million).

Revenues from copper sales in 2018 amounted to PLN 12 342 million, or a difference of +1% compared to the level of sales revenue in the prior year (PLN 12 213 million).

Revenues from metallic silver sales in 2018 amounted to PLN 2 101 million and were lower by 14% as compared to the level of sales revenue in 2017. Additionally, in 2018 KGHM Polska Miedź S.A. earned revenues from the sale of silver in concentrate in the amount of PLN 141 million.

The decrease in revenues from silver sales in 2018 was mainly due to the decrease in the price of this metal expressed in the Polish zloty as compared to 2017. Revenues from gold sales in 2018 amounted to PLN 381 million, and in 2017 to PLN 556 million. The difference was due to lower production of gold in 2018.

Table 18. Sales revenue of KGHM Polska Miedź S.A. (PLN million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Cathodes and cathode parts	5 097	5 541	(8.0)	1 725	1 345	1 191	836
Copper wire rod and OFE rod	6 525	6 276	+4.0	1 630	1 623	1 662	1 610
Payable copper in concentrate <sup>1</sup>	400	86	x4.7	73	99	228	-
Other copper products	320	310	+3.2	74	82	85	79
<b>Total copper and copper products</b>	<b>12 342</b>	<b>12 213</b>	<b>+1.1</b>	<b>3 502</b>	<b>3 149</b>	<b>3 166</b>	<b>2 525</b>
Metallic silver	2 101	2 447	(14.1)	607	628	474	392
Payable silver in concentrate <sup>2</sup>	141	-6	x	22	55	64	-
Metallic gold	381	556	(31.5)	101	100	89	91
Refined lead	262	273	(4.0)	68	66	60	68
Other goods and services	345	356	(3.1)	93	87	78	87
Merchandise and materials	185	185	-	47	43	52	43
<b>Total sales revenue</b>	<b>15 757</b>	<b>16 024</b>	<b>(1.7)</b>	<b>4 440</b>	<b>4 128</b>	<b>3 983</b>	<b>3 206</b>

<sup>1</sup> value of payable copper less treatment charges (TC), Cu refining charges (RcCu) and other deductions impacting the value of Cu concentrate (apart from the Ag refining premium)

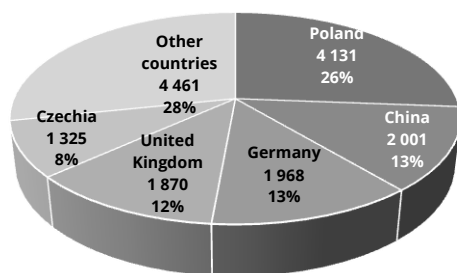
<sup>2</sup> value of payable silver less the Ag refining premium (RcAg), negative values result from settlement of prior-year contracts

### Geographical breakdown of sales

The largest proportion, i.e. 26%, of KGHM Polska Miedź S.A.'s sales revenue in 2018 was from the Polish market. The largest remaining recipients of the products, merchandise and services offered by the Company were: China, Germany, the United Kingdom and Czechia.

The Company's revenues from sales to external customers is broken down geographically in the following table. Sales revenue includes the result from the settlement of hedging instruments.

Chart 24. Sales revenue of KGHM Polska Miedź S.A. by market (PLN million)



### 7.3. Costs

The Company's cost of sales, selling costs and administrative expenses (cost of products, merchandise and materials sold plus selling costs and administrative expenses) in 2018 amounted to PLN 13 460 million and was 4% higher as compared to 2017. The Company's cost of sales, selling costs and administrative expenses was substantially affected by the change in inventories of half-finished products, products and work in progress, which in 2018 amounted to -PLN 236 million (in 2017 - PLN 1 097 million) and was mainly due to the decrease in the level of half-finished products inventories. At the end of 2018 there was a slight increase in inventories of work in progress and finished goods.

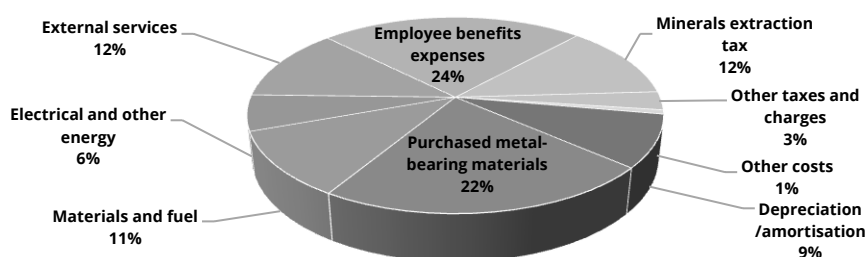
Total expenses by nature in 2018 as compared to 2017 were lower by 2.1%, mainly due to the lower consumption of purchased metal-bearing materials (a lower amount by 27 thousand tonnes and a lower price by 1.5%) as well as a lower minerals extraction tax (lower production of own concentrate and lower silver prices).

Table 19. Expenses by nature of KGHM Polska Miedź S.A. (PLN million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Depreciation of property, plant and equipment and amortisation of intangible assets	1 173	1 072	+9.4	305	288	287	293
Employee benefits expenses	3 324	3 210	+3.6	805	835	902	782
Materials and energy, including:	5 312	5 831	(8.9)	1 471	1 292	1 144	1 405
- purchased metal-bearing materials	3 040	3 750	(18.9)	862	701	611	866
- electrical and other energy	803	775	+3.6	203	228	187	185
External services	1 649	1 531	+7.7	455	406	419	369
Taxes and charges, including:	2 083	2 154	(3.3)	471	494	575	543
- minerals extraction tax	1 671	1 765	(5.3)	374	397	466	434
Other costs	92	126	(27.0)	26	22	15	29
<b>Total expenses by nature</b>	<b>13 633</b>	<b>13 924</b>	<b>(2.1)</b>	<b>3 533</b>	<b>3 337</b>	<b>3 342</b>	<b>3 421</b>

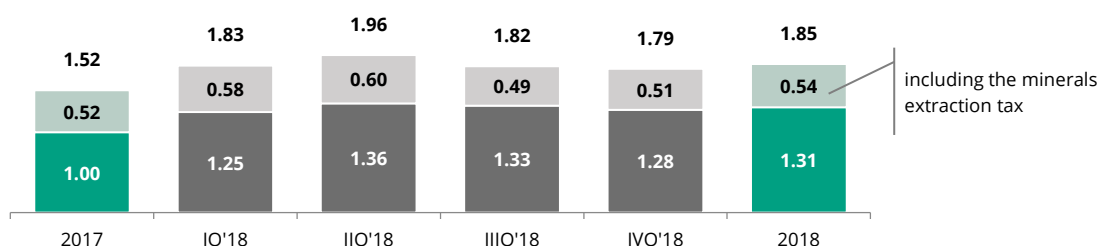
The structure of expenses by nature in 2018 is presented below. As compared to the prior year, they were at a very similar level.

Chart 25. Structure of expenses by nature in 2018



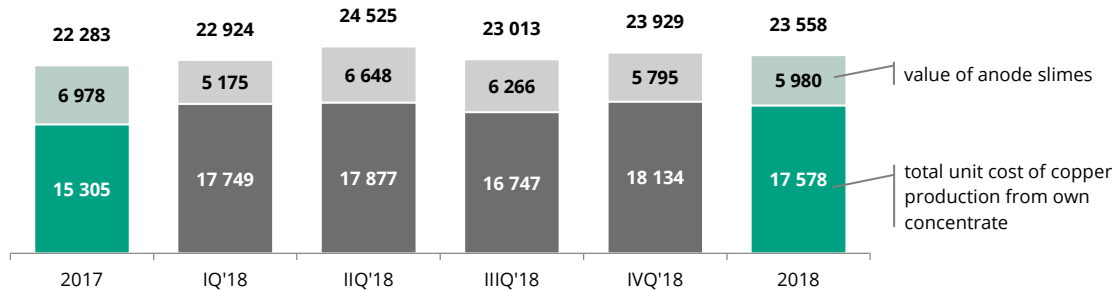
The Company's operating costs are decisively impacted by the costs of electrolytic copper production (prior to decrease by the value of by-products), whose share is about 91%.

Chart 26. Cost of producing copper in concentrate - C1 (USD/lb)



**Cost of producing copper in concentrate - C1** (unit cash cost of producing payable copper in concentrate, reflecting costs of ore extraction and processing, transport costs, the minerals extraction tax, administrative costs during the mining stage, and smelter treatment and refining charges (TC/RC), less the value of by-products) was as follows: in 2017: 1.52 USD/lb and in 2018: 1.85 USD/lb. The cost was impacted by a strengthening in the PLN as compared to the USD, lower silver prices and lower production of own concentrate.

Chart 27. Pre-precious metals credit unit cost of electrolytic copper production – from own concentrate (PLN/t)



**The pre-precious metals credit unit cost of copper production from own concentrate** (unit cost prior to decrease by the value of anode slimes containing among others silver and gold) was higher than that recorded in 2017 by 1 275 PLN/t (6%), alongside a lower minerals extraction tax (-56 PLN/t) and higher production from own concentrate by 26 thousand tonnes of Cu (7.3%). The increase in the unit cost was mainly due to higher costs of materials, fuel and energy (excluding purchased metal-bearing materials), labour costs, depreciation/amortisation and external services.

## 7.4. Financial results

### Statement of profit or loss

The Company recorded a profit for 2018 in the amount of PLN 2 025 million, or PLN 702 million (53%) higher than in the prior year.

Table 20. Basic items of the statement of profit or loss of KGHM Polska Miedź S.A. (PLN million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Sales revenue	15 757	16 024	(1.7)	4 440	4 128	3 983	3 206
- adjustment to revenues due to hedging transactions	125	16	×7.8	15	34	18	57
Cost of sales, selling costs and administrative expenses	(13 460)	(12 899)	+4.3	(3 911)	(3 526)	(3 337)	(2 686)
- including the minerals extraction tax	(1 705)	(1 488)	+14.6	(477)	(427)	(447)	(354)
<b>Profit on sales (EBIT)</b>	<b>2 297</b>	<b>3 125</b>	<b>(26.5)</b>	<b>529</b>	<b>602</b>	<b>646</b>	<b>520</b>
<b>Other operating income / (costs)</b>	<b>1 149</b>	<b>(2 004)</b>	<b>×</b>	<b>490</b>	<b>(49)</b>	<b>625</b>	<b>83</b>
- foreign exchange gains/(losses) on assets and liabilities other than borrowings	386	(1 179)	×	162	(103)	451	(124)
- interest on loans granted and other financial receivables	244	310	(21.3)	56	62	69	57
- dividend income	239	4	×59.8	-	-	239	-
- provisions recognised	(162)	(23)	×7.0	(10)	(3)	(148)	(1)
- measurement and realisation of derivatives	(136)	(213)	(36.2)	(49)	(59)	(6)	(22)
- fees and charges on re-invoicing of costs of bank guarantees securing the payment of liabilities	53	51	+3.9	4	21	10	18
- recognition/reversal of impairment losses on shares and investment certificates in subsidiaries	355	(330)	×	355	-	-	-
- gains/(losses) on changes in fair value of financial assets measured at fair value through profit or loss	(63)	N/A <sup>1</sup>	×	(115)	11	(72)	113
- reversal of allowances for impairment of loans measured at amortised cost	183	N/A <sup>1</sup>	×	(6)	18	136	35
- allowances for impairment of loans under IFRS 9	(4)	N/A <sup>1</sup>	×	40	-	(42)	(2)
- reversal of impairment losses on assets impaired at the moment of initial recognition	85	N/A <sup>1</sup>	×	85	-	-	-
- (recognition)/reversal of allowances for impairment of loans due to restructuring of intra-group financing	15	N/A <sup>1</sup>	×	-	-	-	15
- allowances for impairment of loans under IAS 39	N/A <sup>1</sup>	(606)	×	N/A <sup>1</sup>	N/A <sup>1</sup>	N/A <sup>1</sup>	N/A <sup>1</sup>
- other	(46)	(18)	×2.6	(32)	4	(12)	(6)
<b>Finance income / (costs)</b>	<b>(774)</b>	<b>1 033</b>	<b>×</b>	<b>(275)</b>	<b>97</b>	<b>(720)</b>	<b>124</b>
- exchange differences on borrowings	(592)	1 247	×	(206)	145	(681)	150
- interest on borrowings	(127)	(113)	+12.4	(37)	(32)	(34)	(24)
- fees and commissions on bank and other loans	(23)	(28)	(17.9)	(5)	(6)	(6)	(6)
- measurement and realisation of derivatives	11	(30)	×	(17)	2	11	15
- other	(43)	(43)	-	(10)	(12)	(10)	(11)
<b>Profit / (loss) before income tax</b>	<b>2 672</b>	<b>2 154</b>	<b>+24.0</b>	<b>744</b>	<b>650</b>	<b>551</b>	<b>727</b>
Income tax expense	(647)	(831)	(22.1)	(149)	(207)	(94)	(197)
<b>PROFIT / (LOSS) FOR THE PERIOD</b>	<b>2 025</b>	<b>1 323</b>	<b>+53.1</b>	<b>595</b>	<b>443</b>	<b>457</b>	<b>530</b>
Depreciation/amortisation recognised in profit or loss	1 119	1 035	+8.1	299	286	283	251
EBITDA <sup>2</sup> (EBIT + depreciation/amortisation)	3 416	4 160	(17.9)	828	888	929	771
<b>Adjusted EBITDA<sup>3</sup></b>	<b>3 416</b>	<b>4 160</b>	<b>(17.9)</b>	<b>828</b>	<b>888</b>	<b>929</b>	<b>771</b>

<sup>1</sup> „N/A” – not applicable – items which were not measured in accordance with principles arising from the application, from 1 January 2018, of IFRS 9.

<sup>2</sup> EBITDA = EBIT + depreciation/amortisation (recognised in profit or loss)

<sup>3</sup> Adjusted EBITDA = EBIT + depreciation/amortisation (recognised in profit or loss) + impairment loss (-reversal of impairment losses) on non-current assets, recognised in cost of sales, selling costs and administrative expenses

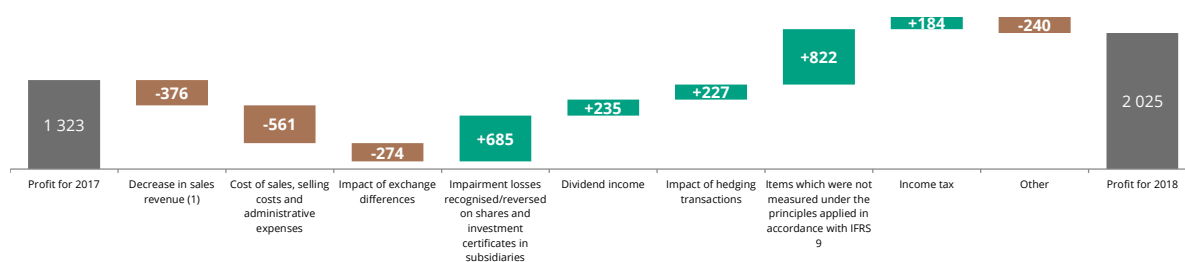
Table 21. Main reasons for the change in profit/(loss) of KGHM Polska Miedź S.A.

Item	Impact on change in result (PLN million)	Description
<b>Decrease in sales revenue by PLN 376 million</b> (excluding the impact of hedging transactions +PLN 109 million)	(643)	A decrease in revenues from sales of basic products (Cu, Ag, Au) due to a less favourable average annual USD/PLN exchange rate (a change from 3.78 to 3.61 USD/PLN).
	(575)	A decrease in revenues due to a lower volume of copper sales (-14.2 kt, -3%), silver (-38 t, -3%) and gold (-33 koz t, -28%).
	+461	An increase in revenues due to the sale of copper concentrate from PLN 80 million to PLN 541 million.
	+419	An increase in revenues due to higher prices of copper (+357 USD/t, +6%) and gold (+11 USD/koz t, +1%) alongside lower silver prices (-134 US\$/koz t, -8%).
	(38)	A decrease in revenues due to the sale of merchandise and other goods and services, including the value of third party processing of concentrate into cathodes (-PLN 58 million) and lower sales of refined lead (-PLN 12 million).

<b>An increase in cost of sales, selling costs and administrative expenses<sup>1</sup> by PLN 561 million</b>	(861)	A change in inventories of half-finished products, products and work in progress in 2018 (reducing costs) amounting to -PLN 236 million, compared to 2017: -PLN 1 097 million.
	+710	Lower consumption of purchased metal-bearing materials by 27 thousand tonnes Cu (-18%) alongside a lower purchase price by 1.5%.
	(410)	Including an increase in other expenses by nature by PLN 419 million, mainly due to a change in costs: other materials and energy (+PLN 191 million), external services (+PLN 118 million), depreciation/amortisation (+PLN 101 million), employee benefits (+PLN 114 million) and the minerals extraction tax (-PLN 94 million).
<b>Impairment losses recognised/reversed on shares and investment certificates in subsidiaries</b>	+685	Change in the balance of impairment losses recognised/ reversed from -PLN 330 million in 2017 to PLN +355 million in 2018
<b>Impact of exchange differences (-PLN 274 million)</b>	+1 565	A change in the result due to exchange differences from measurement of assets and liabilities other than borrowings – in other operating activities.
	(1 839)	A change in the result due to exchange differences on measurement of borrowings (presented in finance costs).
<b>Dividend income</b>	+235	An increase in dividend income from PLN 4 million to PLN 239 million.
<b>Impact of hedging transactions (+PLN 227 million)</b>	+109	A change in adjustments to sales revenue due to the settlement of hedging transactions from PLN 16 million to PLN 125 million.
	+248	A change in the result due to the measurement of derivatives from -PLN 233 million to +PLN 15 million.
	(130)	A change in the result due to the realisation of derivatives from -PLN 10 million to -PLN 140 million.
<b>Provisions recognised</b>	(139)	Provisions recognised in 2018 in the amount of PLN 162 million versus PLN 23 million in the prior year. The provisions recognised in 2018 were mainly in respect of disputed issues (PLN 103 million) mainly involving rationalisation and inventions and the property tax on mining divisions (PLN 49 million).
<b>Change in the balance of income and costs due to interest on borrowings, including fees and commissions (-PLN 75 million)</b>	(66)	A decrease in income due to interest on loans granted.
	(14)	Higher interest costs on borrowings.
	+5	A decrease in costs of fees and commissions on bank loans drawn.
<b>Items which were not measured under the principles applied in accordance with IFRS 9 since 1 January 2018 (+PLN 822 million)</b>	(63)	Fair value gains/(losses) on financial assets measured at fair value through profit or loss (in 2018)
	+183	Reversal of allowances for impairment of loans measured at amortised cost (in 2018)
	(4)	Allowances for impairment of loans under IFRS 9 (in 2018)
	+85	Reversal of impairment losses on assets impaired at the moment of initial recognition
	+15	(Recognition)/reversal of allowances for impairment of loans due to restructuring of intra-group financing (in 2018)
	+606	Allowances for impairment of loans under IAS 39 (in 2017)
<b>Decrease in income tax</b>	+184	The lower tax results from the lower tax base.

<sup>1</sup> Cost of products, merchandise and materials sold plus selling costs and administrative expenses

Chart 28. Change in profit for the period of KGHM Polska Miedź S.A. (PLN million)



<sup>1</sup> excluding adjustments due to hedging transactions

## Cash flows

Table 22. Statement of cash flows of KGHM Polska Miedź S.A. (PLN million)

	2018	2017	Change(%)	4Q'18	3Q'18	2Q'18	1Q'18
Profit / (loss) before income tax	2 672	2 154	+24.0	744	650	551	727
Depreciation/amortisation recognised in profit or loss	1 119	1 035	+8.1	299	286	283	251
Interest on investment activities	(219)	(299)	(26.8)	(43)	(57)	(65)	(54)
Impairment losses and reversals of impairment losses on non-current assets	(623)	940	×	(465)	(19)	(91)	(48)
Other adjustments to profit / (loss) before income tax	23	304	(92.4)	275	(111)	88	(229)
Exclusions of income and costs, total	300	1 980	(84.8)	66	99	215	(80)
Income tax paid	(710)	(934)	(24.0)	(189)	(189)	(188)	(144)
Changes in working capital	553	(1 120)	×	1 059	207	(128)	(585)
<b>Net cash generated from operating activities</b>	<b>2 815</b>	<b>2 080</b>	<b>+35.3</b>	<b>1 680</b>	<b>767</b>	<b>450</b>	<b>(82)</b>
Expenditures on mining and metallurgical assets	(1 884)	(1 970)	(4.4)	(523)	(419)	(386)	(556)
Expenditures on other property, plant and equipment and intangible assets	(23)	(21)	+9.5	3	(7)	(4)	(15)
Loans granted	(682)	(490)	+39.2	(413)	-	(264)	(5)
Other expenses	(84)	(83)	+1.2	(17)	(14)	(15)	(38)
Dividends received	239	4	×59.8	-	138	101	-
Other proceeds	35	48	(27.1)	7	3	19	6
<b>Net cash used in investing activities</b>	<b>(2 399)</b>	<b>(2 512)</b>	<b>(4.5)</b>	<b>(943)</b>	<b>(299)</b>	<b>(549)</b>	<b>(608)</b>
Proceeds from borrowings	2 257	2 416	(6.6)	221	(8)	932	1 112
Repayments of borrowings	(2 073)	(2 030)	+2.1	(692)	(235)	(665)	(481)
Proceeds from cash pooling	-	160	×	-	-	(60)	60
Expenses due to cash pooling	(80)	-	×	(30)	(10)	(40)	-
Dividends paid	-	(200)	×	-	-	-	-
Interest paid and other costs of borrowings	(152)	(138)	+10.1	(45)	(41)	(36)	(30)
<b>Net cash generated from/(used in) financing activities</b>	<b>(48)</b>	<b>208</b>	<b>×</b>	<b>(546)</b>	<b>(294)</b>	<b>131</b>	<b>661</b>
<b>TOTAL NET CASH FLOW</b>	<b>368</b>	<b>(224)</b>	<b>×</b>	<b>191</b>	<b>174</b>	<b>32</b>	<b>(29)</b>
Foreign exchange gains/(losses) on cash and cash equivalents	25	(24)	×	7	6	2	10
Cash and cash equivalents at the beginning of the period	234	482	(51.5)	429	249	215	234
<b>Cash and cash equivalents at the end of the period</b>	<b>627</b>	<b>234</b>	<b>×2.7</b>	<b>627</b>	<b>429</b>	<b>249</b>	<b>215</b>

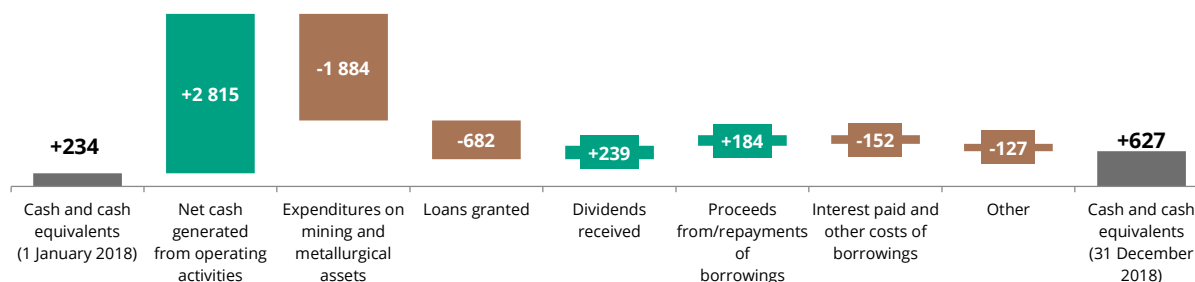
Net cash generated from operating activities in 2018 amounted to +PLN 2 815 million and mainly comprised profit before income tax in the amount of PLN 2 672 million adjusted by depreciation/amortisation in the amount of +PLN 1 119 million, less income tax paid in the amount of -PLN 710 million and the change in working capital in the amount of +PLN 553 million.

Net cash used in investing activities in 2018 amounted to -PLN 2 399 million and mainly comprised net expenditures on mining and metallurgical property, plant and equipment and intangible assets in the amount of -PLN 1 884 million and loans granted of -PLN 682 million alongside dividend income in the amount of PLN 239 million.

Net cash used in financing activities during the same period amounted to -PLN 48 million and mainly comprised proceeds from borrowings in the amount of +PLN 2 257 million as well as repayments of borrowings and the cash pooling in the amounts respectively of: -PLN 2 073 million and -PLN 80 million, along with interest paid and other costs of borrowings in the amount of -PLN 152 million.

After reflecting exchange gains/losses on cash and cash equivalents, at the end of 2018 cash and cash equivalents increased by PLN 393 million and amounted to PLN 627 million.

Chart 29. Cash flows of KGHM Polska Miedź S.A. (PLN million)





## Assets, equity and liabilities

Table 23. Assets of KGHM Polska Miedź S.A. (PLN million)

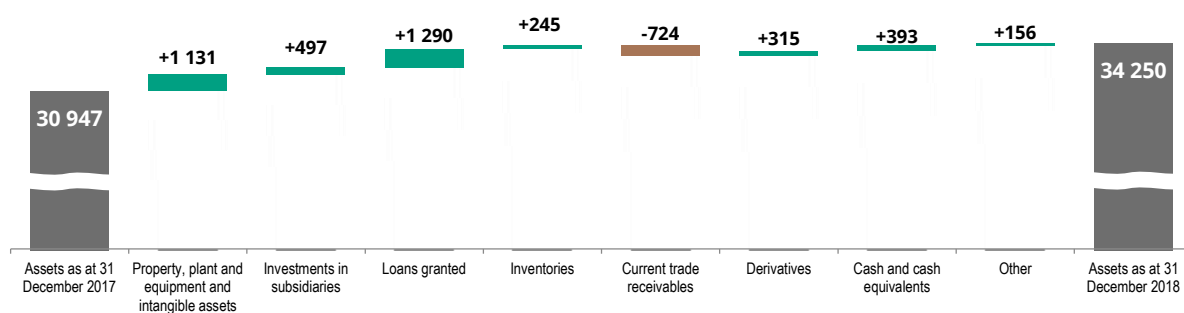
	31.12.2018	31.12.2017	Change (%)	30.09.2018	30.06.2018	31.03.2018
Mining and metallurgical property, plant and equipment	16 382	15 355	+6.7	15 674	15 554	15 373
Mining and metallurgical intangible assets	576	507	+13.6	557	550	532
Other property, plant and equipment	92	75	+22.7	71	69	71
Other intangible assets	52	34	+52.9	34	34	32
Investments in subsidiaries	3 510	3 013	+16.5	3 020	3 013	3 013
Financial instruments, including:	7 453	6 031	+23.6	6 742	6 781	5 901
- Loans granted	6 262	4 972	+25.9	5 559	5 580	4 780
- Derivatives	319	109	+2.9	398	328	212
- Other financial instruments measured at fair value	496	613	(19.1)	419	508	534
- Other financial assets	376	337	+11.6	366	365	375
Deferred tax assets	9	31	(71.0)	94	140	110
Other non-financial assets	24	25	(4.0)	35	22	24
<b>Non-current assets</b>	<b>28 098</b>	<b>25 071</b>	<b>+12.1</b>	<b>26 227</b>	<b>26 163</b>	<b>25 056</b>
Inventories	4 102	3 857	+6.4	4 588	4 627	4 651
Trade receivables	310	1 034	(70.0)	782	683	730
Tax assets	275	214	+28.5	167	166	160
Derivatives	300	195	+53.8	243	158	263
Other assets	538	342	+57.3	569	693	405
Cash and cash equivalents	627	234	+2.7	429	249	215
<b>Current assets</b>	<b>6 152</b>	<b>5 876</b>	<b>+4.7</b>	<b>6 778</b>	<b>6 576</b>	<b>6 424</b>
<b>TOTAL ASSETS</b>	<b>34 250</b>	<b>30 947</b>	<b>+10.7</b>	<b>33 005</b>	<b>32 739</b>	<b>31 480</b>

As at 31 December 2018, total assets amounted to PLN 34 250 million, or an increase as compared to the end of 2017 by PLN 3 303 million, or by 11%, mainly due to increases in the following items:

- **non-current financial instruments** by PLN 1 422 million, including mainly loans granted (+PLN 1 290 million) and derivatives (+PLN 210 million),
- **mining and metallurgical property, plant and equipment** by PLN 1 027 million, arising from the realisation of investments – expenditures on property, plant and equipment and intangible assets in 2018 amounted to PLN 2 132 million,
- **cash and cash equivalents** by PLN 393 million and
- **inventories** by PLN 245 million, including mainly half-finished products and work in progress (+PLN 144 million) and finished products (+PLN 117 million).

alongside a decrease in **trade receivables** by PLN 724 million, in connection with the implementation of new receivables financing programs (factoring), a decrease of copper prices in the second half of 2018 and a change in the manner of settling December spot contracts.

Chart 30. Change in assets of KGHM Polska Miedź S.A. in 2018 (PLN million)



The carrying amounts of equity and liabilities as at 31 December 2018 are presented below.

Table 24. Equity and liabilities of KGHM Polska Miedź S.A. (PLN million)

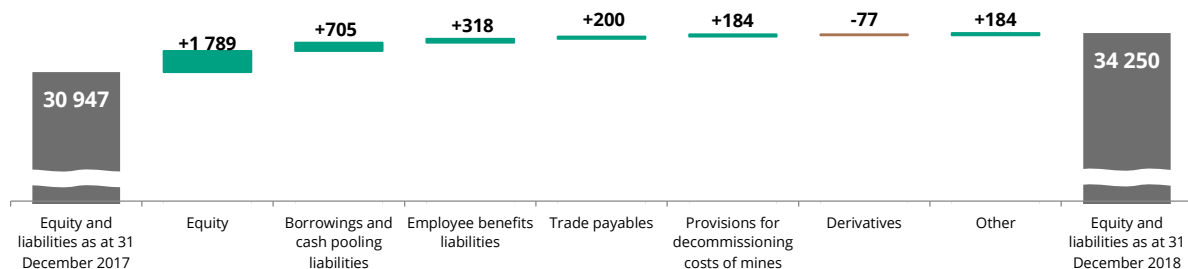
	31.12.2018	31.12.2017	Change (%)	30.09.2018	30.06.2018	31.03.2018
Share capital	2 000	2 000	-	2 000	2 000	2 000
Other reserves from measurement of financial instruments	(307)	142	x	(419)	(518)	(439)
Accumulated other comprehensive income	(593)	(348)	+70.4	(499)	(537)	(495)
Retained earnings	17 945	15 462	+16.1	17 263	16 820	16 363
<b>Equity</b>	<b>19 045</b>	<b>17 256</b>	<b>+10.4</b>	<b>18 345</b>	<b>17 765</b>	<b>17 429</b>
Borrowings	6 758	6 085	+11.1	7 012	7 343	5 863
Derivatives	68	84	(19.0)	82	97	80
Employee benefits liabilities	2 235	1 879	+18.9	2 125	2 139	2 049
Provisions for decommissioning costs of mines and other technological facilities	980	797	+23.0	791	844	794
Other liabilities	199	207	(3.9)	202	196	211
<b>Non-current liabilities</b>	<b>10 240</b>	<b>9 052</b>	<b>+13.1</b>	<b>10 212</b>	<b>10 619</b>	<b>8 997</b>
Borrowings	1 035	923	+12.1	1 053	1 112	1 627
Cash pooling liabilities	80	160	(50.0)	110	120	220
Derivatives	13	74	(82.4)	11	16	36
Trade payables	1 920	1 719	+11.7	1 452	1 145	1 321
Employee benefits liabilities	611	649	(5.9)	709	614	759
Tax liabilities	405	416	(2.6)	377	593	428
Other liabilities	901	698	+29.1	736	755	663
<b>Current liabilities</b>	<b>4 965</b>	<b>4 639</b>	<b>+7.0</b>	<b>4 448</b>	<b>4 355</b>	<b>5 054</b>
<b>Non-current and current liabilities</b>	<b>15 205</b>	<b>13 691</b>	<b>+11.1</b>	<b>14 660</b>	<b>14 974</b>	<b>14 051</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>34 250</b>	<b>30 947</b>	<b>+10.7</b>	<b>33 005</b>	<b>32 739</b>	<b>31 480</b>

There was an increase in equity and liabilities, mainly due to increases in the following items:

- **equity** by PLN 1 789 million, including with respect to the profit for 2018 in the amount of PLN 2 025 million,
- **borrowings and cash pool liabilities** by PLN 705 million, due to exchange rate differences (+PLN 597 million), accrued interest (+PLN 277 million) and cash flows (-PLN 169 million),
- **employee benefits liabilities** by PLN 318 million and in **trade payables** by PLN 200 million, and
- **provisions for decommissioning costs of mines and other technological facilities** by PLN 184 million,

alongside a decrease in **derivatives** by PLN 77 million.

Chart 31. Change in equity and liabilities of KGHM Polska Miedź S.A. in 2018 (PLN million)



### Contingent assets and liabilities

At the end of 2018, contingent assets amounted to PLN 558 million and related mainly to promissory notes receivables (PLN 225 million) and guarantees received by the Company with respect to the proper performance of agreements (PLN 168 million).

At the end of 2018, contingent liabilities amounted to PLN 3 151 million and mainly concerned guarantees and letters of credit in the total amount of PLN 2 828 million and due to promissory notes payable in the amount of PLN 176 million, including:

- a corporate guarantee securing repayment of a specified part of payment to guarantees set by Sumitomo Metal Mining Co., Ltd. and Sumitomo Corporation, securing repayment of a corporate loan drawn by the joint venture Sierra Gorda S.C.M. (PLN 677 million),
- a letter of credit granted set as security for the proper performance of a long-term contract for the off-take of electricity to the joint venture Sierra Gorda S.C.M. (PLN 517 million),
- corporate guarantees securing the repayment of short term working capital facilities drawn by the joint venture Sierra Gorda S.C.M. (PLN 496 million),

- a security for the costs of restoring the areas of the Robinson mine, Podolsky mine and the Victoria project, and obligations related to the proper performance of the agreements signed (PLN 401 million),
- a security for the proper performance of future environmental obligations of the Company to restore the area, following the conclusion of operations of the Żelazny Most tailings storage facility (PLN 160 million in the form of a bank guarantee and PLN 160 million in the form of an own promissory note),
- a security for the proper performance by DMC Mining Services (UK) Ltd. and DMC Mining Services Ltd. of a contract for sinking shafts under a project underway in the United Kingdom (PLN 188 million),
- corporate guarantees securing the proper performance of lease agreements entered into by the joint venture Sierra Gorda S.C.M. (PLN 125 million).

Other liabilities not recognised in the statement of financial position in the amount of PLN 451 million, comprised of:

- liabilities due to an operating lease in the amount of PLN 338 million,
- liabilities towards local government entities due to expansion of the tailings storage facility by KGHM Polska Miedź S.A. in the amount of PLN 113 million.

## 7.5. Capital expenditures

In 2018, capital expenditures on property, plant and equipment amounted to PLN 2 127 million and were higher than in the previous year by 4%. Together with expenditures incurred on uncompleted development work, capital expenditures amounted to PLN 2 132 million.

Table 25. Structure of expenditures on property, plant and equipment and intangible assets of KGHM Polska Miedź S.A. (PLN million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Mining	1 483	1 286	+15.3	580	352	300	251
Metallurgy	573	735	(22.0)	261	116	118	78
Other activities	71	32	×2.2	55	9	6	1
Development work - uncompleted	5	4	+25.0	4	1	-	-
<b>Total</b>	<b>2 132</b>	<b>2 057</b>	<b>+3.6</b>	<b>900</b>	<b>478</b>	<b>424</b>	<b>330</b>
including borrowing cost	133	61	×2.2	33	33	42	25

Investment activities comprised projects related to the replacement of equipment and maintaining mine production, as well as development projects:

**Projects related to the replacement of equipment** aimed at maintaining production equipment in an undeteriorated condition, represent 36% of total expenditures incurred.

**Projects related to maintaining mine production** aimed at maintaining mine production on the level set in approved Production Plan (development of infrastructure to match mine advancement) represent 26% of total expenditures incurred.

**Development projects** aimed at increasing production volume of the core business, implementation of technical and technological activities optimising use of existing infrastructure, maintaining production costs and adaptation of the company's operations to changes in standards, laws and regulations (conformatory projects and those related to environmental protection) represent 38% of total expenditures incurred.

Table 26. Major tasks and facilities advanced by KGHM Polska Miedź S.A. in 2018

Replacement (PLN 768 million)	
<b>Mining machinery replacement</b>	With respect to modernisation and replacement of mining machinery, 263 mining machines were purchased. Expenditures incurred in 2018: PLN 266 million.
<b>Infrastructure replacement - other</b>	Investments aimed at the replacement of infrastructure in the Divisions in order to maintain it in an undeteriorated condition. Expenditures incurred in 2018: PLN 502 million.
Maintaining mine production (PLN 555 million)	
<b>Mine infrastructure development</b>	Investments were made in the mines related to developing mine infrastructure, ventilation and air cooling equipment, conveyor belts and piping. Expenditures incurred in 2018: PLN 284 million, including expenditures incurred in 2018 on access and development tunneling under the Deposit Access Program in 2018 in the amount of PLN 48 million.
<b>Construction of the SW-4 shaft</b>	In 2018, work on the project comprised work on the side rock of the shaft to increase the amount of intake air, work to prepare for the installation of cables in the shaft, holes were drilled in the side rock for the installation of cables, the tower roof was rebuilt, maintenance was performed on the cementation bridge for installation of cables, and power and telecommunications cables were installed in the shaft.  Assembly and execution of around 90% of the main switching stations Rd-40 and AR-40 at the bottom of the SW-4 shaft was carried out. Lifting equipment in the shaft was also checked and evaluated.  As at 31 December 2018, expenditures were incurred in the amount of PLN 882 million, including PLN 27 million in 2018.

<b>Żelazny Most project ensuring the ability to store flotation tailings after 2016</b>	<p>Based on the permit received in 2016 to develop the Main Facility to a crown height of 195 meters a.s.l. and a permit to further operate the Tailings Storage Facility, the dam is being built up successively as part of the on-going operations of the Division.</p> <p>In March 2018, a permit was issued for construction of the Southern Quarter. Construction of the Southern Quarter will enable the additional deposition of waste tailings in the amount of around approx. 170 million m<sup>3</sup>.</p> <p>In May 2018, a contract was signed for construction of the Southern Quarter with the company Budimex. Construction is underway with planned completion on 31 December 2021.</p> <p>A substitute building permit for the Tailings Segregation and Thickening Station was received and construction commenced.</p> <p>As at 31 December 2018, expenditures were incurred in the amount of PLN 534 million, including PLN 215 million in 2018.</p>
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### Mining Development (PLN 508 million)

<b>Deposit Access Program</b>	<p>Work continues under the Program on sinking of the GG-1 ventilation and material-transport shaft with a target depth of 1 350 meters with a diameter of 7.5 meters. The shaft's depth has reached 1 070 meters (as at 31 December 2018).</p> <p>In 2018, construction began on the Surface-based Central Air Conditioning System (PSK) at the GG-1 shaft. A decision was received with respect to environmental conditions to advance the PSK as well as a building permit.</p> <p>With respect to the project to build an Ice Water Transportation System (IWTS), in 2018 work continued related to advancing the construction project and on obtaining an environmental decision to advance the IWTS.</p> <p>In 2018 an agreement was signed with the Gmina (municipality) of Żukowice and procedures commenced related to amending planning documentation with respect to the planned construction of the GG-2 „Odra” shaft.</p> <p>In 2018, 45 kilometers of tunneling were excavated in the Rudna and Polkowice-Sieroszowice mines, representing nearly 80% of the total amount of access and development tunnels in KGHM.</p> <p>As at 31 December 2018, total expenditures incurred on the Deposit Access Program amounted to PLN 3 010 million, including PLN 413 million in 2018 (development expenditures alone amounted to PLN 365 million).</p>
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<b>Change in the L-VI shaft's function to a material-transport shaft</b>	<p>In 2018, the complete power supply system for the L-VI shaft region was brought online. Final work is underway on: construction of the shaft complex together with buildings and surface infrastructure; construction of the rainwater pipeline and of the sewage pipeline together with telecommunications cables between shafts L-VI and L-I. In addition, in 2018 construction commenced on the following buildings: for the shipment of explosives, the Góra Logistics Center, a waste processing building and the construction of functional chambers together with the Underground Logistics Center. Work is underway on a mine telecommunications-announcements system: SAT-DOTRA.</p> <p>As at 31 December 2018, expenditures were incurred in the amount of PLN 235 million, including PLN 120 million in 2018.</p>
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<b>Modernisation of classification systems in the Concentrators Division</b>	<p>Polkowice Concentrator: work was completed on two more hydrocyclone batteries. A contractor was selected for the construction of the last 9 classification units.</p> <p>Lubin Concentrator: work was completed on 8 classification units and they were brought online.</p> <p>Rudna Concentrator: work was completed on 4 classification units.</p> <p>As at 31 December 2018, expenditures were incurred in the amount of PLN 126 million, including PLN 30 million in 2018.</p>
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### Metallurgy Development (PLN 241 million)

<b>Program to adapt the technological installations of KGHM to the requirements of BAT Conclusions for the non-ferrous metals industry together with restricting arsenic emissions (BATAs)</b>	<p>The BATAs Program which began in 2018 comprises 26 new investment projects, including 20 at the Głogów Copper Smelter and Refinery and 6 at the Legnica Copper Smelter and Refinery.</p> <p>By the end of December 2018 11 projects had commenced, including 9 at the Głogów Copper Smelter and Refinery and 2 at the Legnica Copper Smelter and Refinery. In addition, 7 tenders are underway, while project assumptions are being updated for 8 projects. A decision was made to terminate 2 of the projects underway at the Głogów Copper Smelter and Refinery.</p> <p>As at 31 December 2018, expenditures were incurred in the amount of PLN 2 million.</p>
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<b>Metallurgy Development Program</b>	<p>In 2018 the stage of technological trials for the steam drier was completed. Following the maintenance shutdown of the Głogów II Copper Smelter and Refinery, production is underway with the full use of the newly-built steam drier. Work is underway on the settlements and final handover stage.</p> <p>The concentrate roasting installation is undergoing start-up trials.</p> <p>In terms of conformatory projects work continues on settlements with contractors, the completion of post-construction documentation and obtaining operating permits.</p> <p>As at 31 December 2018, expenditures on the program were incurred in the amount of PLN 1 192 million, including PLN 52 million in 2018.</p>
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<b>Increasing cathode production at the Legnica Copper Smelter and Refinery to 160 kt of copper cathode/year (HML160)</b>	<p>In 2018 work on the project comprised continued construction of the Revolving-Casting-Refining Furnace (RCR) at the Legnica Copper Smelter and Refinery. The following equipment was assembled: the RCR furnace, post combustion chamber, full evaporation tower, casting machinery, the installation to provide utilities, electrical installation and the APKiA ("Aparatury Kontrolno-Pomiarowej i Automatyki", or Control-Measurement and Automation Apparatus).</p> <p>As at 31 December 2018, expenditures were incurred in the amount of PLN 96 million, including PLN 83 million in 2018.</p>
<b>Pyrometallurgy Modernisation Program (PMP)</b>	<p>Production by the flash furnace of the Głogów I Copper Smelter and Refinery was stabilised in accordance with the current production plan. Settlement procedures and the final handovers of contracts and orders with respect to the Pyrometallurgy Modernisation Program are near completion.</p>
<b>Other Development (PLN 43 million)</b>	
<b>KGHM 4.0 Program</b>	<p>The KGHM 4.0 Program which began in 2018 is a venture which addresses the Industry 4.0 concept within the technical-organisational environment of KGHM Polska Miedź S.A. The KGHM 4.0 Program comprises the advancement of projects in 3 areas: INDUSTRY, ICT and SUPPORTING PROJECTS. The Program is aimed at the unified management of production and the utilisation of data in order to improve productivity and efficiency.</p> <p>In December 2018 an electric vehicle charging station open to the public was created in Lubin. This is a result of an agreement with the company Tauron, which foresees the cooperation between the companies in the area of electromobility, including the construction of vehicle charging station infrastructure for car-sharing services (so-called "auta na minuty"), and mutual pro-ecological activities.</p> <p>As at 31 December 2018, expenditures were incurred in the amount of PLN 41 million.</p>
<b>Exploration Development (PLN 12 million)</b>	
<b>Exploration projects</b>	<p><b>Synklina Grodziecka, Konrad</b> – Synklina Grodziecka, Konrad – hydrogeological research planned for the years 2018-2020 remains underway. In January 2019 administrative proceedings in the concession-granting body for the Synklina Grodziecka concession were concluded.</p> <p><b>Retków-Ścinawa</b> – Based on the results from 3 drillholes sunk in 2017 (S-761, S-708 and S-745) it was decided to alter the scope of drilling under the concessions a result of which in December 2017 it became necessary to introduce changes in the scope of planned geological and mining work by submitting a request to the Ministry of the Environment for a change in the concession. In the third quarter of 2018 a decision was received altering the concession and work commenced on the sinking of another drillhole under stage 2 of the geological research.</p> <p><b>Głogów</b> - In 2018, surface-based geophysical research was conducted under stage 2 of the geological research. At the start of December 2018 a request was submitted to the concession-granting body for a change in the concession involving extension of its life (to March 2020).</p> <p><b>Bytom Odrzański, Kulów-Luboszyce</b> – On 30 November 2017 the Supreme Administrative Court dismissed the claims of KGHM against a decision of the Regional Administrative Court dated 10 July 2015. At the start of 2019 the Ministry of the Environment announced a re-opening of the proceedings regarding a re-hearing of concession applications.</p> <p><b>Puck region</b> - in 2018 drilling work continued and Amendment no. 1 to the Geological Work Project, in which a proposal was made for an additional drillhole, was submitted to the concession-granting body for its approval. At a hearing on 27 February 2019, the Supreme Administrative Court dismissed the cassation appeals of a competing company which had filed a complaint against the concession granted to KGHM for the same region.</p> <p>In the years 2010-2018 expenditures were incurred on exploration projects in the amount of PLN 363 million, including PLN 12 million in 2018.</p>

## 8. Economic results of KGHM INTERNATIONAL LTD.

### 8.1. Production

Table 27. Production of KGHM INTERNATIONAL LTD.

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
<b>Payable copper, including:</b>	<b>kt</b>	<b>78.8</b>	<b>81.0</b>	<b>(2.7)</b>	<b>18.0</b>	<b>18.2</b>	<b>22.5</b>	<b>20.1</b>
- Robinson mine (USA)	kt	48.0	48.8	(1.6)	9.3	9.9	15.1	13.7
- Sudbury Basin mines (CANADA) <sup>1</sup>	kt	7.4	9.4	(21.3)	1.9	1.9	1.8	1.8
<b>Payable nickel</b>	<b>kt</b>	<b>0.9</b>	<b>1.1</b>	<b>(18.2)</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>
<b>Precious metals (TPM), including:</b>	<b>koz t</b>	<b>67.6</b>	<b>74.0</b>	<b>(8.6)</b>	<b>16.3</b>	<b>16.7</b>	<b>18.8</b>	<b>15.8</b>
- Robinson mine (USA)	koz t	37.1	35.2	+5.4	8.3	8.5	10.6	9.7
- Sudbury Basin mines (CANADA) <sup>1</sup>	koz t	30.5	38.8	(21.4)	8.1	8.1	8.2	6.1

<sup>1</sup> Comprised of the Morrison and McCreedy West mines in the Sudbury Basin

Copper production in the segment KGHM INTERNATIONAL LTD. in 2018 amounted to 78.8 thousand tonnes, or a decrease by 2.2 thousand tonnes (-3%) as compared to 2017.

The decrease in copper production by the Robinson mine by 0.8 thousand tonnes (-2%) was due to lower recoveries caused by the parameters of the ore extracted. This was partially offset by an increase in ore throughput. The increase in production of precious metals by 1.9 thousand troy ounces (+5%) was due to higher recoveries from the processing of gold (+18%), which was limited by a lower ore grade of this metal.

The increase in ore extraction by the Sudbury Basin mines (+14%) was unable to offset the decrease in metals grade in ore (including copper by 32%), as a result of which the production of copper and precious metals was lower respectively by 2 thousand tonnes (-21%) and 8.3 thousand troy ounces (-21%).

## 8.2. Sales revenue

Table 28. Volume and sales revenue of KGHM INTERNATIONAL LTD. (USD million)

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
<b>Revenues from contracts with customers<sup>1</sup>, including:</b>	<b>USD mn</b>	<b>788</b>	<b>695</b>	<b>+13.4</b>	<b>215</b>	<b>204</b>	<b>189</b>	<b>180</b>
- copper	USD mn	460	454	+1.3	118	102	132	108
- nickel	USD mn	12	12	-	3	3	3	3
- TPM – precious metals	USD mn	95	99	(4.0)	36	20	19	20
Copper sales volume	kt	78.0	80.0	(2.5)	21.3	18.3	21.1	17.3
Nickel sales volume	kt	0.9	1.1	(18.2)	0.2	0.3	0.2	0.2
TPM sales volume	koz t	66.0	72.6	(9.1)	18.3	16.1	17.7	13.9

<sup>1</sup> reflects processing premium

Table 29. Sales revenue of KGHM INTERNATIONAL LTD. (PLN million)

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
<b>Revenues from contracts with customers<sup>1</sup>, including:</b>	<b>PLN mn</b>	<b>2 856</b>	<b>2 602</b>	<b>+9.8</b>	<b>808</b>	<b>750</b>	<b>689</b>	<b>609</b>
- copper	PLN mn	1 666	1 702	(2.1)	446	375	480	365
- nickel	PLN mn	44	46	(4.3)	11	11	11	11
- TPM – precious metals	PLN mn	344	371	(7.3)	135	72	69	68

<sup>1</sup> reflects processing premium

The sales revenue of the segment KGHM INTERNATIONAL LTD. in 2018 amounted to USD 788 million, and increased by USD 93 million (+13%) as compared to the prior year, mainly due to an increase in the sales revenue of companies operating under the brand of DMC Mining Services („DMC”).

The increase in sales revenue of DMC mainly related to the realisation of a contract in the United Kingdom and amounted to USD 105 million.

The increase in revenues from sales of copper by USD 6 million (+1%) was due to a higher effective copper sales price (6 423 USD/t in 2018 as compared to 6 315 USD/t in 2017) and to lower processing premiums (TC/RC), which decrease revenues. The impact of these factors was partially offset by a lower copper sales volume by 2 thousand tonnes (-3%).

The decrease in the volume of precious metals sales by 6.6 thousand troy ounces (-9%) and lower effective prices led to a decrease in revenues from TPM sales by USD 4 million (-4%).

## 8.3. Costs

Table 30. C1 unit cost of KGHM INTERNATIONAL LTD.

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
C1 unit cost <sup>1</sup>	USD/lb	1.92	1.92	-	2.04	1.89	1.84	1.89

<sup>1</sup> C1 unit production cost of copper - cash cost of payable copper production, reflecting costs of ore extraction and processing, the minerals extraction tax, transport costs, administrative expenses during the mining phase and smelter treatment and refining charges (TC/RC) less by-product value

The average weighted unit cash cost of copper production for all operations in the segment KGHM INTERNATIONAL LTD. in 2018 remained at the prior year's level and amounted to 1.92 USD/lb. The increase in C1 cost in the fourth quarter of 2018 to 2.04 USD/lb was due to the lower copper sales volume and to lower revenues from by-product sales (which decrease C1).



## 8.4. Financial performance

Table 31. Financial results of KGHM INTERNATIONAL LTD. (USD million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Revenues from contracts with customers	788	695	+13.4	215	204	189	180
Cost of sales, selling costs and administrative expenses, including: <sup>1</sup>	(716)	(526)	+36.1	(197)	(195)	(181)	(143)
- recognition/reversal of impairment losses on non-current assets	-	74	(100.0)	-	-	-	-
<b>Profit/(loss) on sales (EBIT)</b>	<b>72</b>	<b>169</b>	<b>(57.4)</b>	<b>18</b>	<b>9</b>	<b>8</b>	<b>37</b>
<b>Profit/(loss) before taxation, including:</b>	<b>(85)</b>	<b>(336)</b>	<b>(74.7)</b>	<b>51</b>	<b>(28)</b>	<b>(118)</b>	<b>10</b>
- share of losses of joint ventures accounted for using the equity method	(182)	(127)	+43.3	(110)	-	(72)	-
Income tax	(8)	179	x	(4)	(1)	(2)	(1)
<b>PROFIT/(LOSS) FOR THE PERIOD</b>	<b>(92)</b>	<b>(157)</b>	<b>(41.4)</b>	<b>48</b>	<b>(29)</b>	<b>(120)</b>	<b>9</b>
Depreciation/amortisation recognised in profit or loss	(127)	(94)	+35.1	(33)	(32)	(49)	(13)
EBITDA <sup>2</sup>	199	263	(24.3)	51	40	58	50
<b>Adjusted EBITDA<sup>3</sup></b>	<b>199</b>	<b>189</b>	<b>+5.3</b>	<b>51</b>	<b>40</b>	<b>58</b>	<b>50</b>

Table 32. Financial results of KGHM INTERNATIONAL LTD. (PLN million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Revenues from contracts with customers	2 856	2 602	+9.8	809	749	689	609
Cost of sales, selling costs and administrative expenses, including: <sup>1</sup>	(2 595)	(1 989)	+30.5	(741)	(716)	(653)	(485)
- recognition/reversal of impairment losses on non-current assets	-	257	(100.0)	-	-	-	-
<b>Profit/(loss) on sales (EBIT)</b>	<b>261</b>	<b>613</b>	<b>(57.4)</b>	<b>68</b>	<b>33</b>	<b>36</b>	<b>124</b>
<b>Profit/(loss) before taxation, including:</b>	<b>(280)</b>	<b>(1 231)</b>	<b>(77.3)</b>	<b>207</b>	<b>(106)</b>	<b>(415)</b>	<b>34</b>
- share of losses of joint ventures accounted for using the equity method	(658)	(474)	+38.8	(403)	(3)	(252)	-
Income tax	(28)	670	x	(14)	(4)	(5)	(5)
<b>PROFIT/(LOSS) FOR THE PERIOD</b>	<b>(308)</b>	<b>(561)</b>	<b>(45.1)</b>	<b>193</b>	<b>(110)</b>	<b>(420)</b>	<b>29</b>
Depreciation/amortisation recognised in profit or loss	(461)	(351)	+31.3	(126)	(115)	(176)	(44)
EBITDA <sup>2</sup>	722	964	(25.1)	194	148	212	168
<b>Adjusted EBITDA<sup>3</sup></b>	<b>722</b>	<b>707</b>	<b>+2.1</b>	<b>194</b>	<b>148</b>	<b>212</b>	<b>168</b>

<sup>1</sup> Cost of products, merchandise and materials sold, selling costs and administrative expenses

<sup>2</sup> EBITDA = EBIT + depreciation/amortisation (recognised in profit or loss)

<sup>3</sup> Adjusted EBITDA = EBIT + depreciation/amortisation (recognised in profit or loss) + impairment losses (-reversal of impairment losses) on non-current assets, recognised in cost of sales, selling costs and administrative expenses

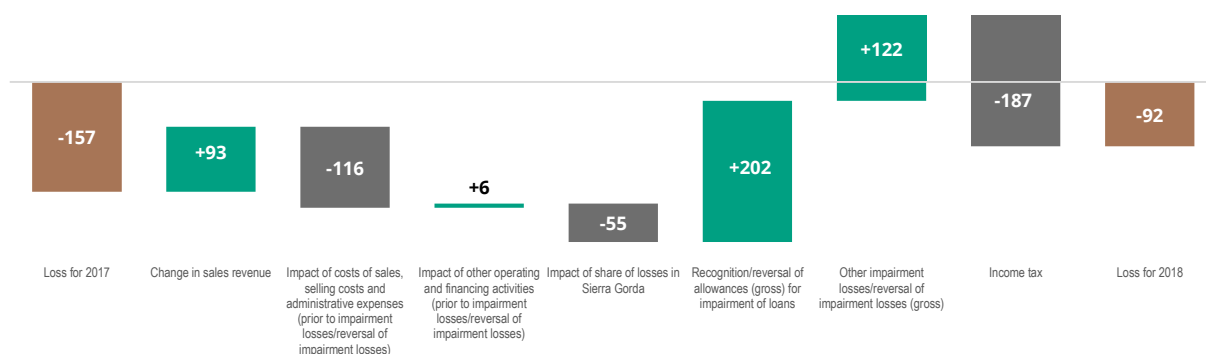
Key factors impacting the change in financial result of KGHM INTERNATIONAL LTD.:

Item	Impact on change of profit or loss (USD million)	Description
<b>Higher sales revenue by USD 93 million</b>	+105	Higher revenues due to a contract being advanced by DMC in the United Kingdom.
	(20)	Lower revenues due to lower sales volumes, including copper (-USD 14 mn)
	+8	Other factors
	+34	A change in inventories.
<b>Higher cost of sales, selling costs and administrative expenses by USD 190 million</b>	(74)	No impairment loss on assets recognised/reversed in 2018, in 2017 recognition/reversal of impairment loss on assets (+USD 74 mn)
	(38)	Higher depreciation/amortisation due to reversal of impairment losses on assets of the Robinson mine as at 31 December 2017
	(46)	Higher costs of labour (+USD 25 mn) and materials and energy (+USD 21 mn)
	(74)	Higher costs of external services mainly due to an increased scope of work carried out by subcontractors of DMC
	+8	Other factors



	(26) Decrease in other operating income, including due to lower interest on loans granted to Sierra Gorda S.C.M.
<b>Impact of other operating activities and financing activities (+USD 403 million), including:</b>	+202 (Recognition)/reversal of allowances for impairment of loans. The tests conducted showed justification for a reversal of the impairment allowance recognised in prior years with regard to loans granted for the construction of the Sierra Gorda mine. The amount of the allowance reversed as at 31 December 2018 amounts to USD 195 million (in 2017 the allowance amounted to -USD 7 million)
	+196 Other impairment losses recognised and reversed. The result on other operating activities for 2018 reflects the impairment loss on non-financial assets in the amount of -USD 13 million, while in 2017 the excess of the impairment loss on intangible assets not yet available for use recognised over the reversed impairment in this regard amounted to -USD 209 million.
	+31 Other factors, of which mainly decrease in finance costs (+USD 17 million)
<b>Share of losses of entities accounted for using the equity method (-USD 55 million)</b>	(55) Share of the loss of Sierra Gorda S.C.M. recognised in 2018 in the amount of the financing granted, i.e. in the amount of USD 182 mn (in 2017 the share of the loss of Sierra Gorda S.C.M. was also recognised in the amount of the financing granted, i.e. in the amount of USD 127 mn)
<b>Income tax</b>	(187) Changes mainly due to deferred income tax

Chart 32. Change in profit or loss of KGHM INTERNATIONAL LTD. (USD million)



## 8.5. Cash expenditures

Table 33. Cash expenditures of KGHM INTERNATIONAL LTD. (USD million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Victoria project	5	5	-	1	1	1	2
Sierra Gorda Oxide project	2	2	-	1	1	-	-
Pre-stripping and other	164	136	+20.6	44	39	44	37
Ajax project	-	3	(100.0)	-	-	-	-
<b>Total</b>	<b>171</b>	<b>147</b>	<b>+16.3</b>	<b>46</b>	<b>41</b>	<b>45</b>	<b>39</b>
Financing for Sierra Gorda S.C.M.	182	127	+43.3	110	-	72	-

Table 34. Cash expenditures of KGHM INTERNATIONAL LTD. (PLN million)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Victoria project	19	19	-	6	3	3	7
Sierra Gorda Oxide project	6	8	(25.0)	3	3	-	-
Pre-stripping and other	595	511	+16.4	167	141	161	126
Ajax project	0	11	(100.0)	-	-	-	-
<b>Total</b>	<b>620</b>	<b>549</b>	<b>+12.9</b>	<b>176</b>	<b>147</b>	<b>164</b>	<b>133</b>
Financing for Sierra Gorda S.C.M.	658	474	38.8	403	3	252	-

Cash expenditures by the segment KGHM INTERNATIONAL LTD. in 2018 amounted to USD 171 million (an increase by USD 24 million as compared to 2017).

Around 75% of cash expenditures were incurred by the Robinson mine and were due to pre-stripping work, developing the tailings storage facility and geotechnical drilling.

In 2018, USD 5 million was spent on the Victoria project to secure infrastructure and project terrain. Cash expenditures on the Sierra Gorda Oxide project amounted to USD 2 million and were incurred on the analysis of selected project assumptions and work on acquiring required permits.

In the second and fourth quarters KGHM INTERNATIONAL LTD. financed the Sierra Gorda mine in the total amount of USD 182 million to ensure liquidity, including covering the repayments of the bank loan drawn to build the mine.

## 9. Economic results of Sierra Gorda S.C.M.

The segment Sierra Gorda S.C.M. is a joint venture (under the JV company Sierra Gorda S.C.M.) of KGHM INTERNATIONAL LTD. (55%) and Sumitomo Group companies (45%).

The following production and financial data are presented on a 100% basis for the joint venture and proportionally to the interest in the company Sierra Gorda S.C.M. (55%), pursuant to the methodology of presentation of data in note 2 to the consolidated financial statements.

### 9.1. Production

In the fourth quarter of 2018, Sierra Gorda S.C.M. produced a higher amount of copper than the levels recorded in the previous three quarters of 2018. Molybdenum production for the quarter was also relatively high.

Table 35. Production of copper, molybdenum and precious metals by Sierra Gorda S.C.M.

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Copper production <sup>1</sup>	kt	96.9	97.1	(0.2)	27.6	24.7	22.8	21.8
Copper production – segment (55%)	kt	53.3	53.4	(0.2)	15.2	13.6	12.5	12.0
Molybdenum production <sup>1</sup>	mn lbs	26.7	35.7	(25.2)	7.2	5.6	6.7	7.2
Molybdenum production – segment (55%)	mn lbs	14.7	19.7	(25.2)	4.0	3.0	3.7	4.0
TPM production – gold <sup>1</sup>	koz t	42.2	50.9	(17.1)	13.4	11.8	8.6	8.4
TPM production – gold – segment (55%)	koz t	23.2	28.0	(17.1)	7.4	6.5	4.7	4.6

<sup>1</sup> Payable metal in concentrate.

The improved results in the final quarter led to the production of 96.9 thousand tonnes of copper in 2018. Maintaining production at the level of 2017 alongside a decrease in copper grade in ore was possible due to the improved efficiency in the utilisation of assets at the processing stage. In 2018, preventative actions were undertaken with respect to maintenance and the exchange of installation elements, which enabled an increase in the period between major maintenance work on the Ore Processing Plant from 2 months in 2017 to 3 months in 2018, and consequently an increase in the volume of ore processed by 7% compared to 2017.

With respect to molybdenum, production decreased as compared to 2017 by 9.0 million pounds due to mining in an area of lower molybdenum content (the sequence of mining in an area with a lower grade of this metal resulted from the approved mining plan).

### 9.2. Sales

In 2018, sales revenues amounted to USD 978 million (on a 100% basis), or PLN 1 948 million respectively to the 55% interest held by KGHM Polska Miedź S.A.

Table 36. Sales volume and revenues of Sierra Gorda S.C.M.

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
<b>Revenues from contracts with customers,<sup>1</sup> including from the sale of:</b>	<b>USD mn</b>	<b>978</b>	<b>968</b>	<b>+1.0</b>	<b>261</b>	<b>248</b>	<b>211</b>	<b>258</b>
- copper	USD mn	535	574	(6.8)	151	131	113	140
- molybdenum	USD mn	380	315	+20.6	90	100	88	102
Copper sales volume	kt	94.7	98.4	(3.8)	28.4	25.2	18.2	22.9
Molybdenum sales volume	mn lbs	30.8	35.3	(12.7)	7.4	8.3	7.7	7.4
<b>Revenues from contracts with customers<sup>1</sup> - segment (55% interest)</b>	<b>PLN mn</b>	<b>1 948</b>	<b>1 993</b>	<b>(2.3)</b>	<b>541</b>	<b>499</b>	<b>427</b>	<b>481</b>

<sup>1</sup> reflecting treatment/refining and other charges

The increase in revenues by USD 10 million as compared to the amount achieved in 2017 was mainly due to higher molybdenum prices (higher revenues by USD 121 million) and a lower volume of sales of this metal (lower revenues by USD 57 million). Revenues from sales of copper were lower due to lower prices and a lower volume of sales (lower revenues in total by USD 46 million).

The impact of the main factors responsible for the change in sales revenue is described in the section discussing the financial results Sierra Gorda S.C.M.

### 9.3. Costs

The cost of sales, selling costs and administrative expenses incurred by Sierra Gorda S.C.M. amounted to USD 934 million, of which USD 68 million were selling costs and USD 40 million administrative expenses. Proportionally to the interest owned (55%) the costs of the segment Sierra Gorda amounted to PLN 1 861 million.

Table 37. Costs (prior to the impairment loss on non-current assets) and unit production cost of copper (C1) of Sierra Gorda S.C.M.

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Cost of sales, selling costs and administrative expenses	USD mn	934	898	+4.0	265	240	186	243
Cost of sales, selling costs and administrative expenses – segment (55% interest)	PLN mn	1 861	1 849	+0.6	548	482	378	453
<b>C1 unit cost<sup>1</sup></b>	<b>USD/lb</b>	<b>1.31</b>	<b>1.67</b>	<b>(21.6)</b>	<b>1.56</b>	<b>1.29</b>	<b>0.83</b>	<b>1.43</b>

<sup>1</sup> C1 unit production cost of copper - cash cost of payable copper production, reflecting costs of ore extraction and processing, the minerals extraction tax, transport costs, administrative expenses during the mining phase and smelter treatment and refining charges (TC/RC) less by-product value

The cost of sales, selling costs and administrative expenses expressed in million USD was 4% higher than in 2017, which was significantly impacted by higher ore throughput (+7%).

Costs increased mainly in the following areas:

- depreciation/amortisation (+21%) resulting from access being gained to one of the mining areas more rapidly than assumed,
- energy costs (+9%) – a higher volume of ore throughput and greater hardness of the ore, and
- costs of fuel, lubricants and oils (+15%), mainly due to an increase in diesel prices.

On the other had there were positive tendencies with respect to the following costs:

- external services (-9%) – optimisation of their scope, internalisation of some services and updating of contractual prices,
- materials (-8%) – mainly a decrease in the consumption of explosives and flotation agents,
- spare parts (-3%) – realisation of the strategy as regards maintenance (extension of inter-maintenance cycles), and
- third-party molybdenum processing costs (-21%) – elimination of penalties due to substantial improvement in the quality of the molybdenum concentrate as compared to prior years.

The aforementioned factors led to a decrease in the unit operating cost of the ore processing plant (per tonne of ore processed) by 10%, alongside a unit mining cost (per tonne of excavated ore) at the level of 2017.

There was also a decrease in the unit cost of copper production (C1) from 1.67 USD/lb to 1.31 USD/lb, although in this case the main factor in the improvement was the higher price of molybdenum, which determines the level of revenues from sales of associated metals and decreases C1 cost.

### 9.4. Financial results

#### Statement of profit or loss

In 2018, EBITDA amounted to USD 318 million, of which proportionally to the interest held (55%) PLN 633 million is attributable to the KGHM Group.

Table 38. Results of Sierra Gorda S.C.M. in USD million (on a 100% basis)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Revenues from contracts with customers	978	968	+1.0	261	248	211	258
Cost of sales, selling costs and administrative expenses	(934)	(898)	+4.0	(265)	(240)	(186)	(243)
Profit/(loss) on sales (EBIT)	44	70	(37.1)	(4)	8	25	15
<b>PROFIT/(LOSS) FOR THE PERIOD</b>	<b>(385)</b>	<b>(255)</b>	<b>+51.0</b>	<b>(191)</b>	<b>(72)</b>	<b>(56)</b>	<b>(66)</b>
Depreciation/amortisation recognised in profit or loss	(274)	(226)	+21.2	(75)	(67)	(60)	(72)
<b>EBITDA<sup>1</sup></b>	<b>318</b>	<b>296</b>	<b>+7.4</b>	<b>71</b>	<b>75</b>	<b>85</b>	<b>87</b>
<b>Adjusted EBITDA<sup>2</sup></b>	<b>318</b>	<b>296</b>	<b>+7.4</b>	<b>71</b>	<b>75</b>	<b>85</b>	<b>87</b>

Table 39. Results of the segment Sierra Gorda S.C.M. proportionally to the interest held (55%) in PLN million

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Revenues from contracts with customers	1 948	1 993	(2.3)	541	499	427	481
Cost of sales, selling costs and administrative expenses	(1 861)	(1 849)	+0.6	(548)	(482)	(378)	(453)
Profit/(loss) on sales (EBIT)	87	144	(39.6)	(7)	17	49	28
<b>PROFIT/(LOSS) FOR THE PERIOD</b>	<b>(767)</b>	<b>(525)</b>	<b>+46.1</b>	<b>(386)</b>	<b>(145)</b>	<b>(113)</b>	<b>(123)</b>
Depreciation/amortisation recognised in profit or loss	(546)	(465)	+17.4	(156)	(134)	(121)	(135)
<b>EBITDA<sup>1</sup></b>	<b>633</b>	<b>609</b>	<b>+3.9</b>	<b>149</b>	<b>151</b>	<b>170</b>	<b>163</b>
<b>Adjusted EBITDA<sup>2</sup></b>	<b>633</b>	<b>609</b>	<b>+3.9</b>	<b>149</b>	<b>151</b>	<b>170</b>	<b>163</b>

<sup>1</sup> EBITDA = EBIT + depreciation/amortisation (recognised in profit or loss)

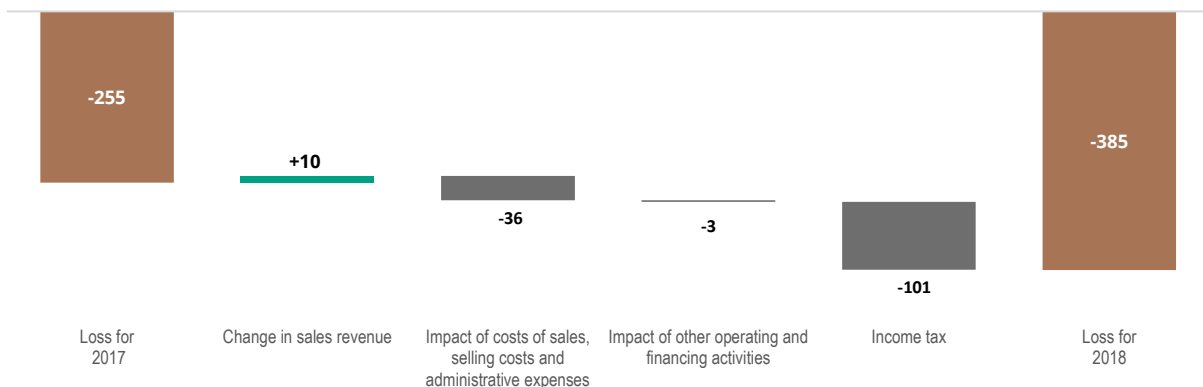
<sup>2</sup> Adjusted EBITDA = EBIT + depreciation/amortisation (recognised in profit or loss) + impairment loss (-reversal of impairment losses) on non-current assets (recognised in cost of sales, selling costs and administrative expenses)

The increase in EBITDA for 2018 was due to higher sales revenues, which as compared to 2017 increased by USD 10 million, mainly due to a better macroeconomic situation on the molybdenum market and lower costs excluding depreciation/amortisation by USD 12 million. The most important factors affecting the level of revenues and costs, and therefore EBITDA, is shown in the following table.

Main factors responsible for the increase in the loss for the period of Sierra Gorda S.C.M. by USD 130 million:

Item	Impact on change of profit or loss (USD million)	Description
	(23)	Lower revenues due to lower copper prices
	(23)	Lower revenues due to a lower copper sales volume by 4 kt
<b>Higher sales revenue by USD 10 million, including:</b>	+121	Higher revenues due to higher molybdenum prices
	(57)	Lower revenues due to a lower molybdenum sales volume by 4 mn lbs
	(8)	Other factors, mainly lower revenues from gold and silver sales
	+63	Lower costs, mainly: external services, materials, spare parts, molybdenum processing
<b>Higher cost of sales, selling costs and administrative expenses by USD 36 million, including:</b>	(84)	Higher costs, mainly: depreciation/amortisation, energy, fuel, labour costs, selling costs
	(20)	Change in inventories
	+5	Higher costs of pre-stripping, subject to capitalisation and at the same time lowering costs in profit or loss
<b>Impact of other operating activities – an increase in the result by USD 18 million</b>	+18	Mainly an increase in other income due to foreign exchange gains and to lower costs due to the release of provisions for disputed issues
<b>An increase in finance costs by USD 21 million</b>	(21)	Mainly a higher level of accrued interest on Owner loans granted to build the mine
<b>Income tax</b>	(101)	Mainly an impairment loss on the deferred tax asset ( USD 110 million)

Chart 33. Change in profit/loss (USD million)



Sierra Gorda S.C.M. recorded a loss for 2018 of USD 385 million, due to accrued interest on a loan granted by the company's partners to build the mine. In addition, at the end of 2018 an impairment loss was recognised on the tax asset, which increased the loss as compared to 2017 by USD 110 million.

### Cash expenditures

In 2018, cash expenditures on property, plant and equipment and intangible assets, reflected in the statement of cash flows of Sierra Gorda S.C.M. amounted to USD 287 million, of which the majority, or USD 206 million (72%) were cash expenditures incurred on pre-stripping to gain access to further areas of the deposit, with the rest related to development work and the replacement of property, plant and equipment.

Table 40. Cash expenditures of Sierra Gorda S.C.M.

	Unit	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Cash expenditures on property, plant and equipment	USD mn	287	274	+4.7	56	72	84	75
Cash expenditures on property, plant and Equipment – segment (55% interest)	PLN mn	572	564	+1.4	120	145	168	139

The increase in investment expenditures (expressed in USD) by 5% was mainly due to capitalised pre-stripping costs due to the greater scope of work carried out.

The main source of financing investments was the inflow from operating activities. In 2018, Owner financing of Sierra Gorda amounted to USD 330 million.

## 10. Financial results of other segments

Companies in the remaining segments are very diversified in their operations. Among others they are of an equity investment nature, as well as playing an important role in fulfilling the policy of corporate social responsibility. This segment also includes companies which are to be restructured and divested. The segment in addition includes closed-end non-public investment funds and their portfolio companies (including those forming the Polska Grupa Uzdrowisk (Polish Spa Group)).

Table 41. Financial results of other segments (prior to consolidation adjustments)

	2018	2017	Change (%)	4Q'18	3Q'18	2Q'18	1Q'18
Sales revenue	6 990	6 478	+7.9	1 922	1 699	1 719	1 650
- including from external clients	2 202	2 013	+9.4	517	578	554	553
Profit/(loss) on sales (EBIT)	(33)	43	×	(55)	(15)	22	15
<b>Profit/(loss) for the period</b>	<b>(41)</b>	<b>38</b>	<b>×</b>	<b>(52)</b>	<b>(21)</b>	<b>16</b>	<b>16</b>
Depreciation/amortisation recognised in profit or loss	(225)	(234)	(3.8)	(57)	(53)	(58)	(57)
<b>EBITDA<sup>1</sup></b>	<b>192</b>	<b>277</b>	<b>(30.7)</b>	<b>2</b>	<b>38</b>	<b>80</b>	<b>72</b>
<b>Adjusted EBITDA<sup>2</sup></b>	<b>201</b>	<b>277</b>	<b>(27.4)</b>	<b>11</b>	<b>38</b>	<b>80</b>	<b>72</b>

<sup>1</sup> EBITDA = EBIT + depreciation/amortisation (recognised in profit or loss)

<sup>2</sup> Adjusted EBITDA = EBIT (profit/loss) on sales + depreciation/amortisation (recognised in profit or loss) + impairment loss (-reversal of impairment losses) on non-current assets (recognised in cost of sales, selling costs and administrative expenses)

In 2018, other segments recorded a loss on sales, prior to recognition of consolidation adjustments, in the amount of -PLN 33 million, which was a worsening as compared to 2017 by PLN 76 million. A loss for the period was recorded in the amount of -PLN 41 million, versus a profit for 2017 of PLN 38 million.

## 11. Ownership structure and share price of the Company KGHM Polska Miedź S.A. on the Stock Exchange

### 11.1. The Company on the stock exchange

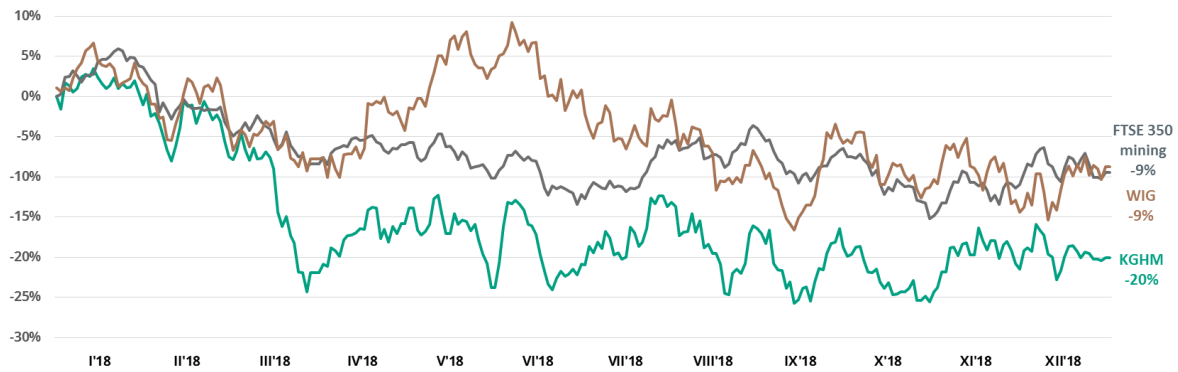
KGHM Polska Miedź S.A. debuted on the Warsaw Stock Exchange (WSE) in July 1997. The Company's shares are traded on the primary market of the WSE in the continuous trading system and are a component of the WIG, WIG20 and WIG30 indices, the sector index WIG-GÓRNICtwo and – until 10 July 2018 – the WIGdiv index. Continuously since 19 November 2009, the Company has participated in the RESPECT Index, which confirms its conformance with the highest standards of social responsibility. The RESPECT Index highlights those companies which are managed in a sustainable and responsible manner, and also highlights their investment attractiveness.

Pursuant to an announcement by FTSE Russell, on 24 September 2018 Poland's status was amended from that of an emerging market to a developed market. Consequently, since September 2018, KGHM Polska Miedź S.A. has been a component company of the FTSE4Good Index Series. The FTSE4Good Index Series is part of the group of ethical investment indicators, reflecting criteria of corporate social responsibility and ESG risk management.

The year 2018 was unsuccessful for the stock market. The main indices of the WSE dropped: WIG by 9%, WIG20 by 7% and WIG30 by 9%. The FTSE 350 Mining index – an index comprised of companies from the mining sector, listed on the London Stock Exchange – also fell, by nearly 9%. The share price of KGHM Polska Miedź S.A. on the WSE fell during 2018 by 20%, from PLN 111.20 recorded on 29 December 2017 to PLN 88.88 at the end of 2018. During the same period the price of copper – the Company's main product – recorded a drop of 17%, alongside an increase in the average USD/PLN exchange rate by 8%.

On 15 January 2018 the Company's shares reached their maximum closing price for the year of PLN 115.00. The minimum closing price of PLN 82.56 was recorded on 11 September 2018.

Chart 34. Share price of KGHM Polska Miedź S.A. versus the WIG index and FTSE 350 mining index



Key share price data of KGHM Polska Miedź S.A. on the Warsaw Stock Exchange in the years 2017-2018 are presented in the following table:

Table 42. Key share price data of the Company on the Warsaw Stock Exchange

Symbol: KGH, ISIN: PLKGHM000017	Unit	2018	2017
Number of shares issued	million	200	200
Market capitalisation of the Company at year's end	PLN billion	17.8	22.2
Average trading volume per session	000' shares	601	790
Turnover value	PLN million	13 890	23 251
Change in share price from the end of the prior year	%	-20.1	+20.2
Highest closing price during the year	PLN	115.00	135.50
Lowest closing price during the year	PLN	82.56	92.17
Closing price from the last day of trading in the year	PLN	88.88	111.20

Source: Own work based on WSE Statistic Bulletin for 2017 and 2018

## 11.2. Investor relations

The dialogue with stakeholders, among whom shareholders are of particular significance, is for us a key aspect of the Company's operations. For KGHM Polska Miedź S.A., as a global company operating on three continents, it is a priority to ensure equal access to information to all members of the global capital markets. KGHM Polska Miedź S.A.'s actions are aimed at maintaining regular communication and transparent dialogue with investors and analysts as well as at ensuring conformance with our regulatory legal obligations.

The Company fulfils its disclosure obligations by publishing regulatory filings and periodic reports via the official reporting system (ESPI). The Company's representatives communicate with investors by regular participation in investor conferences and meetings with investors and analysts both in Poland and abroad. Another form of communication by the Company with the market are conference calls and video conferences organised in response to stakeholder needs.

Publication of the Company's financial results is accompanied by a conference open to all stakeholders, which is webcast live in Polish and English, and includes the possibility of sending questions via e-mail as well as listening-in by phone. Playbacks of conferences are available on the Company's website at [www.kghm.com](http://www.kghm.com) in the Investors section. The Investors section is continuously updated with the latest information and documents. This section also includes regulatory filings and periodic reports, information on the shareholder structure, documents related to general meetings and corporate governance, as well as presentations and videos for investors.

Sell-side reports on KGHM Polska Miedź S.A. were published by 11 analysts based in Poland and 9 based abroad.

Table 43. Financial institutions which prepare reports on KGHM Polska Miedź S.A.

Poland		
Dom Maklerski Banku Handlowego	Dom Maklerski BOŚ	Dom Maklerski BZ WBK
Dom Maklerski mBanku	Erste Group	IPOPEMA Securities
JP Morgan	Pekao Investment Banking	PKO Dom Maklerski
Haitong	Trigon Dom Maklerski	
Abroad		
Bank of America Merrill Lynch	BMO	EVA Dimensions
Global Mining Research	Goldman Sachs	Morgan Stanley
Raiffeisen	UBS	WOOD & Company

### 11.3. Dividend

In accordance with the Resolution No. 10/2018 of the Ordinary General Meeting of KGHM Polska Miedź S.A. dated 6 July 2018 regarding the allocation of profit from financial year 2017, all of the profit was transferred to the Company's share capital.

Table 44. Dividend paid in the years 2017 – 2018

	Unit	2018	2017
Dividend paid in the financial year from prior years' profit	PLN million	-	200
	PLN/share	-	1.00
Dividend yield <sup>1</sup>	%	-	0.9

<sup>1</sup> dividend per share paid in the given financial year divided by the closing price in the last trading day in the given financial year

### 11.4. Ownership structure and the Company's outstanding shares

As at 31 December 2018, the share capital of the Company, in accordance with the entry in the National Court Register, amounted to PLN 2 000 million and was divided into 200 million shares, series A, fully paid, having a face value of PLN 10 each. All shares are bearer shares. Each share grants the right to one vote at the General Meeting. The Company has not issued preference shares.

In 2018, there was no change in either registered share capital or in the number of outstanding shares issued.

During this time there was a change in the ownership structure of significant blocks of shares of KGHM Polska Miedź S.A. In 2018, the Company was informed of increases in the total number of votes at the General Meeting of KGHM Polska Miedź S.A. above 5% by two pension funds: Aviva Otwarty Fundusz Emerytalny Aviva BZ WBK (in an announcement dated 17 July 2018) and Otwarty Fundusz Emerytalny PZU „Złota Jesień” (in an announcement dated 16 October 2018).

The Company's shareholder structure as at 31 December 2018 was as follows:

Table 45. Shareholder structure as at 31 December 2018

Shareholder	Number of shares/votes	% of share capital /total number of votes
State Treasury <sup>1</sup>	63 589 900	31.79%
Nationale-Nederlanden Otwarty Fundusz Emerytalny <sup>2</sup>	10 104 354	5.05%
Otwarty Fundusz Emerytalny PZU „Złota Jesień” <sup>3</sup>	10 099 003	5.05%
Aviva Otwarty Fundusz Emerytalny Aviva BZ WBK <sup>4</sup>	10 039 684	5.02%
Other shareholders	106 167 059	53.09%
<b>Total</b>	<b>200 000 000</b>	<b>100.00%</b>

<sup>1</sup> based on a notification received by the Company dated 12 January 2010

<sup>2</sup> based on a notification received by the Company dated 18 August 2016

<sup>3</sup> based on a notification received by the Company dated 16 October 2018

<sup>4</sup> based on a notification received by the Company dated 17 July 2018

On 18 February 2019, the Company was informed of a decrease in the total number of votes at the General Meeting of KGHM Polska Miedź S.A. below 5% by the pension fund Otwarty Fundusz Emerytalny PZU „Złota Jesień”. The Company's shareholder structure as at the date this report was signed was as follows:

Table 46. Shareholder structure as at the date this report was signed

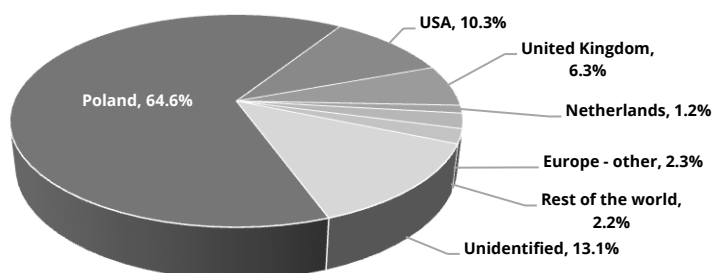
Shareholder	Number of shares/votes	% of share capital /total number of votes
State Treasury	63 589 900	31.79%
Nationale-Nederlanden Otwarty Fundusz Emerytalny	10 104 354	5.05%
Aviva Otwarty Fundusz Emerytalny Aviva BZ WBK	10 039 684	5.02%
Other shareholders	116 266 062	58.14%
<b>Total</b>	<b>200 000 000</b>	<b>100.00%</b>

Other shareholders, whose total ownership of the share capital and share in the total number of votes amounts to 58.14%, are mainly institutional investors, both international and domestic.

Following is the geographic distribution of the shareholder structure of KGHM Polska Miedź S.A. The data is based on research into the Company's shareholder structure performed in October 2018.



Chart 35. Geographic shareholder structure of KGHM Polska Miedź S.A. (%)



Source: CMI2i, October 2018

The Company does not hold any treasury shares.

The Management Board of the Company is unaware of any agreements which could result in changes in the proportion of the Company's shares held by present shareholders in the future.

Based on information held by KGHM Polska Miedź S.A., as at 31 December 2018 and at the date this report was signed, no Member of the Management Board of the Company held shares of KGHM Polska Miedź S.A. or rights to them.

Amongst the Members of the Company's Supervisory Board, as at 31 December 2018 and at the date this report was signed, only Józef Czyczerski held 10 shares of KGHM Polska Miedź S.A. with a total nominal value of PLN 100. Based on information held by the Company, the remaining Members of the Company's Supervisory Board did not hold shares of KGHM Polska Miedź S.A. or rights to them.

As far as the Company is aware, Members of the Management Board and Supervisory Board did not hold shares of the related entities of KGHM Polska Miedź S.A. as at 31 December 2018 and at the date this report was signed.

The Company did not have an employee share incentive program in 2018.

## 12. Risk management in the Group

### 12.1. Comprehensive Risk Management System in the KGHM Polska Miedź S.A. Group

The KGHM Polska Miedź S.A. Group defines risk as uncertainty, being an integral part of the activities conducted and having the potential to result in both opportunities and threats to achievement of the business goals. The current and future, actual and potential impact of risk on the KGHM Polska Miedź S.A. Group's activities is assessed. Based on this assessment, management practices are reviewed and adjusted in terms of responses to individual risk factors.

Under the Corporate Risk Management Policy and Procedure and the Rules of the Corporate Risk and Compliance Committee updated in 2018, the process of corporate risk management in the Group is consistently performed. In the companies of the Group, documents regulating the management of corporate risk are consistent with those of the Parent Entity. KGHM Polska Miedź S.A. oversees the process of managing corporate risk in the Group. Each year, the process of managing corporate risk is subjected to an efficiency audit (compliant with the guidelines of Best Practice for WSE Listed Companies 2016).

Risk factors in various areas of the Group's operations are continuously identified, assessed and analysed in terms of their possible limitation. Key risk factors in the Group undergo in-depth analysis in order to develop a Risk Response Plan and Corrective Actions. Other risk factors undergo constant monitoring by the Department of Corporate Risk Management and Compliance, and in terms of financial risk by the division of the Executive Director for Treasury Operations - Corporate Treasurer.

This comprehensive approach to analysing risk factors also comprises the identification of risk factors related to achieving the strategic goals. In 2018, risks were reviewed related to achievement of the strategic goals contained in the Main Strategy and in the Executory and Support Strategies.

Following is the organisational structure of risk management in the Parent Entity as updated in 2018. The breakdown of rights and responsibilities applies best practice principles for Corporate Governance and the generally recognised model of three lines of defense.

Diagram 7. Organisational structure of risk management in KGHM Polska Miedź S.A

Supervisory Board (Audit Committee)					
Performs annual assessment of the effectiveness of the risk management process and monitors the level of key risk factors and ways to address them.					
Management Board					
Has ultimate responsibility for the risk management system and supervision of its individual elements.					
1st line of defense	2nd line of defense				3rd line of defense
Management	Risk Committees				Audit
Managers are responsible for identifying, assessing and analysing risk factors and for the implementation, within their daily duties, of responses to risk. The task of the management staff is ongoing supervision of the application of appropriate responses to risk within the tasks realised, to ensure the expected level of risk is not exceeded.	Support effective risk management and ongoing supervision of key risk factors.				The Internal Audit Plan is based on assessing risk and subordinated business goals, assessed is the current level of individual risk factors and the degree of efficiency with which they are managed.  Internal Audit Rules  Executive Director for Audit and Control  <i>Reports to the President of the Management Board</i>
	Corporate Risk and Compliance Committee	Market Risk Committee	Credit Risk Committee	Financial Liquidity Committee	
	Manages corporate risk and continuously monitors key risk factors	Manages risk of changes in metals prices (e.g.: copper and silver) as well as exchange and interest rates	Manages risk of failure of debtors to meet their obligations	Manages risk of loss of liquidity, understood as the ability to pay financial liabilities on time and to obtain financing for operations	
	<i>Corporate Risk Management Policy</i>	<i>Market Risk Management Policy</i>	<i>Credit Risk Management Policy</i>	<i>Liquidity Management Policy</i>	
	Department of Corporate Risk Management and Compliance	Executive Director for Treasury Operations - Corporate Treasurer			
	<i>Reports to the Management Board</i>	<i>Reports to the Vice President of the Management Board (Finance)</i>			

## 12.2. Corporate risk – key risk factors and their mitigation

A tool used in identifying risk in the KGHM Polska Miedź S.A. Group is the Risk Model. Its structure is based on a given risk's source and is divided into the following 5 categories: Technological, Values chain, Market, External and Internal. Several dozen sub-categories have been identified and defined covering particular areas of the operations or management.

Following are the key risks in the KGHM Polska Miedź S.A. Group, including identification of specific risks for the Parent Entity and the KGHM INTERNATIONAL LTD. Group.

The list below uses the following abbreviations: for the KGHM Polska Miedź S.A. Group – the KGHM Group, for the KGHM INTERNATIONAL LTD. Group – the KGHM INTERNATIONAL Group.

Risk factor	Risk - description	Mitigation
<b>Technology</b>		
<b>Technology</b>	(Parent Entity) Technological risk related to the mining of deep underground copper ore deposits, under conditions associated with natural hazards.	R&D work and test runs of alternate mining methods to currently-used copper ore mining technology.
	(Parent Entity) Risk of failure to adhere to the efficient working time parameter and of failure to fully utilise the capacity of metallurgical installations to process own concentrate (Głogów Copper Smelter and Refinery).	Construction of a concentrate roasting installation at the Głogów smelter and refinery, maintain the appropriate separation of concentrate to optimise the pyrometallurgical process and advance R&D

<b>Value chain</b>		
<b>Planning</b>	(KGHM Group) Risk related to using inappropriate economic parameters related to production, investments, macroeconomics and finance, for forecasts of company results.	Forecasts related to specific areas of the operations are prepared by appropriate specialised units.
	(KGHM INTERNATIONAL Group) Risk related to the accuracy of estimating decommissioning costs of certain mines.	
<b>Resources and reserves</b>	(KGHM Group) Risk related to insufficient knowledge of the parameters and characteristics of a deposit, both for exploration projects (estimated input data for orebody evaluation models), as well as for ongoing mining operations.	Additional expenditures on exploratory work to enhance the precision of estimating resources and the level of knowledge of geological-mining conditions, optimisation of the drilling network, geological research, knowledge gained through access drifts, consultations with external experts.
<b>Waste management</b>	(Parent Entity) Risk of the inability to store mine tailings.	Operation, construction and development of the tailings storage facility pursuant to the operating instructions. Cooperation with a Team of International Experts (TIE) and the General Designer, introduction of Observation Methods during development recommended by the TIE, based on the evaluation of geotechnical parameters obtained from the results of monitoring performed, which allow conclusions to be made regarding the behaviour of the constructed/operated facility.
<b>Availability of materials and utilities</b>	(KGHM Group) Risk related to the lack of availability of utilities (electricity, gas, water).	Ensure back-up systems for key utilities and on-going evaluation of the security of power systems. Conduct a variety of investments aimed at strengthening energy security. Agreement with the company Polskie Górnictwo Naftowe i Gazownictwo S.A. for the sale of natural gas, increasing the security of natural gas supply.
<b>Production and infrastructure</b>	(KGHM Group) Risk related to infrastructure emergencies resulting in a shut-down of production lines, both as a result of natural hazards as well as internal factors related to the applied technology (as well as the pyrometallurgical process).	Preventative management of key elements of infrastructure which impact the smooth flow of operations. On-going analysis of geotechnical risk and reviews of planned recoveries. Appointment of special-purpose and expert teams on preventing emergencies in metallurgical infrastructure.
	(KGHM INTERNATIONAL Group) Geotechnical risk in open-pit mines (wall stability) and in underground mines.	
<b>Efficiency and costs</b>	(KGHM Group) Risk related to the cost effectiveness of the production process, mining projects and the processing of copper-bearing materials, including the risk of significant increases in the prices of materials, services and utilities and of restoration costs.	Monitoring trends on the copper-bearing materials market and maintaining costs at the planned levels. Creating multi-year plans and budgets to achieve profitability under the given market conditions.
<b>Market</b>		
<b>Market Risk</b>	(KGHM Group) Risk related to volatility in commodity prices (copper, silver and other metals), exchange rates and interest rates.	This risk is actively managed (in the Parent Entity, in accordance with the Market Risk Management Policy currently in force). A basic technique for managing market risk in the company are hedging strategies utilising derivative instruments. Natural hedging is also applied.
<b>Credit Risk</b>	(KGHM Group) Risk related to the failure by commercial customers or financial institutions to regulate receivables.	This risk is actively managed (in the Parent Entity, in accordance with the Credit Risk Management Policy currently in force). Exposure to credit risk is limited by evaluating and monitoring the financial condition of customers, setting credit limits and applying creditor security and factoring.
<b>Liquidity Risk</b>	(KGHM Group) Risk related to the loss of liquidity, understood as the ability to pay liabilities on time and to obtain financing for operations.	This risk is actively managed (in the Parent Entity, in accordance with the updated Financial Liquidity Management Policy in the KGHM Group).

<b>Equity investments and divestments</b>	(KGHM Group) The risk of not receiving the expected return or expected effects on an equity investment. Risk of loss of company value, the failure to achieve assumed synergies, the loss of alternative profits, a fall in the price of shares of listed companies.	Detailed analysis of the effectiveness and justification of equity investment plans; pre-investment analysis of projects and on-going monitoring of the value of assets owned.
<b>External</b>		
<b>Administrative proceedings</b>	(KGHM Group) The risk of restricting or suspending operations as a result of administrative and/or legal proceedings: administrative decisions not received, withdrawn or which undergo unfavourable changes.	The process of obtaining administrative decisions is conducted with an appropriate level of prudence and care. Deadlines are met. Being proactive (initiating procedures at an early stage and executing decisions with a margin of safety in terms of time). Legal counsel is employed when the company is engaged in administrative proceedings. Appeals procedures are followed. The opinions of external experts are sought.
<b>Natural hazards</b>	(KGHM Group) The risk of employees' loss of life or health. Disruptions or restrictions in production as a result of seismic events and associated roof collapses, or distressings of the rock mass and the occurrence of uncontrolled rock bursts.	A wide variety of technological and organisational solutions and other active and passive methods are applied to prevent roof collapses enabling restriction of the effects of dynamic events (roof collapses or rock mass distressings) in the mines. Preparation of reserve fields in the orebody which could handle reduced production.
	(Parent Entity) Risk related to gas hazards (mainly hydrogen sulphide).	The risk of gas hazards occurring is being assessed and principles are being developed for working under the risk of such hazards. Individual employee safety measures are applied as well as equipment and means for reducing concentrations of hydrogen sulphides and neutralising oppressive odours.
	(Parent Entity) Risk related to underground climate risk, which increases in tandem with increasing mine depth.	The construction of additional ventilation shafts, the use of centralised, workplace and individual air cooling systems as well as reduced working time.
	(Parent Entity) Risk related to the occurrence of underground water-related threats.	The introduction of a variety of technological solutions (e.g. water level signalling devices and alarms, draining of the rock mass) and organisational solutions (training, work conducted in accordance with documentation), aimed at minimising the negative impact of the occurrence of such a risk.
<b>Natural environment and climate change</b>	(KGHM Group) The extraction and processing of copper ore at all stages of production has an unavoidable impact on various parts of the natural environment. Risk related to pricing and the placing of limits on CO <sub>2</sub> emissions.	Compliance with rigorous environmental standards imposed by law is possible thanks to the systematic modernisation of environmental protection installations, both those built in the past as well as new investments in this regard. (In the Parent Entity a CO <sub>2</sub> Emissions Management System has been implemented as well as environmental management standard ISO 14001).
	(Parent Entity) Risk related to evaluating air quality in Lower Silesia (exceeding the average annual target level of arsenic in suspended dusts PM10).	Carrying out the list of actions arising from Air Protection Programs. Conduct of R&D work and of the Program to adapt the technological installations of KGHM BAT Conclusions for the non-ferrous metals industry together with limitation of arsenic emissions.
<b>Law and regulations</b>	(KGHM Group) The risk of changes in the regulatory environment in areas such as geological-mining law, environmental protection, energy, corporate law, insurance and security.	Monitoring of legal changes in individual jurisdictions and active participation in legislative processes. Taking pre-emptive actions to adapt to organisational, infrastructural and technological changes. An energy management system was implemented in the Parent Entity and a certificate of compliance with ISO 50001 standard was received.
<b>Taxation</b>	(Parent Entity) The risk of there being no change in the royalty formula (the minerals extraction tax) and the risk of taxation arising from other regulations.	
	(KGHM INTERNATIONAL Group) Taxation risks arising from operating in numerous jurisdictions.	
<b>Internal</b>		
<b>Occupational health and safety</b>	(KGHM Group) The risk of serious accidents or industrial illnesses caused by improper workplace organisation, the failure to follow procedures or the use of improper safety devices. The risk of temporary production stoppages caused by serious accidents.	In the Parent Entity, occupational health and safety standards are in force (18001/OHSAS); regular training in occupational health and safety standards, programs to identify potentially accident-causing events.

<b>Stakeholders</b>	(KGHM Group) The risk of negative ad campaigns and the risk of lack of acceptance by the public, local governments or other stakeholders for the conduct of development and exploration work.	Execution of the CSR Strategy, close cooperation with government bodies; meetings and negotiations with stakeholders, informational campaigns, conferences, publications.
<b>Human resources</b>	(KGHM Group) The risk of not being able to acquire and keep human resources, for example in order to support development projects.	Programs aimed for example at raising the effectiveness of the processes of recruitment, finding successors and maintaining key positions. Employee mobility program.
<b>Security, IT and data protection</b>	(KGHM Group) Risk that the confidentiality, integrity or availability of informational assets which have been collected, stored or processed on physical and/or IT resources may be compromised.	Strict adherence to and application of the principles, among others, of the Information Security Policy and Facility Protection Plans. Adaptation of the KGHM Group to the requirements of the general decree on the protection of personal data (GDPR). Systematic assessment of the risk of compromise of the confidentiality, integrity or availability of informational assets.
<b>Ethics and organisational culture</b>	(KGHM Group) Risk of failure to adhere to established principles and standards with respect to counteracting corruption within the procurement process and the risk of incurring losses due to actions harmful to KGHM.	Strict adherence to and application of the principles arising from the Code of Ethics of the KGHM Polska Miedź S.A. Group, the Anti-corruption Policy and the Procedures for Counteracting Threats of Corruption in the KGHM Polska Miedź S.A. Group. In the companies of the KGHM Group, Corporate Representatives for Ethics and Anti-corruption were appointed and a Procedure for Disclosing Improprieties and Protecting Whistleblowers was implemented in the KGHM Group.
<b>Project management</b>	(KGHM Group) The risk of exceeding project/program budgets and schedules, exceeding defined scopes and failing to meet defined quality parameters as a result of the improper management of portfolios and projects.  (KGHM INTERNATIONAL Group) Risk related to the operational management and development of key mining projects, including issues related to costs incurred, permitting and infrastructural requirements.	Project Management in accordance with Methodology as well as on-going monitoring and updating of schedules. On-going evaluation of the economic effectiveness of existing and anticipated development projects.

### 12.3. Market, credit and liquidity risk

The goal of market, credit and liquidity risk management in the KGHM Polska Miedź S.A. Group is to restrict the undesired impact of financial factors on cash flow and results in the short and medium terms and to enhance the Group's value over the long term. The management of these risks includes both the processes of risk identification and measurement as well as its restriction to acceptable levels. The process of risk management is supported by an appropriate policy, organisational structure and procedures. In the Parent Entity these issues are covered in the following documents:

- Market Risk Management Policy and the Rules of the Market Risk Committee,
- Credit Risk Management Policy and the Rules of the Credit Risk Committee, and
- Financial Liquidity Management Policy and the Rules of the Financial Liquidity Committee.

The „Market Risk Management Policy in the KGHM Polska Miedź S.A. Group” covers selected mining companies in the Group (KGHM Polska Miedź S.A., KGHM INTERNATIONAL LTD., FNX Mining Company Inc., Robinson Nevada Mining Company, KGHM AJAX MINING Inc. and Sociedad Contractual Minera Franke), with representatives of the Parent Entity and KGHM INTERNATIONAL LTD. serving as members of the Market Risk Committee.

Financial liquidity management is carried out in accordance with the „Financial Liquidity Management Policy in the KGHM Group” which in a comprehensive manner regulates financial liquidity management in the Group carried out by individual Group companies, while its organisation and coordination as well as the supervision thereof is performed in the Parent Entity.

Credit risk management in the Parent Entity is carried out in accordance with the Management Board-approved Credit Risk Management Policy. The Parent Entity serves as an advisor to the Group's companies with respect to managing credit risk. The „Credit Risk Management Policy in the KGHM Polska Miedź S.A. Group” applies to selected Group companies, the goal of which is to introduce a comprehensive, joint approach and the most important elements of the credit risk management process.

### 12.4. Market risk management

Market risk is understood as the possible negative impact on the Group's results arising from changes in the market prices of commodities, exchange rates and interest rates, as well as from changes in the value of debt securities and share prices of listed companies.

In terms of market risk management (in particular the risk of changes in metals prices and exchange rates) of greatest significance and impact on the results of the Group are the scale and nature of the activities of the Parent Entity and the mining companies of KGHM INTERNATIONAL LTD.

The Parent Entity actively manages market risk, undertaking actions and decisions in this regard within the context of the global exposure throughout the KGHM Polska Miedź S.A. Group.

The Management Board is responsible for market risk management in the Parent Entity and for adherence to policy in this regard. The main body involved in performing market risk management is the Market Risk Committee, which makes recommendations to the Management Board in this area.

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**Commodity risk,  
currency risk**

In 2018, the Group was mainly exposed to the risk of the changes in the prices of metals it sells: copper and silver. Of major significance for the Parent Entity was the risk of changes in currency rates, in particular the USD/PLN exchange rate. The Group's companies are additionally exposed to the risk of volatility in the prices of lead, gold, molybdenum, platinum and palladium. Market risk related to changes in metals prices arises from the formula for setting prices in physical metals sales contracts, which are usually based on the average monthly market prices for the relevant future month.

In accordance with the Market Risk Management Policy, in 2018 the Parent Entity continuously identified and measured market risk related to changes in metals prices, exchange rates and interest rates (analysis of the impact of market risk factors on the Parent Entity's activities – profit or loss, statement of financial position, statement of cash flows), and also analysed the metals and currencies markets. These analyses, along with assessment of the internal situation of the Parent Entity and Group, represented the basis for taking decisions on the application of hedging strategies on the metals, currency and interest rates markets.

With respect to managing risk in 2018, the Parent Entity implemented copper price hedging transactions with a total notional amount of 126 thousand tonnes and a hedging horizon falling from July 2018 to December 2020 (including: 114 thousand tonnes hedging revenues from copper sales in the years 2019-2020). The Parent Entity did not implement derivatives transactions on the silver market. As a result, the Parent Entity held open derivatives positions on the copper market for 168 thousand tonnes of copper in the years 2019-2020.

Moreover, in 2018 the Parent Entity commenced the management of a net trading position in order to react to changes in contractual agreements with customers and to the appearance of non-standard pricing conditions in metals sales and in purchases of copper-bearing materials. In the fourth quarter of 2018 so-called QP adjustment swap transactions were entered into on the copper and gold markets with maturity falling in June 2019.

In 2018, the Parent Entity implemented transactions hedging against a change in the USD/PLN exchange rate for the total notional amount of USD 1 710 million with maturity from April 2018 to December 2020 (including transactions hedging USD 1 080 million in revenues for the period from January 2019 to December 2020). As at 31 December 2018 the Parent Entity held an open hedging position in derivatives for USD 1 260 million of planned revenues from sales of metals.

As for managing currency risk which may arise from bank and other loans, the Parent Entity applies natural hedging by borrowing in currencies in which it has revenues. The balance of liabilities of the Parent Entity due to bank loans and a loan as at 31 December 2018 was comprised of USD-denominated liabilities, which following their translation into PLN amounted to PLN 7 655 million.

As at 31 December 2018, KGHM INTERNATIONAL LTD. did not hold open derivative positions on the metals and currency markets.

Some of the Group's Polish companies managed the currency risk related to their core businesses by opening derivative transactions on the EUR/PLN and USD/PLN markets.

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**Interest rate risk**

Interest rate risk is the possibility of the negative impact of changes in interest rates on the Group's position and results. In 2018, the Group was exposed to such risk due to loans granted, free cash invested on deposits and borrowings.

As at 31 December 2018, the following positions were exposed to interest rate risk by impacting the amount of interest costs and income:

- cash and cash equivalents: PLN 1 315 million, including the deposits of special purpose funds: the Mine Closure Fund and the Tailings Storage Facility Restoration Fund,
- liabilities due to bank and other loans drawn: PLN 5 112 million.

As at 31 December 2018, the following positions were exposed to interest rate risk due to changes in the fair value of instruments with fixed interest rates:

- receivables due to loans granted by the Group: PLN 15 million,
- liabilities due to bank and other loans drawn with fixed interest rates: PLN 2 810 million.

Financial liabilities denominated in USD and EUR, based on LIBOR or EURIBOR, expose the Group to the risk of higher interest rates which would result in higher interest costs. As a result, taking into consideration the global exposure of the Group to interest rate risk, in 2018 the Parent Entity drew a loan based on a fixed interest rate and exercised its right to draw loans from the European Investment Bank based on a fixed interest rate. Moreover, the Parent Entity remains hedged against an interest rate increase (LIBOR USD) through the aid of a call option (CAP) with an interest rate of 2.50% in the years 2019-2020.

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<b>Price risk related to the change in share prices of listed companies</b>	<p>Price risk related to the shares of listed companies held by the Group is understood as the change in their fair value due to changes in their quoted share prices.</p> <p>As at 31 December 2018, the carrying amount of shares of companies which were listed on the Warsaw Stock Exchange and on the TSX Venture Exchange amounted to PLN 427 million.</p>
<b>Result on derivatives and hedging transactions</b>	<p>The total impact of derivatives and hedging instruments (transactions on the copper, silver, currency and interest rate markets as well as embedded derivatives and a loan in USD designated as a hedge against a change in the exchange rate) on the Group's profit or loss for 2018 amounted to PLN 47 million, of which:</p> <ul style="list-style-type: none"> <li>- PLN 125 million was recognised in sales revenue,</li> <li>- PLN 89 million decreased the result on other operating activities,</li> <li>- PLN 11 million increased the result on financing activities.</li> </ul> <p>Moreover, in 2018 other comprehensive income increased by PLN 349 million (impact of hedging instruments).</p> <p>As at 31 December 2018, the fair value of open positions in derivatives of the Group (on the metals, currency, interest rate and embedded derivatives markets) amounted to PLN 416 million.</p> <p>The Parent Entity decided to implement standard IFRS 9 (including hedge accounting principles) as at 1 January 2018 without adjusting comparable data, which means that the data related to 2017 which are presented in the financial statements for 2018 are not comparable.</p>

### Credit risk management

Credit risk is defined as the risk that counterparties will not be able to meet their contractual liabilities.

The Management Board is responsible for credit risk management in the Parent Entity and for compliance with policy in this regard. The main body involved in actions in this area is the Credit Risk Committee.

In 2018, the KGHM Polska Miedź S.A. Group was exposed to this risk, mainly in four areas:

<b>Credit risk related to trade receivables</b>	<p>The Group's companies have been cooperating for many years with a large number of customers, which affects the geographical diversification of trade receivables.</p> <p>The Parent Entity limits its exposure to credit risk related to trade receivables by evaluating and monitoring the financial standing of its customers, setting credit limits, using debtor security and factoring. An inseparable element of the credit risk management process realised by the Parent Entity is the on-going monitoring of receivables and the internal reporting system. Buyer's credit is only provided to proven, long-term customers, while sales of products to new customers are mostly based on prepayments or commercial financing instruments which transfer all of the credit risk to financial institutions. In 2018, the Parent Entity secured its receivables by promissory notes, registered pledges, bank guarantees, corporate guarantees, mortgages and documentary collection. Moreover, the majority of customers who hold buyer's credit on contracts have ownership rights confirmed by a date certain.</p> <p>To reduce the risk of insolvency by its customers, the Parent Entity has a receivables insurance contract, which covers receivables from entities with buyer's credit which have not provided strong collateral or have provided collateral which does not cover the total amount of the receivables. Taking into account the collateral held and the credit limits received from the insurance company, as at 31 December 2018 the Parent Entity had secured 75% of its trade receivables (as at 31 December 2017: 95%).</p> <p>The concentration of credit risk in the Group is related to the terms of payment granted to key clients. Consequently, as at 31 December 2018 the balance of receivables from 7 of the Group's largest clients, in terms of trade receivables at the end of the reporting period, represented 28% of the trade receivables balance (as at 31 December 2017: 63%). Despite the concentration of this type of risk, it is considered that due to the availability of historical data and the many years of experience cooperating with clients, as well as above all due to the security used, the level of credit risk is low.</p>
<b>Credit risk related to cash and cash equivalents and bank deposits</b>	<p>The Group allocates periodically free cash in accordance with the requirements to maintain financial liquidity and limit risk and in order to protect capital and maximise interest income.</p> <p>Credit risk related to deposit transactions is continuously monitored by the on-going review of the credit ratings of those financial institutions with which the Group cooperates, and by limitation of the level of concentration in individual institutions.</p>
<b>Credit risk related to derivatives transactions</b>	<p>All of the entities with which the Group enters into derivative transactions (with the exception of embedded derivatives) operate in the financial sector. These are mainly financial institutions, with a medium-high rating. According to fair value as at 31 December 2018, the maximum share of a single entity with respect to credit risk arising from open derivative transactions entered into by the Group and from unsettled derivatives amounted to 22%. Due to diversification of risk in terms both of the nature of individual entities and of their geographical location, as well as taking into consideration the fair value of assets and liabilities arising from derivative transactions, the Group is not materially exposed to credit risk as a result of derivative transactions entered into.</p>



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<b>Credit risk related to loans granted</b>	<p>As at 31 December 2018, the balance of loans granted by the Group amounted to PLN 5 222 million. The most important of these are long-term loans in the total amount of PLN 5 199 million, or USD 1 383 million, granted by the KGHM INTERNATIONAL LTD. Group for the financing of a mining joint venture in Chile.</p> <p>Credit risk related to the loans granted to the joint venture Sierra Gorda S.C.M. is dependent on the risk related to mine project advancement.</p>
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### Financial liquidity risk and management of capital

The management of capital in the Group aims at securing funds for development and at securing relevant liquidity.

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<b>Financial liquidity management</b>	<p>Management of the Group's liquidity is conducted in accordance with the Financial Liquidity Management Policy in the KGHM Group. This document describes the process of financial liquidity management in the Group, which is realised by the Group's companies, while its organisation and coordination as well as the supervision thereof is performed in the Parent Entity.</p> <p>The basic principles resulting from this document are:</p> <ul style="list-style-type: none"> <li>- the need to ensure stable and effective financing for the Group's operations,</li> <li>- constant monitoring of the Group's level of debt, and</li> <li>- effective management of working capital.</li> </ul> <p>Borrowing by the Group is based on three pillars:</p> <ul style="list-style-type: none"> <li>- an unsecured, revolving syndicated credit facility, obtained by the Parent Entity and which is for the amount of USD 2 500 million with a maturity of 9 July 2021,</li> <li>- two investment loans granted to the Parent Entity by the European Investment Bank in the amount of PLN 2 000 million and PLN 900 million with a financing period of 12 years from the dates the instalments are drawn, and</li> <li>- bilateral bank loans in the amount of up to PLN 3 700 million, to support the management of current liquidity in companies and the financing of working capital as well as to finance the continued advancement of investments.</li> </ul> <p>Detailed information regarding available sources of financing and their utilisation in 2018 may be found in Section 6.6 of this report.</p> <p>The aforementioned sources of financing fully cover the Group's liquidity needs. During 2018, the Group made use of borrowing which was available from all of the above categories, while liabilities of the Group due to bank and other loans drawn as at 31 December 2018 amounted to PLN 7 922 million.</p>
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<b>Management of capital</b>	<p>In order to maintain the ability to operate, taking into consideration the execution of planned investments, the Group manages capital so as to be able to generate returns for shareholders and provide benefits for other stakeholders.</p> <p>The Group aims to maintain the equity ratio, in the long-term, at a level of not less than 0.5, and the ratio of Net Debt/EBITDA at a level of up to 2.0.</p>
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## 13. Human resources in the Company and Group

### 13.1. Employment

#### KGHM Polska Miedź S.A.

Employment in KGHM Polska Miedź S.A. at the end of 2018 amounted to 18 503 people, and was 0.8% higher than at the end of the prior year. Average annual employment in KGHM Polska Miedź S.A. amounted to 18 331 people and was higher than the level of employment in 2017 by 133 people. The change in employment was due to natural movements in staff.

Table 47. Average employment in KGHM Polska Miedź S.A.

	2018	2017	Change (%)
Mines	12 433	12 413	+0.2
Metallurgical plants	3 600	3 529	+2.0
Other divisions	2 298	2 256	+1.9
<b>KGHM Polska Miedź S.A.</b>	<b>18 331</b>	<b>18 198</b>	<b>+0.7</b>

#### Group

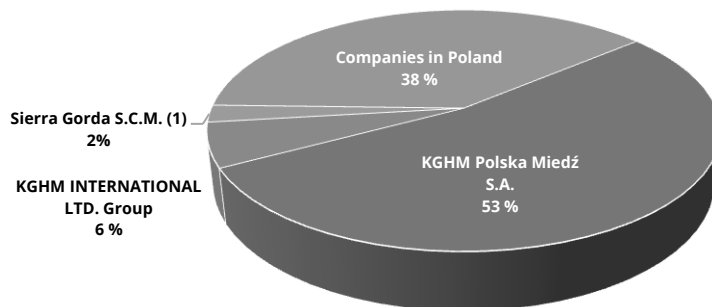
In 2018, the companies of the Group employed 34 386 people, or an increase by 1.3% as compared to the prior year. The employment structure is shown in the following table and chart:

Table 48. Average employment in the Group

	2018	2017	Change (%)
KGHM Polska Miedź S.A.	18 331	18 198	+0.7
KGHM INTERNATIONAL LTD.	2 037	1 695	+20.2
Sierra Gorda S.C.M. <sup>1</sup>	790	748	+5.6
Group companies in Poland	13 228	13 294	(0.5)
<b>Total</b>	<b>34 386</b>	<b>33 935</b>	<b>+1.3</b>

<sup>1</sup> Sierra Gorda S.C.M. – employment proportional to share in the company (55%)

Chart 36. Employment structure in the Group in 2018



<sup>1</sup> Sierra Gorda S.C.M. – employment proportional to share in the company (55%)

#### Companies in Poland

In 2018, average employment in the companies of the KGHM Polska Miedź S.A. Group in Poland decreased as compared to 2017 by 66 positions (or by 0.5%). This change was mainly in respect of blue-collar positions and was due to difficulties in securing properly-qualified workers, as well as to adapting employment to current needs.

#### Companies abroad

The increase in employment in companies within the KGHM INTERNATIONAL LTD. Group in 2018 was due to the involvement of companies acting under the DMC brand in new projects in the United Kingdom (Yorkshire county) and Canada (the Sudbury Basin), development of the activities of the Franke mine in Chile and expansion of the scope of services offered by KGHM Chile SpA to the Sierra Gorda project.

The increase in employment in Sierra Gorda in 2018 was mainly due to the need to increase employment in the maintenance and conservation areas of the processing plant and mine, as well as in technical services. This was related to improving the efficiency and productivity of the processing plant and mine, as well as with advancement of the Debottlenecking Program, the goal of which is to optimise utilisation of the existing infrastructure of Sierra Gorda and at the same time to increase the processing capacity and productivity of the processing plant.

## 13.2. Human Resources projects

### KGHM Polska Miedź S.A.

#### Competent in the sector

In 2018, KGHM Polska Miedź S.A. commenced cooperation with schools in the powiats (counties) of Legnica, Lubin, Głogów and Bolesławiec under the project „Competent in the mining-metallurgical sector. KGHM – a key partner in professional education”. The project is being advanced under the patronage of the Ministry of National Education and comprises 57 sector classes involved in educating among others future staff of KGHM.

The actions undertaken by the project are: shaping educational programs, expanding the scope and form of vocational education in actual workplace environments, acquiring certification by students, professional consulting and motivating students and raising the qualifications of teachers.

As a result of introducing this program, vocational training is being adapted to the needs of the workplace, and in particular to those of KGHM Polska Miedź S.A.

#### Dual education

On 5 July 2018, KGHM Polska Miedź S.A., Katowicka Specjalna Strefa Ekonomiczna S.A. (the Katowice Special Economic Zone) and the County (Powiat) of Głogów signed a letter of intent declaring cooperation in the organisation and operation of a pilot Model Program for vocational education in the profession Metallurgical Technician, developed under the project “PO WER KSZTAŁCENIE DUALNE – DOBRY START W ZAWODACH BRANŻY GÓRNICZO – HUTNICZEJ”.

The objective of the project is to develop a model program for vocational education in the profession Metallurgical Technician. This is being achieved in cooperation with the school Zespół Szkół im. Jana Wyżykowskiego in Głogów and with the Głogów Center for Professional Education (Głogowskie Centrum Edukacji Zawodowej) in Głogów. Completion of the project is planned in December 2019.

#### La Serena

KGHM Polska Miedź S.A. is strengthening its global position by expanding its business and social contacts. In every location where the Company operates it endeavours to be a responsible investor committed to sustainable growth and the local community.

On 11 December in Chile, the Polish investor signed a declaration of educational and technical cooperation with the University of La Serena. KGHM Polska Miedź S.A. intends to introduce a scholarship program for students from this University. At the same time this will be a means of honouring the memory of the famous Pole, Ignacy Domeyko. This Polish geologist, mineralogist, mining engineer and explorer of South America, including in particular Chile, played an enormous role in reforming the educational system in Chile and in advancing the science of mining.

#### eKariera (e-Career)

Work is underway on expanding the functionality of the eRekrutacja (eRecruitment) system by three modules:

- Applications for Probationary period employment (Staże),
- Applications for Internships (Praktyki),
- Providing materials for the preparation of graduate theses in KGHM Polska Miedź S.A..

As a result of the team’s work, a business concept was developed aimed at creating the eKariera IT system for cooperation between the coordinators of KGHM Polska Miedź S.A. and interested external parties: pupils, students and educational institutions. Work on implementing these solutions will last until August 2019.

#### Group

In 2018, an Employee Pension Program was introduced in the Group’s companies in Poland, which is one of the elements in advancing the social policy under the strategy of KGHM Polska Miedź S.A. and, apart from other typical tools of HR policy, is an important element in motivating and integrating employees with the company. The Employee Pension Program was instituted in the Parent Entity in 2003. It is one of the oldest and largest such programs in Poland, in which the investment funds (to which the contributions are transferred) are managed by TFI PZU S.A.

In 2018, each of the companies advanced its own HR projects. These involved areas such as: raising skills, improving productivity and management efficiency. To address problems associated with acquiring employees, cooperation was instituted with vocational schools and schools of higher learning.

In addition, in 2018 actions were undertaken with respect to global projects introduced in prior years, comprising all of the Group’s domestic companies, including recruitment principles utilising the e-Rekrutacje system.

### 13.3. Relations with the trade unions

#### KGHM Polska Miedź S.A.

In 2018, the following major events with respect to relations with the trade unions took place in KGHM Polska Miedź S.A.:

<b>5 February 2018</b>	Additional Protocol No. 22 to the CLA was signed. With effect from 1 January 2018, it introduces an increase in basic wages by 6.1%.
<b>28 June 2018</b>	An additional agreement to the Collective Labour Agreement (CLA) for the Employees of KGHM Polska Miedź S.A. was signed regarding the date of payment of the annual bonus for 2017.
<b>22 January 2019</b>	Additional Protocol No. 23 to the CLA for the Employees of KGHM Polska Miedź S.A. was signed. It introduces the following, with force from 1 January 2019: <ul style="list-style-type: none"> <li>- an increase in basic wage rates by 5.6%;</li> <li>- an increase in the basis for calculating shift bonuses, from category 8 to category 10;</li> <li>- a reflection in the employment periods granting entitlement to bonuses and benefits of breaks in working time, in the case of a court-ordered return to work;</li> <li>- a reflection in the employment periods granting entitlement to pension rights and jubilee bonuses of un-paid holiday time, granted to the employee for the purpose of working at another employer for a period set forth in the agreement reached between the employers in this regard.</li> </ul>

#### Group

##### Companies in Poland

In 2018, the domestic companies of the Group engaged in negotiations with the trade unions regarding questions of remuneration, employment conditions and social matters. In most cases they concluded with the signing of additional protocols to the Collective Labour Agreements and other agreements.

In entities engaged in therapeutic and spa activities, agreements were concluded involving assuring higher basic wages for employees, pursuant to the „act dated 8 June 2017 on setting the lowest basic wage of employees practicing medicine employed in healthcare entities“.

In 2018, collective disputes were initiated in two of the Group's companies, which were short in duration and, after less than a month, were concluded with the signing of agreements.

**INOVA Spółka z o.o.** – in February 2018 one (of the two trade unions active in this company) initiated a collective dispute, in which the main demands were centered around wages. Following negotiations, in March 2018 an agreement was reached which ended the dispute.

**PeBeKa S.A.** – from 10 January 2018 to 15 February 2018 the company was in a collective dispute with one of the trade unions active in this company. During the procedural process the parties commenced negotiations, which concluded with the signing of a protocol of dispute. In the meantime the company commenced talks involving wage issues with all of the trade unions active in the company. As a result of these talks, the parties agreed a common position which also comprised the demands at the center of the dispute. In February 2018, based on the Agreement reached, the subject of the dispute was ended, while in December 2018 the trade union issued new demands. During the subsequent negotiations the parties presented their positions. Discussions in this regard will be continued in 2019.

In May 2018, as the result of the signing of an agreement with the trade union, the collective dispute in the company **PMT Linie Kolejowe 2 Sp. z o.o.**, which began in 2017 and involved wage demands, was ended.

### 13.4. Occupational health and safety

In 2018, the Company continued work involving implementation of the long-term vision „Zero accidents due to personal and technical reasons, zero occupational illnesses among our employees and contractors“.

The life and health of employees and workplace safety in general is the chief priority in the hierarchy of values of the KGHM Polska Miedź S.A. Group. The Company applies high OHS standards, both towards its own employees as well as towards those providing services on the grounds of KGHM Polska Miedź S.A. Each of the Company's Divisions has implemented a safety management system which is compliant with standards in force. All work stations have identified threats. The Company has assessed occupational risks and updates them continually. Working environments are continually monitored and periodic reviews and potential threat assessments are conducted, as well as reviews of equipment and required technical checks and approvals. Employees undergo systematic training and continually enhance their qualifications.

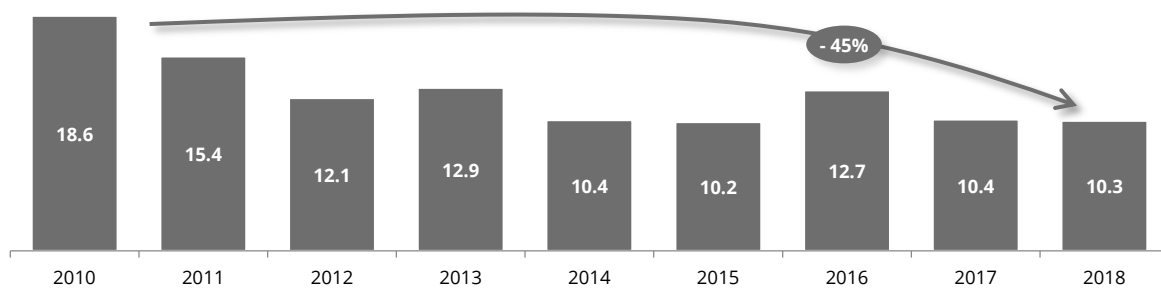
In 2018, the Company recorded a decrease in the total number of workplace accidents (as defined by the act on social insurance due to workplace accidents and occupational illnesses), with a year-on-year decrease from 300 to 297 injured. Most of the registered workplace accidents (98.7%) involved light injuries, with the main causes being in order: contact

(striking) with or by moveable/ immovable objects, loss of balance by employees, rock falls and injuries related to using workplace tools.

Natural hazards associated with the underground mining of copper ore deposits, in particular hazards related to mining tremors and their potential effects in the form of roof and wall collapses are considered as particularly important from the safety point of view, as their occurrence can lead to serious or even fatal injuries as well as damage to underground machinery, equipment and infrastructure, along with production downtimes. KGHM Polska Miedź S.A. carries out a variety of preventive actions in its mines involving the intentional provoking of roof collapses and rock falls, comprising systematic seismological observations, on-going assessment of the rock mass and the marking off of areas of particular threat of roof collapse. The size, shape and number of chambers and inter-chamber pillars is selected, as well as the most advantageous direction of mine work advance and the optimum order of ore selection to minimise local concentrations of stress in the rock mass. So-called active methods of preventing uncontrolled roof collapses and rock falls are also applied, based on provoking dynamic events through mass blasting of mining faces and through blasting to release stress in the orebody or its roof. The Company is continually improving in terms of the safe mining of the copper ore deposit. In 2018, the Company registered a total of 18 workplace accidents in its mines qualified as light injuries, caused by the threat inherent in the rock mass. These incidents represented 7.6% of all workplace accidents in the mines during this period. KGHM Polska Miedź S.A. is continuously improving its safety record in the mining of the copper ore deposit.

The ratio  $LTIFR_{KGHM}$  (Lost Time Injury Frequency Rate KGHM) in 2018, or the total number of workplace accidents (as defined by the act on social insurance due to workplace accidents and occupational illnesses) in the Company, being the number of accidents per million hours worked for the entire core business of KGHM Polska Miedź S.A., decreased by 1.1 % as compared to 2017, and amounted to 10.3 (2017 = 10.4) and at the same time was lower by 45% than the amount recorded in 2010.

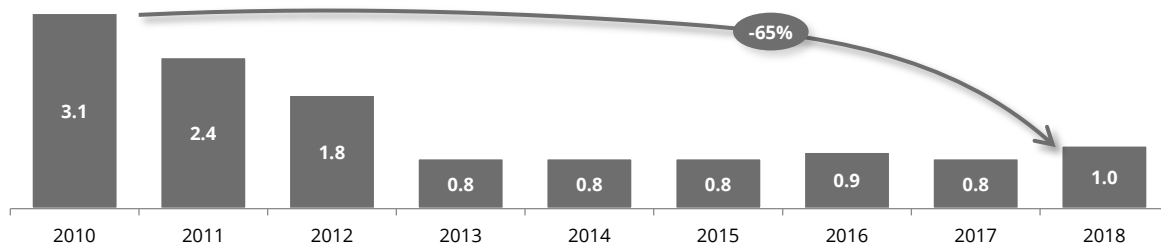
Chart 37.  $LTIFR_{KGHM}$  in the Parent Entity



In KGHM INTERNATIONAL LTD., in accordance with the adopted obligations, the Occupational Health and Safety Management System is consistently implemented, based on a systematic approach to the identification, assessment, elimination and/or control of hazards and risks related to advancing and continuously improving the organisational culture of Zero Harm, which at the same time represents one of the company's values. This system comprises all of the companies which are fully owned by KGHM INTERNATIONAL LTD. or in which KGHM INTERNATIONAL LTD. is a managing partner, and at the same time reflects the cultural and legal differences of activities of individual entities. In North America the Zero Harm policy encompasses employees, contractors and local communities. It is a process of continuous prevention and improvement in counteracting threats to occupational health and safety, as well as to environmental protection. In 2018, in the mines and projects supervised by KGHM INTERNATIONAL LTD. in Canada and the United States of America, a total of 51 workplace accidents were registered, while the TRIR ratio amounted to 2.90.

In Chile, KGHM Polska Miedź S.A. conducts mining operations in two entities, which have separate systems of OHS management adapted to legal requirements and to mining conditions in this country. These systems encompass both the employees in these entities as well as sub-contractors, and are aimed at achieving the long-term vision „Zero harm”. In KGHM Chile SpA, which oversees the Franke mine, and which also engages in its own exploration and other activities, two workplace accidents were recorded in 2018, with a TRIR ratio of 0.22. In the joint venture company Sierra Gorda S.C.M., 16 workplace accidents were recorded in 2018, with a TRIR ratio of 0.38.

In 2018 in the entities in which KGHM Polska Miedź S.A. conducts mining operations in Canada, the United States and Chile, a total of 69 workplace accidents were recorded. The consolidated TRIR ratio (Total Recordable Incident Rate) for these operations reached 1.0. This was 0.2 higher as compared to 2017 and at the same time 68% lower than the level recorded in 2010.

Chart 38. TRIR<sup>1</sup> ratio in KGHM INTERNATIONAL LTD.

<sup>1</sup>TRIR (Total Recordable Incident Rate) calculated using accepted methodology as the number of accidents at work meeting the conditions of registration as defined in the ICMM (International Council on Mining & Metals) standard, in total for the employees of KGHM INTERNATIONAL LTD., KGHM Chile SpA and Sierra Gorda SCM and sub-contractors for these entities, per 200 000 worked hours.

## 14. Significant contracts for the Company and Group

In 2018, Group companies entered into the following significant contracts:

Date	Description
<b>6 November 2018</b>	<p>On 6 November 2018, a contract was signed for the sale of copper cathodes produced by the Company in the years 2019-2023, between the Company and China Minmetals Nonferrous Metals Co. Ltd. (a company within the China Minmetals Corporation group).</p> <p>This is a framework contract which will replace the current framework contract signed on 20 June 2016 with China Minmetals Corporation for the years 2017-2021 and announced by the Company via regulatory filing no. 22/2016 dated 20 June 2016, and at the same time will ensure the sale of cathodes to the Chinese market in the years subsequent to the current contract. The new contract's entry into force is conditional on the termination of the current contract with China Minmetals Corporation.</p> <p>The value of this contract depends on the volume of options used, and is estimated to be from USD 1 590 million, or PLN 6 028 million to USD 3 816 million, or PLN 14 467 million. The value was estimated based on the forward copper price curve from 2 November 2018 and the USD/PLN exchange rate announced by the National Bank of Poland on 5 November 2018. The contract foresees contractual penalties for delays in delivery.</p>

In addition, on 27 February 2019, the Company signed an unsecured, working capital facility agreement with Bank Gospodarstwa Krajowego with a financing period of up to 84 months, as a revolving credit line in the amount of USD 450 million for a period of 60 months, with the option to transform it into a non-revolving credit after 60 months.

### 14.1. Related party transactions under other than arm's length conditions

In 2018, neither the Parent Entity nor its subsidiaries entered into related party transactions under other than arm's length conditions.

### 14.2. Information on contracts with the entity entitled to audit the financial statements

The entity entitled to audit the separate financial statements of KGHM Polska Miedź S.A. and the consolidated financial statements of the KGHM Polska Miedź S.A. Group is Deloitte Audyt Sp. z o. o. Sp. k. with its registered head office in Warsaw, al. Jana Pawła II 22.

In accordance with a decision of the Supervisory Board of KGHM Polska Miedź S.A., on 7 April 2016, KGHM Polska Miedź S.A. signed a contract with Deloitte Audyt Sp. z o. o. Sp. k. for the review of the half-year financial statements and for the audit of the annual financial statements for the years 2016, 2017 and 2018.

Based on a statement by the Supervisory Board, the Management Board informs that the selection of the auditing company for the audit of the annual financial statements for 2018 and for the annual consolidated financial statements for 2018 was conducted in compliance with the law, including those involving the selection, and the procedure for selecting, the auditing company, indicating that:

- the auditing company and the members of the team conducting the audit met the conditions for preparing an unbiased and independent report on the audit of the annual financial statements and the annual consolidated financial statements in line with the binding regulations of the law, professional standards and professional ethics,
- rules in force are complied with related to rotation of the auditing company and the key certified auditor as well as prevailing mandate periods, and that

- the Company has a policy with respect to the selection of the auditing company and a policy with respect to the providing of services to the Company by the auditing company, any entity related to the auditing company or a member of its network of additional non-auditing services, including services which are conditionally excluded from the ban on such services being provided by the auditing company.

Deloitte Audyt Sp. z o. o. Sp. k. was also selected to audit the financial statements of twenty-four subsidiaries of the KGHM Polska Miedź S.A. Group.

Detailed information on remuneration of the entity entitled to audit the financial statements for the review and audit of financial statements and other remuneration is presented in note 12.11 of the separate and consolidated financial statements.

### 14.3. Information about suppliers and customers

The copper smelters and refineries of KGHM Polska Miedź S.A. produce electrolytic copper from their own concentrates as well as from purchased copper-bearing material (concentrates, copper scrap and blister copper). In 2018, the production of electrolytic copper from purchased copper-bearing material amounted to 72.1 thousand tonnes, and represented 23.2% of total electrolytic copper production.

For the most part, this production came from copper scrap (74.3 thousand tonnes of copper; 14.4% of total electrolytic copper production), which is supplied to KGHM's metallurgical plants by KGHM Metraco S.A. – a 100%-owned subsidiary of KGHM Polska Miedź S.A.

KGHM Metraco S.A., due to its specialisation and familiarity with the scrap market, as well as to its equity relationship with KGHM Polska Miedź S.A., supplies scrap to the metallurgical plants of KGHM based on exclusivity and as a result revenues from the sales of this company to KGHM Polska Miedź S.A. are significant and represent 12% of KGHM Polska Miedź S.A.'s sales revenue and 9% of sales revenue of the Group.

Apart from KGHM Metraco S.A., the only counterparty whose turnover with the Company exceeds 10% of the sales revenue of KGHM Polska Miedź S.A. (KGHM) is China Minmetals Corporation (Minmetals). Copper cathodes are sold to Minmetals based both on a framework contract as well as spot-type contracts. Total sales to Minmetals in 2018 accounted for 13% of the Company's sales revenue and 10% of the Group's sales revenue.

In 2018, as in the previous years, there were no significant changes in the sources of supply of materials, merchandise and services to KGHM Polska Miedź S.A. There was no recorded dependence on a single or multiple customers or suppliers.

## 15. Litigation and claims

At the end of 2018, the total value of on-going disputed claims both by and against KGHM Polska Miedź S.A. and its subsidiaries amounted to PLN 465 million, including receivables of PLN 223 million and liabilities of PLN 242 million. The total value of the above claims did not exceed 10% of the equity of the Parent Entity.

Value of proceedings involving receivables at the end of 2018:

- proceedings by KGHM Polska Miedź S.A. amounted to PLN 137 million,
- proceedings by subsidiaries amounted to PLN 85 million.

Value of proceedings involving liabilities at the end of 2018:

- proceedings against KGHM Polska Miedź S.A. amounted to PLN 82 million,
- proceedings against subsidiaries amounted to PLN 161 million.

### List of significant proceedings before courts, arbitration authorities or public administration authorities respecting the liabilities and receivables of KGHM Polska Miedź S.A. and its subsidiaries

<b>Proceedings regarding royalties for use by the Company of invention project no. 1/97/KGHM</b>	<p>Claim dated 26 September 2007. Plaintiffs (14 natural persons) filed a claim against KGHM Polska Miedź S.A. with the Regional Court in Legnica for the payment of royalties for the use by the Company of invention project no. 1/97/KGHM called „Sposób zwiększenia zdolności produkcyjnej wydziałów elektrodrefinacji Huty Miedzi” (Method for increasing the production capacity of the electrorefining sections of the Metallurgical Plants) for the 8th period of the application, together with interest due. The amount of the claim (principal amount) was set by the Plaintiffs in the claim in the amount of PLN 42 million (principal amount without interest and court costs). Interest as at 30 September 2018 amounted to PLN 53.6 million. In the response to the claim, KGHM Polska Miedź S.A. requested the dismissal of the claim in its entirety and filed a counter claim for the return of undue royalties paid for the 6th and 7th periods of application of invention project no. 1/97/KGHM, together with interest due, also invoking the right of mutual set-off of claims. The amount of the claim (principal amount) in the counter claim was set by the Company in the amount of approx. PLN 25 million.</p> <p>In accordance with the Company's position, the counter claim is justified. The Company in this regard paid the authors of the project royalties for a longer period of application of the project than anticipated in the initial contract entered into by the parties on advancing the invention project, based on an annex to the contract, extending the period of payment of royalties, whose validity is questioned by the Company. Moreover, the Company is questioning the „rationalisation” nature of the solutions, as well as whether they were in fact used</p>
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in their entirety, and also their completeness and suitability for use in the form supplied by the Plaintiffs as well as the means of calculating the economic effects of this solution, which were the basis for paying the royalties.

In a judgment dated 25 September 2018, the court dismissed the counter claim and partially upheld the principal claim to the total amount of approx. PLN 23.8 million, and at the same time ordered the payment of interest in the amount of approx. PLN 30.1 million – for the total amount of PLN 53.8 million. The judgment is not final and binding and it may be appealed. On 6 December 2018, KGHM Polska Miedź S.A. filed an appeal of the judgement of the court of first instance.

## 16. Environmental protection

### 16.1. KGHM Polska Miedź S.A.

#### Activities of the Company related to environmental protection

KGHM Polska Miedź S.A. as one of the largest, socially responsible companies in Lower Silesia, cannot and does not want to avoid its responsibility for the environment in which we live. The idea of sustainable growth, and in particular respect for the natural environment, is one of the most important values of the Company. The extraction of copper ore, followed by its processing at all stages of production, is inextricably linked to its impact on various aspects of the natural environment. Adherence to strict environmental standards, mandated by law, is possible thanks to the systematic modernisation of installations protecting the environment, both those built in the past as well as new investments in this area. In 2018, the Company spent PLN 143 million on investments to protect the natural environment, of which the largest expenditure, in the amount of over PLN 32 million, was incurred on modernisation of the installation for removal of carbonates during the flotation process at the Polkowice Concentrator.

In 2018, the program of supporting crop-raising farmers in areas impacted by the operations of the Company's installations continued. This support was in the form of cash subsidies for the purchase of fertilising lime necessary for soil liming in order to reduce its acidity and immobilise heavy metals in agricultural terrain. The program encompassed farmers from the gmina (municipality) of Grębocice which, in accordance with a resolution of the Management Board and Supervisory Board, received PLN 0.8 million for the liming of soil.

#### Environmental fees

Environmental fees paid by the Divisions of KGHM Polska Miedź S.A. in 2018 amounted to PLN 14 million. The amount of fees paid has remained at this low level for two years, thanks to the functioning in the copper ore mines of a system for monitoring chlorides and sulphides volumes, which annually enables the amount of around PLN 22 million to be deducted from the fee paid for the emission of over-sediment water from the Żelazny Most tailings storage facility. In 2018, in the structure of fees, the highest amount incurred was the fee for atmospheric emissions of dusts and gases: PLN 5 million. Another item of costs, over PLN 4 million, is the waste storage fee.

#### Legal status and future actions

W KGHM Polska Miedź S.A. operates ten installations whose functioning, in accordance with the Act on Environmental Protection, requires integrated permits. As a result of the coming into force of Implementing Decision 2016/1032 of the European Commission establishing best available techniques (BAT) conclusions for the non-ferrous metals industries, we were required to amend the permits held for the metallurgical facilities. In 2018, we completed this procedure and now hold new decisions for the Głogów and Legnica Copper Smelters and Refineries and the Cedynia Wire Rod Plant.

In addition, the Tailings Division holds permits for the operation of the Żelazny Most Tailings Storage Facility, and sector permits required by law. The mines operate on the basis of current sector permits with respect to airborne emissions and waste management.

Metallurgical installations at the Głogów and Legnica Copper Smelters and Refineries as well as the gas-steam blocks in Polkowice and Głogów also hold permits to participate in the CO<sub>2</sub> emissions trading system, as since 2013 KGHM Polska Miedź S.A. has been participating in the obligatory European Union Emissions Trading System (EU ETS).

In 2018, emissions in the previous year (2017) in the amount of 1 080 thousand tonnes of CO<sub>2</sub> were settled by freely-acquired rights (around 950 thousand tonnes of CO<sub>2</sub>) supplemented by purchases of rights (EUAs or European Emission Allowances and CERs - certified emission reduction).

It is expected that 2018 emissions at the level of around 1.15 million tonnes of CO<sub>2</sub> will be settled thanks to freely-acquired rights for the Głogów and Legnica Copper Smelters and Refineries as well as rights for the Gas-Steam Blocks in Polkowice and Głogów (around 930 thousand tonnes of CO<sub>2</sub>) along with rights from prior years and purchases of rights (EUA i CER) in the amount of PLN 10 million.

The most important planned undertakings related to environmental protection in the near term are as follows:

- completion of construction of a concentrate roasting installation at the Głogów Copper Smelter and Refinery,
- updating of the integrated permit for the RCR furnace investment underway at the Legnica Copper Smelter and Refinery.
- overseeing the system for trading CO<sub>2</sub> emissions,
- work related to ensuring the security of the Żelazny Most Tailings Storage Facility, such as strengthening the containment dam,

- continuation of a program to promote health and prevent environmental threats, aimed at the people living in the nearest proximity to our metallurgical facilities, and
- construction of the southern quarter of the Żelazny Most tailings storage facility.

#### Activities to meet REACH Regulation requirements

KGHM is a member of six international consortia created to meet the requirements of EC Regulation No. 1907/2006, the so-called REACH Regulation. In 2018, cooperation with the consortia involved adaptation to changes in REACH requirements as regards registration documentation, the classification of substances, assessment and authorisation. These changes are to be introduced smoothly, which is why the REACH consortia will continue to function.

#### Updating of BREF documentation

BREF documents are required by the EU and comprise descriptions of techniques applied in various industries with an emphasis on best available ecological techniques, for use by Member States as a starting point for the issuance of environmental permits.

Work is being conducted by the Joint Research Centre – Institute of Prospective Technological Studies (JRC-IPTS) in Seville in cooperation with Technical Working Groups (TWGs), composed of representatives of Member States, organisations and industry (including KGHM).

In 2018, work was concluded on updating the BREF for dealing with mining tailings and waste, the MWEI BREF document. This document was published in December 2018.

#### 16.2. The KGHM INTERNATIONAL LTD. Group

In 2018, entities of the KGHM INTERNATIONAL LTD. Group also engaged in activities related to environmental protection. In the case of the Robinson mine (USA), activities were aimed at monitoring air and water quality, waste management and the restoration of mining areas - total expenditures amounted to approx. PLN 25 million, including PLN 1.8 million due to environmental permits held, of which PLN 0.2 million were in the form of an emission fee.

At the Carlota mine in the USA, activities were mainly related to closure of the mine and environmental monitoring – total expenditures for this purpose amounted to approx. PLN 4 million, including PLN 0.2 million in the form of an emission fee.

In the Sudbury Basin mines (Canada) activities focused on modernising the waste treatment system. PLN 0.6 million was incurred for this purpose.

At the Franke mine (Chile) activities focused on acquiring required permits and environmental monitoring. Total expenditures for this purpose amounted to PLN 3 million.

#### Financial resources for mine decommissioning and restoration of mining areas

Pursuant to laws in force in the United States and Canada, the KGHM INTERNATIONAL LTD. Group is obligated to purchase government environmental bonds at the amount of the estimated provision for decommissioning of mines and technological facilities.

As at 31 December 2018, the value of assets for decommissioning the mines of KGHM INTERNATIONAL LTD. (cash) amounted to PLN 117 million (as at 31 December 2017: PLN 117 million).

In addition, as at 31 December 2018, KGHM Polska Miedź S.A. had issued letters of credit to secure liabilities related to covering the costs of decommissioning mines and restoring terrain in the amount of PLN 345 million (as at 31 December 2017 – PLN 345 million). Letters of credit issued by KGHM INTERNATIONAL LTD. as at 31 December 2018 amounted to PLN 85 million (as at 31 December 2017 – PLN 7 million).

#### 16.3. Other Group companies in Poland

The Polish companies of the Group operate in compliance with environmental laws. Companies which are required to do so hold valid environmental permits, with one exception. The company Uzdrowiska Kłodzkie S.A. – Grupa PGU does not possess a water rights permit for the discharge of water following bathing for the unit Zakład Przyrodolecznicy in Polanica Zdrój. Because of this the fee paid by the company for the discharge of waste water is higher by 500%. There is also no water rights permit for the discharge of excess mineral water from the „Pieniawa Józefa I” and „Pieniawa Józefa II” inlets. The discharge of this water to the river is not subject to fees. The company is engaged in discussions with the appropriate authorities for the purpose of regulating this state of affairs. In the fourth quarter of 2018 an excess amount of general phosphorus and general nitrogen was released into a stream from the Rozlewnia Wód Mineralnych no. 3 waste treatment plant in Jeleniów. The company took actions aimed at improving the required parameters. Modernisation work was undertaken aimed at returning the treatment plant to proper functioning. The results of the analysis carried out at the start of 2019 confirmed the compliance of the discharge parameters with the water rights permit.

Amongst the Polish companies of the Group, the largest environmental impact comes from the activities of the company „Energetyka” sp. z o.o. In 2018, this company incurred the highest environmental fees. They amounted to PLN 3.8 million and were mainly comprised of payments for water intake and waste discharge (over PLN 2.9 million) and for emission of contaminants to the atmosphere (PLN 0.8 million). In 2018, the company advanced investments aimed at limiting emissions of atmospheric pollutants, including in the following power plants: EC-3 Głogów – construction of water/gas boilers, EC-4 Legnica - modernisation of a steam boiler, EC-1 Lubin – construction of a fumes treatment installation.

Due to the specific nature of the products manufactured by the company NITROERG S.A. (explosives, initiation systems, fuel additives), it has an impact on the environment. The environmental fees incurred by this company in 2018 amounted to PLN 0.5 million. In 2018, the company advanced investments aimed at limiting the environmental impact, including the treatment of sewage and construction of a new installation for the production of fuel additives, which will allow for the re-use of concentrated acids in the production process.

The company Cuprum Development Sp. z o.o., which owns land in the center of Wrocław, remains in a dispute with the General Directorate for Environmental Protection in a matter concerning the execution of a remedial decision issued for the land it owns by the Regional Directorate for Environmental Protection in Wrocław (dated 18 June 2015). In May 2018 the company received a copy of the decision together with supporting justification from the Regional Administrative Court in Warsaw, dismissing the claims to the General Directorate for Environmental Protection for their consideration. The legal proxy for the company submitted cassation appeals against the ruling of the RAC to the Supreme Administrative Court. On 25 February 2019 the Company received notification from the Voivode of Lower Silesia on the commenced enforcement proceeding to enforce the execution of non-financial obligations. This notification was issued based on a warrant of execution issued by the Regional Director for Environmental Protection in Wrocław dated 14 February 2019. This body issued the warrant despite the lack of conclusion of the case before the SAC (lack of a judgment on dismissal of the company's cassation appeals). The requested enforcement measure is a fine aimed at forcing execution of the obligation. The legal proxy for the company filed complaints regarding the initiation of administrative execution.

## 17. The Management Board and the Supervisory Board of the Parent Entity

### 17.1. Bios and responsibilities of members of the Management Board

#### Marcin Chludziński – President of the Management Board



Graduate of the Institute of Social Policy and the European Institute of Regional and Local Development at the University of Warsaw. He finished his MBA at the Institute of Economics, Polish Academy of Sciences. He has experience in the management of commercial law companies, restructuring projects and corporate supervision.

President of the Management Board of KGHM Polska Miedź S.A and chairman of the Employers' Organization of Polish Copper. Previously president of the management board of Agencja Rozwoju Przemysłu S.A., where he successfully restructured the following companies: Przewozy Regionalne, H. Cegielski – Fabryka Pojazdów Szynowych, Świętokrzyskie Kopalnie Surowców Mineralnych. Since January 2016 a Member of the Supervisory Board of PZU S.A. Co-founder and president of the management board of Invent Grupa Doradztwa i Treningu Sp. o.o. in the years 2006 – 2015. President of the economic think tank Fundacja Republikańska in the years 2011 – 2015.

Member of Narodowa Rada Rozwoju (the National Development Council), an advisory body to the President of the Republic of Poland, and of the Jury of the Economic Awards of the President of Poland.

**The President of the Management Board** is responsible for:

- activities related to overall risk management at the corporate level as well as internal auditing and controlling within the Group,
- the preparation, implementation and execution of the Company's Strategy and Policy of Sustainable Development,
- activities related to comprehensive management of security and preventing losses in the Group,
- corporate supervision standards and compliance with the corporate governance standards adopted by the Company,
- overall corporate oversight over the Group's subsidiaries in Poland and abroad,
- compliance with formal reporting and publishing obligations within the scope required by law,
- activities related to creating, updating and maintaining the uniformity of the organisation's internal regulations to maintain consistent operating principles,
- providing organisational and legal services to the Company's bodies,
- providing legal services to the Company,
- activities related to communications and corporate image-building within the Group,
- the shaping of relations with the Company's external business environment,
- on the Founder's behalf – supervision of the functioning of the KGHM Polish Copper Foundation as well as other organisations serving the public, which support achievement of the Group's business goals,
- internal control,
- the activities of the Data Center (COPI) with respect to:

- supplying and developing information and communication services required for the proper functioning of the Head Office,
- the rational utilisation by management of ordered and contracted goods and services, and
- activities related to human resources management.

#### Adam Bugajczuk – Vice President of the Management Board (Development)



Graduate of the Wrocław University of Economics, Faculty of Economics, Management and Tourism.

Involved with PKO Bank Polski S.A. from January 2011, where he served as a manager and director. Among others, he was responsible for supervision over the implementation of investment projects and optimisation of business processes, as well the preparation of development plans and improvements in areas under his supervision. Co-responsible for execution of cost optimisation under the bank's business strategy. Supported the process of business expansion of PKO Bank Polski S.A. Responsible for the implementation of procurement policy in the Group's companies.

He was employed from 2002 to 2010 in the company Bank Zachodni WBK S.A., where he cooperated in the implementation of investment projects. He was also responsible for the optimisation and supervision over the realisation of network contracts.

He has an extensive experience in the areas of standardisation and normalisation of business processes.

**The Vice President of the Management Board (Development)** is responsible for:

- advancement of the Company's R&D policy,
- advancement of the Company's innovation and intellectual property protection policy,
- coordination of the Company's investments and development projects,
- the development, updating and monitoring of execution of the Group's equity investments plan,
- shaping of the Company's products portfolio,
- initiation, development and implementation of management standards in the process of managing projects and programs,
- acquisition and development of the mining resources base in Poland,
- management of real estate,
- overseeing the Company's administrative services,
- the work of the Central Procurement Office.

#### Paweł Gruza – Vice President of the Management Board (International Assets)



Graduate of the Warsaw University, Faculty of Law and Administration.

An Undersecretary of State in the Ministry of Finance from November 2016 to September 2018. Co-author of the tax reform. As a representative of the minister responsible for financial institutions he was also a member of the Polish Financial Supervision Authority.

An Undersecretary of State in the Ministry of the State Treasury from April to November 2016. He managed a portfolio of companies with State Treasury ownership and state legal entities. He worked on reforming supervision over State Treasury companies. An expert and a management board member of Fundacja Republikańska (Republican Foundation) from 2007 to 2016. He was a partner and a management board member of MMR Consulting sp. z o.o., as well as a partner in the tax consultant office GWW Tax from 2007 to 2016. He worked in the Artur Andersen and Ernst & Young consultancy companies from 2000 to 2006. He managed interdisciplinary consultant projects for Polish and international companies from the industrial and financial sector.

Author and co-author of numerous publications on taxes and social security.

**Vice President of the Management Board (International Assets)** is responsible for:

- the preparation and implementation of strategy for international assets,
- activities related to acquiring and developing the International resource base,
- analysis, assessment and preparation of new international exploration projects,
- preparation of studies and expert opinions concerning international resource base projects,
- coordination of tasks with respect to the plan of the Company's equity investments in international subsidiaries,
- substantive oversight over the Group's international production entities, including the creation and execution of their production plans,
- the shaping of the Company's commercial and logistics policies.

### Katarzyna Kreczmańska-Gigol – Vice President of the Management Board (Finance)



Graduate of the Warsaw School of Economics. She completed her doctoral studies at the Collegium of Management and Finance of the Warsaw School of Economics, where she obtained the degree of doctor of economic studies and the degree of doctor habilitatus of economics in the field of finance.

Long-time employee in the banking sector. Researcher at the Warsaw School of Economics since 2007. Associate Professor in the Department of Corporate Finance, Institute of Finance, the Collegium of Management and Finance of the Warsaw School of Economics. Head of the postgraduate studies course „Windykacja należności” (“Debt collection”) and „Bezpieczeństwo finansowe w obrocie gospodarczym” (“Financial security for business”) at the Warsaw School of Economics. In the years 2016-2018 involved with Poczta Polska S.A., in which she performed the duties of executive director of the Finance Section and director of the Treasury Office.

She has experience in finance, planning, budgeting, credit management and financial reporting. An expert in financial liquidity, sources of financing, factoring and collection of debt. Author and co-author of numerous publications in finance, among others: „Finanse spółki akcyjnej” (“Finances of a joint-stock company”), „Podstawy finansowania spółki akcyjnej” (“Basics of financing a joint-stock company”), „Aktywne zarządzanie płynnością finansową przedsiębiorstwa” (“Active management of a company’s financial liquidity”), „Płynność finansowa. Istota, pomiar, zarządzanie” (“Financial liquidity. Essence, measurement, management”), „Windykacja należności – ujęcie interdyscyplinarne” (“Collection of debt – the interdisciplinary approach”), „Windykacja polubowna i przymusowa. Proces, rynek, wycena wierzytelności” (“Amicable and compulsory collection of debt. The process, market and debt valuation”), „Faktoring w prawie cywilnym, podatkowym i bilansowym” (“Factoring in civil, tax and balance sheet law”) and „Skarbnik korporacyjny” (“Corporate Treasurer”).

**Vice President of the Management Board (Finance)** is responsible for:

- the shaping of the Group’s financial policy;
- review of the Main Strategy’s projects in terms of their financial feasibility;
- finances in all of the Group’s operations and activities;
- the creation of Group tax policy; and
- the Company’s accounting services.

### Radosław Stach - Vice President of the Management Board (Production)



Graduate of the AGH University of Science and Technology in Kraków, Department of Mining and Geology – underground mining. He finished his MBA at the Wielkopolska Business School of the Poznań University of Economics and Business as well as the KGHM Executive Academy, managed jointly with IMD Business School in Switzerland. He finished the prestigious managers’ program “Personal Leadership Academy program” at the ICAN Institute.

Involved with the KGHM Polska Miedź S.A. Group since the beginning of his professional career. He was gradually promoted at the Polkowice-Sieroszowice mine: from intern, to senior miner, shift foreman, section foreman, manager of mining operations unit, chief mining engineer/ deputy manager of mining plant operation. He served in the function of vice president (operation development) in the company KGHM INTERNATIONAL in Canada, and was responsible for the portfolio of international assets in North and South America in the years 2015 - 2016. Subsequently, he was an executive director in the Polkowice-Sieroszowice mine. Since 2017, he has also served as a vice president of the management board of MBA CLUB of the Wielkopolska Business School of the Poznań University of Economics and Business.

An active member of KGHM’s rescue team since 2000. He achieved third place in team competition in the International Mines Rescue Competition which took place in the USA (2008). As a captain, he led his team to victory in the competition called “Virtual Comory” in the International Mines Rescue Competition in Australia (2010).

Co-author of the following publications: „Wdrożenie zarządzania procesowego w KGHM Polska Miedź S.A.” (“Implementation of process management in KGHM Polska Miedź S.A.”) and „Koncepcje biznesowe branży wydobywczej. Studium KGHM Polska Miedź S.A.” (“Business concepts of the mining industry. Study of KGHM Polska Miedź S.A.”).

**The Vice President of the Management Board (Production)** is responsible for:

- the integrated planning and optimisation of the Company’s production;
- occupational health and safety and control of environmental risks;
- activities with respect to maintaining readiness of the production and non-production assets and achievement of the main goals of the Energy Strategy;
- activities with respect to manufacturing products and development of the primary mine and metallurgical production,
- overseeing activities connected with the implementation, maintenance and improvement of management systems in the Company.



## 17.2. Biograms of members of the Supervisory Board

### Andrzej Kisielewicz – Chairman of the Supervisory Board

A graduate of the Faculty of Mathematics and Computer Science of Wrocław University. Obtained a doctorate degree in mathematics at the Polish Academy of Sciences in Warsaw. He obtained his title of doctor habilitatus from Wrocław University, and he obtained the title of professor in mathematics in 2001. Currently, he is a professor at Wrocław University, and has worked there since 1993.

He gained professional experience in international science facilities: the University of Manitoba (Winnipeg, Canada, 1989-1990), Technische Hochschule Darmstadt (Germany, 1990-1992) and Vanderbilt University (Nashville, USA, 2001-2002). In addition, he has had many short-term International internships, among others in France, Italy, Austria and Israel. He obtained two of the most prestigious science scholarships in the world: the Alexander von Humboldt scholarship and the Fulbright scholarship.

He also has many years of experience in working on supervisory boards. Among others, he has been a member and chairman of the supervisory boards of companies such as „Spedtrans” sp. z o.o., „Teta” S.A. and PKO BP S.A.

He is an author of over seventy scientific publications in mathematics, logic and computer sciences in international publications, as well as an author of three books in Polish („Logika i argumentacja” (“Logic and argument”), „Sztuczna inteligencja i logika” (“Artificial intelligence and logic”), „Wprowadzenie do informatyki” (“Introduction to computer science”).

### Leszek Banaszak – Deputy Chairman of the Supervisory Board

Leszek Banaszak is a graduate of the University of Warsaw, with a Master’s Degree in Political Science.

For the past 30 years he has been continuously associated with government administration (including nine years in the diplomatic service). Among others he has worked in the Governmental Press Office, the Ministry of Environmental Protection, Natural Resources and Forestry, the Ministry of International Economic Cooperation, the Ministry of the Economy and the Ministry of Energy.

He has been responsible among others for bi-lateral coordination of Poland in the area of environmental protection, coordination of activities by the Polish administration arising from the cooperation of Poland with international institutions and organisations in the area of environmental protection, among others for cooperation under the Organisation of Baltic Sea States (HELCOM), coordination of activities by Poland under the Pan-European Conference of Ministers of Environmental Protection, coordination of activities with respect to international cooperation in meeting the stipulations of the United Nation’s framework convention on climate change. Also cooperated under the European Economic Commission (EEC UN) in Geneva and the UN Commission on Sustainable Development (CSD UN) in New York.

He was the chief negotiator in the area „Environment” during the negotiations regarding Poland’s membership in the Organisation of Economic Cooperation and Development (OECD) in Paris.

He was also responsible for coordination of cooperation between the Republic of Poland and the OECD, the Republic of Poland and the WTO (World Trade Organisation) and oversaw cooperation with the World Bank and the European Bank for Reconstruction and Development.

Also connected with the Department of Energy of the Ministry of the Economy, responsible for international cooperation and European integration (was the chief negotiator in the negotiating area „Energy” during the negotiations regarding Poland’s membership in the European Union), also coordinated legislative work arising from the adaptation of Polish laws to those of the EU. Was also responsible for cooperation with international organisations and institutions, acting in the area of energy, among others the Organisation of Economic Cooperation and Development (OECD), the International Energy Agency (IEA), the European Economic Commission of the United Nation (UN ECE), the UN Commission on Sustainable Development (CSD UN), the Secretariat of the Energy Card Treaty (ECT), the Council of Baltic Sea States and the World Energy Council (WEC).

In the years 2004-2009 and 2012-2016 worked in the diplomatic service in sections of the Polish Embassy in London.

Since 2016 associated with the Department of Renewable Energy in the Ministry of Energy.

Has many years of experience working on supervisory boards. Among others he has been chairman of the supervisory board of Krajowa Agencja Poszanowania Energii (The Polish National Energy Conservation Agency), currently he also serves in the function of chairman of the supervisory board of HUTMAR S.A.

### Jarosław Janas – Secretary of the Supervisory Board

An attorney with a doctorate in law from Wrocław. From 2009 to 2010 he researched British public healthcare at the University of Exeter School of Law (UK), resulting in a doctorate „Prywatyzacja brytyjskiego sektora publicznego na przykładzie National Health Service” (“Privatisation of the British public sector, illustrated by the National Health Service”). An entrepreneur continuously from 1999, an academic teacher, member of the management board of Fundacja Sancta Familia (Sancta Familia Foundation) in Wrocław since 2005, Chairman of the Estate Council of Biskupin-Sępólno-Bartoszowice-Dąbie in the years 2009-2013, a volunteer in Ilford Park Polish Home (UK) 2009-2010, member of the Wrocławska Rada ds. Budżetu Obywatelskiego (Wrocław Citizen’s Budget Council) in the years 2015-2017, member of the Supervisory Board of Polska Agencja Inwestycji i Handlu S.A. (State Treasury) in the years 2016-2018, and an expert in healthcare reform (2018). In the years 2011 – 2018, he was an author of research papers on British law, privatisation of the public sector, judicial control of public administration and healthcare law. He has nearly twenty years of experience in management.

### Józef Czyczerski

Secondary technical education. Since 1979 employed in the Rudna mine of KGHM Polska Miedź S.A., an underground electromechanic. Chairman of the trade union Krajowa Sekcja Górnictwa Rud Miedzi NSZZ Solidarność. Employee-elected member of the Supervisory Board of KGHM Polska Miedź S.A. in the years 1999-2011, and then from 2014.

### Janusz Kowalski

Master's degree in Law,

Master's degree in Administration.

Currently a member of the Management Board of Polska Wytwórnia Papierów Wartościowych S.A. In 2016 Vice President of the Management Board (Corporate Affairs)/(Operations) of the company Polskie Górnictwo Naftowe i Gazownictwo S.A., responsible for coordination of corporate supervision of the PGNiG S.A. Group and of the security and communications department. In 2016 he was a member of the board of directors of PGNiG Upstream International AS, Stavanger, Norway. In the years 2014- 2015 Vice president of Opole city supervising the departments of sport, social policy, security and local affairs as well as supervision over OTBS sp. z o.o. In 2014 he served as Advisor to the Management Board of Proton Relations sp. z o.o., Warsaw; in the years 2009-2013 was a member of the management board of this company. In 2008 he was a chief specialist in the Team for Energy Security in the National Security Bureau. In the years 2018-2010 he was a Member of the team for Energy Security in the Chancellery of Lech Kaczyński – the late President of the Republic of Poland. In the years 2006-2008 he worked in the team of Vice Minister Piotr Naimski in the Ministry of Economy.

Currently a Member of the Council of the PWPW Foundation. In addition, he has been a member of the following supervisory boards: Poczta Polska S.A., Gas – Trading S.A., System Gazociągów Tranzytowych EuRoPol Gaz S.A., Energetyka Ciepła Opolszczyzny S.A., Opole; Investgas S.A. (PGNiG S.A. Group), Operator Logistyczny Paliw Płynnych sp. z o.o., Płock.

### Ireneusz Pasis

Secondary technical education. Since 1988 a mining machinery operator in Przedsiębiorstwo Budowy Kopalń „PeBeKa” S.A. in Lubin (formerly called Zakład Robót Górniczych w Lubinie). Since 2012 Chairman of the Plant Committee of the trade union NSZZ „Solidarność” in PeBeKa S.A.; and since 2015 Secretary of the Employee Council in PeBeKa S.A. Since 2014 has served as Deputy Chairman of the trade union Krajowa Sekcja Górnictwa Rud Miedzi NSZZ „Solidarność”. Previously, in the years 2011 – 2015 was Chairman of the Employee Council in PeBeKa S.A.

### Bartosz Piechota

Bartosz Piechota is a lawyer, a graduate of the Faculty of Law and Administration of the University of Warsaw and also of Cardiff University Law School (Diploma in Legal Studies). Also completed the School of American Law conducted by the University of Florida Levin College of Law and the University of Warsaw. Has many years of experience in providing legal services to the largest Polish and foreign companies, in particular with respect to resolving disputes and restructurisation as well as with respect to corporate law. In recent years he has acted as a consultant, among others, in the realisation of a variety of key infrastructural investments. Since 2010 he has been a founding partner of a leading law firm in Poland involved in resolving disputes and restructurisation. Previously he worked in international and Polish law firms, among others Allen & Overy and Wardyński i Wspólnicy. In the period from 2014 to 2016 he served as Liaison Officer for the International Bar Association in the restructurisation and bankruptcy section responsible for Central and Eastern Europe. He is a member of the International Bar Association and is also the author of publications, as well as a lecturer at international and Polish conferences. Since December 2016 he has been a member of the Supervisory Board of PLL Lot S.A. For many years he has cooperated in the role of expert with Fundacja Republikańska (Republican Foundation).

### Marek Pietrzak

Legal Adviser. A graduate of the Department of Law and Administration of Łazarski University in Warsaw and the Private Higher School of Business and Administration in Warsaw. In 2013, he finished his legal adviser apprenticeship in the District Chamber of Legal Advisers in Warsaw and was licensed to perform the profession. He also finished management and business studies (MBA) at the Warsaw Management University, accredited by the Apsley Business School of London and was granted the title of Executive Master of Business Administration.

He has professional experience in public administration and practical experience in supervision and management of commercial law companies, including those where the State Treasury is one of the shareholders.

In his professional practice he concentrates on providing legal services to corporate entities. His chief specialisations are civil and economic law, in particular corporate law, as well as labour law.

Currently, Marek Pietrzak serves as President of the Management Board of Orlen Asphalt Sp. z o.o. and as Chairman of the Supervisory Board of Polskie Radio Regionalna Rozgłośnia w Warszawie Radio dla Ciebie S.A.

### Bogusław Szarek

Secondary technical education.



Since 1982 employed at the Sieroszowice Mine of KGHM Polska Miedź S.A. in the position: mining machinery and tools mechanic.

Since 1992 Chairman of the Plant Committee of the trade union NSZZ „Solidarność” in the Sieroszowice Mine, and following the merger of the Sieroszowice and Polkowice mines, since 1996 Chairman of the Plant Committee of the trade union NSZZ „Solidarność” in the Polkowice-Sieroszowice mine.

Since 2012 an employee-elected Member of the Supervisory Board of KGHM Polska Miedź S.A.

Deputy Chairman of the Board of the trade union Sekcja Górnictwa Rud Miedzi NSZZ „Solidarność”. Treasurer of the Board of the Secretariat for Mining and Energy of the trade union NSZZ „Solidarność”. Member of the National Committee of the trade union NSZZ „Solidarność”.

### Agnieszka Winnik-Kalemba

Attorney, graduate of the Department of Law of Wrocław University. Also a graduate of the faculty of Public Administration at Georgetown University in Washington D.C.; and of the faculty of Public Administration and Business Law at the University of Kentucky.

She passed her bar exam in 2003 under the District Bar Council in Wrocław and was certified to practice the profession.

Since 2003 owner of a Law Office. In the years 2006 - 2010 served as an advisor and regular associate of the late Member of Parliament Aleksandra Natalii – Świat. In the years 1999 - 2003 gained experience as an apprentice attorney-at-law at Kazimierz Cyrklewicz's Law Office in Wrocław. In addition, was previously Manager of the Legal Services Office of the Lower Silesia Marshal's Office in Wrocław and was Legal Assistant to the Chairman of the Chamber of Regions of the European Council in Strasbourg, Parliament of the Voivodeship of Wrocław. Also gained experience as Legal Assistant in the Law Offices of Bowles, Keating, Matuszewich & Fiordalisi Chicago – Milan – Rome, a Partnership of Professional Corporation, Chicago USA.

Was Deputy Chairwoman and member of the Supervisory Board of PKO BP S.A. Currently she is also the Chairwoman of the Audit Committee of the Supervisory Board of KGHM Polska Miedź S.A.

### 17.3. Changes in the Parent Entity's bodies

#### Management Board of the Company

In accordance with the Statutes of KGHM Polska Miedź S.A. the members of the Management Board are appointed and dismissed by the Supervisory Board. As at 1 January 2018, the composition of the 9th-term Management Board of KGHM Polska Miedź S.A. was as follows:

- |                                |  |
|--------------------------------|--|
| – Radosław Domagalski-Łabędzki | President of the Management Board,                             |
| – Ryszard Jaśkowski            | Vice President of the Management Board (Production),           |
| – Michał Jezioro               | Vice President of the Management Board (International Assets), |
| – Rafał Pawełczak              | Vice President of the Management Board (Development),          |
| – Stefan Świątkowski           | Vice President of the Management Board (Finance).              |

Changes in the composition and division of duties of the Management Board in 2018:

Date	Description of changes
<b>10 March 2018</b>	The Supervisory Board: <ul style="list-style-type: none"> <li>- dismissed Radosław Domagalski-Łabędzki, President of the Management Board and Michał Jezioro, Vice President of the Management Board (International Assets), from the composition of the Company's Management Board,</li> <li>- adopted a resolution on setting the number of Members of the 9th-term Management Board of KGHM Polska Miedź S.A. at three Members of the Management Board,</li> <li>- assigned, until the date of appointment of Members of the Management Board selected under qualification proceedings, Rafał Pawełczak - Vice President of the Management Board (Development) with the responsibilities of President of the Management Board and Stefan Świątkowski - Vice President of the Management Board (Finance) with the responsibilities of Vice President of the Management Board (International Assets).</li> </ul>
<b>22 June 2018</b>	The Supervisory Board adopted resolutions on the appointment (as at the date of conclusion of the Ordinary General Meeting of KGHM Polska Miedź S.A. approving the financial statements for the financial year ending 31 December 2017) to the composition of the 10 <sup>th</sup> term Management Board of Marcin Chludziński, Katarzyna Kreczmańska-Gigol and Radosław Stach.
<b>6 July 2018</b>	In accordance with the aforementioned resolutions, as at the date of conclusion of the General Meeting of KGHM Polska Miedź S.A. Marcin Chludziński assumed the position of President of the Management Board, Katarzyna Kreczmańska-Gigol – the position of Vice President of the Management Board (Finance), and Radosław Stach – the position of Vice President of the Management Board (Production).
<b>23 July 2018</b>	The Supervisory Board assigned, until the date of appointment of Members of the Management Board of KGHM Polska Miedź S.A. selected under qualification proceedings: <ul style="list-style-type: none"> <li>- Marcin Chludziński, President of the Management Board, with the responsibilities of the Vice President of the Management Board (International Assets),</li> <li>- Katarzyna Kreczmańska-Gigol, Vice President of the Management Board (Finance) with the responsibilities of the Vice President of the Management Board (Development).</li> </ul>
<b>24 August 2018</b>	The Supervisory Board appointed Adam Bugajczuk and Paweł Gruza to the composition of the Management Board, and at the same time the Supervisory Board set the number of Members of the 10 <sup>th</sup> term Management Board at five Members of the Management Board.

Finally, from 24 August 2018 to 31 December 2018 the composition of the Management Board was as follows:

- Marcin Chludziński                      President of the Management Board,
- Adam Bugajczuk                        Vice President of the Management Board (Development),
- Paweł Gruza                              Vice President of the Management Board (International Assets),
- Katarzyna Kreczmańska-Gigol        Vice President of the Management Board (Finance),
- Radosław Stach                            Vice President of the Management Board (Production).

On 25 September 2018, there was a change in the Organisational Regulations of KGHM Polska Miedź S.A., as a result of which there were changes in the areas supervised by individual members of the Management Board. The main changes in the areas supervised by the members of the Management Board were as follows:

<b>President of the Management Board</b>	<ul style="list-style-type: none"> <li>- assumption of responsibility for the area of oversight of implementation and execution of the Company's Strategy and Policy of Sustainable Development from the areas supervised by the Vice President of the Management Board (Development);</li> <li>- creation of the area of oversight of comprehensive management of security and preventing losses in the Group;</li> <li>- transfer of the area of overseeing the Company's administrative services to the areas supervised by the Vice President of the Management Board (Development).</li> </ul>
<b>Vice President of the Management Board (International Assets)</b>	<ul style="list-style-type: none"> <li>- transfer from the areas of the shaping of the Company's commercial and logistics policies supervised by the Vice President of the Management Board (Development).</li> </ul>
<b>Vice President of the Management Board (Development)</b>	<ul style="list-style-type: none"> <li>- assumption of responsibility for the area of overseeing the development, updating and monitoring of execution of the Group's equity investments plan from the areas supervised by the President of the Management Board;</li> <li>- assumption of responsibility for oversight of the Central Procurement Office from the areas supervised by the President of the Management Board;</li> <li>- transfer from the areas supervised by the Vice President of the Management Board (Production) of the area of acquisition and development of the mining resources base in Poland.</li> </ul>
<b>Vice President of the Management Board (Production)</b>	<ul style="list-style-type: none"> <li>- assumption of responsibility for the area of oversight of activities connected with the implementation, maintenance and improvement of management systems in the Company from the areas supervised by the President of the Management Board.</li> </ul>

### Supervisory Board of the Company

In accordance with the Statutes of the Company the members of the Supervisory Board are appointed and dismissed by the General Meeting.

As at 1 January 2018, the composition of the 9th-term Supervisory Board of KGHM Polska Miedź S.A. was as follows:

- Dominik Hunek                      Chairman,
- Michał Czarnik                      Deputy Chairman,
- Janusz Marcin Kowalski,
- Wojciech Andrzej Myślecki,
- Marek Pietrzak,
- Agnieszka Winnik-Kalemba,
- Jarosław Witkowski,

and elected by employees:

- Bogusław Szarek                      Secretary,
- Józef Czyczerski,
- Leszek Hajdacki.

On 3 April 2018, Wojciech Andrzej Myślecki submitted his resignation from serving as a Member of the Supervisory Board.

On 6 July 2018, the Ordinary General Meeting of KGHM Polska Miedź S.A. appointed the 10<sup>th</sup>-term Supervisory Board of the Company.

The composition of the Supervisory Board from 6 July 2018 to 31 December 2018 was as follows:

- Andrzej Kisielewicz                      Chairman,
- Leszek Banaszak                      Deputy Chairman,
- Jarosław Janas                          Secretary,
- Janusz Marcin Kowalski,
- Bartosz Piechota,
- Marek Pietrzak,
- Agnieszka Winnik-Kalemba,

and elected by employees:

- Józef Czyczerski,
- Ireneusz Pasis,
- Bogusław Szarek.

#### 17.4. Remuneration of the Parent Entity's bodies and of other key managers of the Group

##### Information on management services contracts, remuneration and the forbidding of competitive activities following the cessation of functioning as a member of the Management Board of KGHM Polska Miedź S.A.

As a result of the coming into force of the Act dated 9 June 2016 on the terms of setting the remuneration of individuals managing certain companies, the Supervisory Board – acting under the authority granted by the Extraordinary General Meeting of the Company KGHM Polska Miedź S.A., setting the principles of employment and remuneration of Management Board Members – established templates for the management services contracts for the Company's Management Board. Based on the aforementioned contract templates, management services contracts were signed with individual members of the Management Board for the time in which they served in management functions, based on a mandate lasting one term until its expiry. This means that the termination of a Contract will occur on the final day on which the function is served, with no notice period and without the need to take additional actions.

The total remuneration received on the basis of these contracts is comprised of a fixed part, representing basic monthly remuneration, and a variable part, representing supplementary remuneration for the Company's financial year.

Pursuant to a decision of the EGM, the amount of fixed monthly remuneration for individual members of the Company's Management Board is within a range of seven- to fifteen times the average monthly remuneration in the corporate sector, exclusive of the annual bonus paid in the fourth quarter of 2016, announced by the President of the Central Statistical Office.

Variable remuneration depends on the level of achievement of the management goals set by the Supervisory Board and may not exceed 100% of the fixed remuneration for the time during which the subject of a given contract is performed (with the proviso that it is longer than three months).

Based on the Statutes of KGHM Polska Miedź S.A., the Bylaws of the Supervisory Board, the management services contracts and resolutions of the Ordinary and Extraordinary General Meetings, the Supervisory Board confirmed the Management Goals (key performance indicators – KPI) for the Management Board of KGHM Polska Miedź S.A. for 2018.

The Management Goals to be achieved, stipulating the conditions under which variable remuneration for the Company's financial year may be received, are as follows:

- application of the principles of remunerating members of management and supervisory bodies, pursuant to the act dated 9 June 2016 on the terms of setting the remuneration of individuals managing certain companies, in all of the Group's companies;
- execution of the duties described in art. 17-20, art. 22 and art. 23 of the act dated 16 December 2016 on the principles of state assets management.

The Supervisory Board also set additional management goals: collective KPIs (obligatory for all of the Management Board's Members) and individual KPIs/goals.

The collective KPIs comprise:

- adjusted EBITDA for the KGHM Polska Miedź S.A. Group,
- EBITDA margin for the KGHM Polska Miedź S.A. Group,
- the pre-precious metals credit unit cost of copper production from own concentrate (excluding the minerals extraction tax), and
- the volume of electrolytic copper production from own concentrate.

The KPIs/goals assigned to individual members of the Management Board according to their duties arise from the Company adopted Strategy of KGHM for the years 2017-2021 with an outlook to 2040 and are of key importance for the organisation.

During the year, as a result of appointing the 10th-term Management Board, the Supervisory Board established new management goals. For all of the members of the Management Board the same set of goals (collective goals) were set. The management goals tied to the possibility of receiving variable remuneration for the Company's financial year were not changed. The remaining management goals comprise 6 tasks in various aspects of management. Three of these (Group EBITDA, unit copper production cost and the volume of electrolytic copper production) were previously adopted by the Supervisory Board. Execution of these indicators ensured achievement of the main budget targets for 2018. The additional proposed Management Goals help to ensure the achievement of key tasks currently underway in the Company with regard to: Company strategy, review of the international assets, development of key strategic directions for the Company and realisation of a key investment concerning development of the Żelazny Most tailings Storage Facility.

Payment of variable remuneration is made if a Management Board Member's management goals are achieved, the Management Board's Report on the activities of the Company and the Company's financial statements for the prior year are approved, the Management Board Member's performance of duties is approved by the General Meeting, and the

Management Board presents the Supervisory Board with a report on the achievement of the management goals. The Supervisory Board evaluates the execution of the aforementioned goals and sets the amount of the variable remuneration due.

Management Board members may join the Employee Pension Program under the principles set forth in the current Collective Agreement, with the proviso that the amount of the monthly basic contribution under the Program depends on the amount of the monthly fixed remuneration for the given period.

Total annual remuneration for a given Management Board Member, as described above, may not exceed a multiple of the amount of PLN 100 000 and the number of calendar months during which the Member served in the function.

Table 49. Potentially-due remuneration of Members of the Management Board of KGHM Polska Miedź S.A. for 2018

First, last name	Position	Potentially-due variable remuneration for 2018 based on management services contract (PLN)
Marcin Chludziński	Member of the Management Board - President of the Management Board	195 467.36
Katarzyna Kreczmańska-Gigol	Member of the Management Board - Vice President of the Management Board	221 302.87
Radosław Stach	Member of the Management Board - Vice President of the Management Board	221 302.87
Adam Bugajczuk	Member of the Management Board - Vice President of the Management Board	161 947.54
Paweł Gruza	Member of the Management Board - Vice President of the Management Board	141 884.20
Radosław Domagański-Łabędzki	Member of the Management Board - President of the Management Board	72 318.38
Stefan Świątkowski	Member of the Management Board - Vice President of the Management Board	178 225.57
Rafał Pawełczak	Member of the Management Board - Vice President of the Management Board	178 225.57
Michał Jezioro	Member of the Management Board - Vice President of the Management Board	66 117.15
Ryszard Jaśkowski	Member of the Management Board - Vice President of the Management Board	202 410.35
<b>TOTAL</b>		<b>1 639 201.86</b>

The aforementioned contract also regulates issues involving the application (utilisation) of all of the Company's resources (tools) required to carry out the contractual duties and to maintain the requirements of security in terms of collecting and transmitting data, including in particular:

- office space together with technical equipment and infrastructure, including a personal computer with wireless Internet access and other necessary equipment, means of communication, including a mobile phone,
- local housing appropriate to the function served (in respect of which the Company covers the cost of such housing to the net amount of PLN 2 500),
- participation in conferences, seminars or business meetings related to the Company's operations and, if necessary to carry out these obligations, business trips in Poland and abroad,
- the incurring by the Company of costs related to services performed outside of the Head Office which must be incurred to properly perform the services, in particular such as travel costs and quartering in a standard appropriate to the function performed,
- use of a company car for business purposes,
- civil liability insurance related to serving in the function, and
- incurring or refinancing costs of individual training for the Management Board Member related to the Contract in question and contractual obligations up to the net amount of PLN 15 000 within a calendar year (if the Supervisory Board expresses consent).

The Contracts also provide that if the Management Board Member serves as a member of a body in a subsidiary of the Company within the Group, the Management Board Member will not receive additional remuneration for this function, apart from the remuneration provided for in the management services contract. In addition, the Management Board Member is obligated to inform the Supervisory Board of the possession of shares in publically-listed companies and to gain the consent of the Supervisory Board for accepting a position or serving in a function in the body of another commercial law company – excluding companies of the Group, the acquisition or possession of shares in another commercial law company, as well as performing work or services on behalf of other entities based on a labour contract, mandate contract or based on any other legal relationship.

The contracts signed with the Members of the Management Board regulate the question of compensation in the case of termination, with or without notice, of the management services contract for reasons other than breach of the contract's basic obligations. The contracts foresee that the Company will pay severance pay of three times the amount of the fixed part of remuneration (if employed in the position for at least 12 months).

The contracts with the Members of the Management Board – both during the period of employment as well as following the period of employment – deal with the question of forbidding any activities which would represent a conflict of interest. In particular, they establish that for a period of six months from the date when employment in the function ceases, the Management Board Member is not allowed to engage in any activities which would represent a conflict of interest. For adherence to the clause on forbidding competitive activities, KGHM pays the Management Board Member compensation in a total amount calculated as a multiple of the monthly fixed remuneration and the 6-month period of the forbidding of competitive activities. The payment of compensation is conditional on the Management Board Member's having served in the function for at least 3 months. If a Member of the Management Board breaches this clause in the contract, he or she will be required to pay a contractual penalty in the entire amount of the compensation received.

Payment of the contractual penalty does not deprive the Company of the right to seek compensation in an amount exceeding that amount under general rules.

### Information on remuneration of Supervisory Board Members

The remuneration of members of supervisory boards was set on 21 June 2017 by the General Meeting based on the Act dated 9 June 2016 on the terms of setting the remuneration of individuals managing certain companies. The amount of monthly remuneration of individual members of the Supervisory Board depends on the function served and is set as 2.2x or twice the average monthly remuneration in the corporate sector excluding payments from profit in the fourth quarter of the previous year, announced by the President of the Central Statistical Office. Members of the Supervisory Board are not remunerated for any month in which they did not attend any of the formally convened meetings for unjustified reasons, which are assessed and qualified by the Supervisory Board.

The Company also covers or reimburses costs related to participation in the work of the Supervisory Board.

Detailed information on the amount of remuneration, bonuses or benefits for Supervisory Board or Management Board members may be found in note 12.10 of the separate and consolidated financial statements.

### Information on the adopted and applied remuneration system for key managers

Key managers receive remuneration based on employment contracts. During the lives of these contracts employees receive:

- basic monthly remuneration, which amounts – depending on the function served – from 6- to 11-times the average monthly remuneration in the corporate sector, excluding payments from profit, in the fourth quarter of the previous year, announced by the President of the Central Statistical Office.
- an annual bonus, paid in accordance with the principles for bonuses set by the Management Board, based on a system of business measures (KPIs) and individual goals (MBO). Principles for setting and granting annual bonuses (STIP - Short-Term Incentive Plan) in KGHM Polska Miedź S.A. functioning since 2013. This system is based on collective, individual and task-related KPIs which were derived from the key performance indicators for the Management Board as well as on goals arising from the Company's strategy. Presently the STIP system comprises a group of 156 managers in the Company.
- additional benefits, such as life insurance, the Employee Pension Program, Health Care Package, and
- a company car.

## 18. Ethics and Corporate Governance

The Code of Ethics of the KGHM Polska Miedź S.A. Group is the main tool, in the corporate Group culture, which assists in defining priorities and in establishing a collection of principles which are binding for all employees in their daily work.

The objective of the Code of Ethics is to ensure that the behaviour of employees conforms to the highest standards based on the values which guide the KGHM Polska Miedź S.A. Group's employees: zero harm, teamwork, results-driven, accountability and courage.

Additionally, in order to enable effective implementation of the principles and values set forth in the Code of Ethics across the KGHM Polska Miedź S.A. Group other appropriate policies and procedures are in force. Their implementation meets world corporate governance standards as well as the increasing demands of stakeholders, including above all customers and financial institutions.

Based on best practices in corporate governance, the following policies are in force, introducing global, unified standards which have been adapted to the laws applicable in all of the jurisdictions in which the KGHM Polska Miedź S.A. Group operates:

<b>Competition Law Policy in the KGHM Polska Miedź S.A. Group</b>	The goal of the Competition Law Policy is to create a functional framework for a system that will enable the KGHM Polska Miedź S.A. Group to remain in conformity with the competition laws which are applicable in all of the countries in which the KGHM Polska Miedź S.A. Group operates.
<b>Anticorruption Policy in the KGHM Polska Miedź S.A. Group</b>	The Anticorruption Policy establishes basic principles and standards, whose goal is to prevent any breaches of the anticorruption laws in the jurisdictions in which the KGHM Polska Miedź S.A. Group operates. The Group applies a zero tolerance policy towards corruption and bribery.
<b>Responsible Supply Chain Policy in the KGHM Polska Miedź S.A. Group</b>	The Responsible Supply Chain Policy is aimed at securing the selection of only responsible suppliers, especially in the case of acquiring so-called conflict minerals (gold, tin, wolfram and tantalum) and at ensuring that the merchandise and services purchased by the KGHM Polska Miedź S.A. Group are not utilised to finance terrorism, and are manufactured or provided in accordance with laws respecting basic human rights, labour standards, protecting the environment and counteracting corruption.

In 2018, the Company updated its internal system for managing a responsible gold and silver supply chain by introducing a new Responsible Supply Chain Policy in the KGHM Polska Miedź S.A. Group and a new Procedure for assessing the supply chain for gold and silver in KGHM Polska Miedź S.A. This system is subject to an annual, independent, external

audit to ensure compliance with the guidelines of the LBMA's Responsible Gold Guidance and the LBMA's Responsible Silver Guidance as well as to obtain certification by the LBMA (The London Bullion Market Association). In 2019 it is planned to expand the system by additional mechanisms ensuring compliance with the LBMA's new guidelines set forth in the updated version of the LBMA Responsible Gold Guidance in force from January 2019.

In 2018 the Management Board of KGHM Polska Miedź S.A. adopted a new „Code of Ethics of the KGHM Polska Miedź S.A. Group”. In order to comply with the most important principles related to counteracting corruption in the KGHM Polska Miedź S.A. Group and in the companies of the KGHM Polska Miedź S.A. Group located in Poland, the Anticorruption Policy and the Procedure for Counteracting the Threat of Corruption in the KGHM Polska Miedź S.A. Group were updated. The Procedure sets forth in detail the standards of behaviour in situations where corruption may arise and informs about criminal penalties for abuse. It is applied in order to minimise the risk of Corruption and to limit all corruption-related phenomena which could arise in relation to the functioning of the KGHM Group. In the companies of the KGHM Group, Ethics and Anticorruption Representatives were appointed and a Procedure for Disclosing Improprieties and Protecting Whistle-blowers in the KGHM Group was implemented, which is aimed at enhancing the effectiveness of uncovering and resolving situations related to the occurrence of improprieties representing an abuse of regulations applied in the KGHM Group, in particular the Code of Ethics of the KGHM Group, the Safety Policy, the Anticorruption Policy and the Procedure Counteracting the Threat of Corruption.

Moreover, work supporting and raising ethical standards and corporate governance will be continued in 2019.

In addition, continuously since 2009, KGHM Polska Miedź S.A. has been amongst the group of companies listed on the Warsaw Stock Exchange which comprise the prestigious RESPECT Index – the first such index of responsible companies in Central-Eastern Europe.

## 19. Regulatory filings published after the balance sheet date

Date of report		Section
10 January 2019	<b>Information on the main Budget targets for 2019</b> The Supervisory Board of the Company approved the Budget of KGHM Polska Miedź S.A. and the Budget of the Group for 2019. Detailed information on the published Budget assumptions may be found in Section 6.5. of this report.	6.5
11 January 2019	<b>Information on the identification of indications to verify the recoverable amount of international mining assets.</b> Detailed information on the results of the tests conducted may be found in Section 3 of the Separate and Consolidated Financial Statements.	6,7
19 February 2019	<b>Notification of a decrease below the 5% threshold in the total number of votes</b> The Company received a notification sent by Powszechnie Towarzystwo Emerytalne PZU S.A. (PTE PZU S.A.) acting on behalf of Otwarty Fundusz Emerytalny PZU „Złota Jesień” (OFE PZU), in which PTE PZU S.A. announced that as a result of the sale on 13 February 2019 of 35 000 shares of the Company, following the settlement of this transaction on 15 February 2019, OFE PZU held less than 5% of the total number of votes in the Company.	11
25 February 2019	<b>Consent to sign a working capital facility agreement with Bank Gospodarstwa Krajowego</b> The Company announced that the Management Board consented to sign an unsecured, working capital facility agreement with Bank Gospodarstwa Krajowego with a financing period of up to 84 months, as a revolving credit line in the amount of USD 450 million for a period of 60 months, with the option to transform it into a non-revolving credit after 60 months. The agreement was signed on 27 February 2019.	6.6
5 March 2019	<b>Information on the results of the conducted tests for impairment</b> Information on completing the major work related to verifying the recoverable amount of international assets of the KGHM Polska Miedź S.A. Group as well as the joint venture, i.e. Sierra Gorda SCM.	6,7

In addition, in 2019 regulatory filings were published concerning:

- publication dates for periodic reports in 2019 (17 January 2019),
- preliminary production and sales data of the KGHM Polska Miedź S.A. Group for December 2018 (22 January 2019) and January 2019 (22 February 2019).



## Appendix 1 Corporate Governance Statement

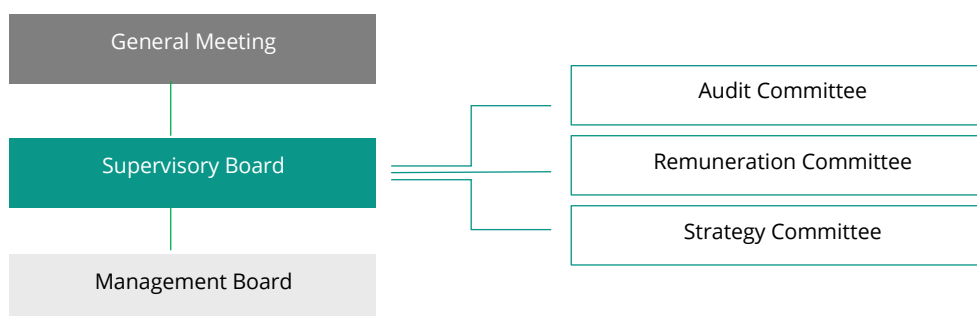
KGHM Polska Miedź S.A., whose shares are listed on the Warsaw Stock Exchange, in 2018 was subject to the corporate governance principles described in the document „Code of Best Practice for WSE Listed Companies 2016” which was adopted by Resolution No. 26/1413/2015 of the Warsaw Stock Exchange Supervisory Board on 13 October 2015. These principles are available at the official website of the Warsaw Stock Exchange devoted to this subject (<https://www.gpw.pl/best-practice>) as well as at the website of KGHM Polska Miedź S.A. under the section devoted to corporate governance <http://kghm.com/en/investors/corporate-governance/governance-compliance>.

KGHM Polska Miedź S.A. has endeavoured at every stage of its operations to carry out the recommendations and principles respecting “Best Practice” for listed companies.

In 2018, KGHM Polska Miedź S.A. did not comply with recommendation IV.R.2 from „Best Practice...”, according to which, if justified, a company should enable its shareholders to participate in general meetings using electronic means of communication, in particular through the real-time broadcast of general meetings, real-time bilateral communication whereby shareholders may take the floor during a general meeting from a location other than the general meeting, and also exercise the right to vote during a general meeting either in person or through a proxy.

In the Company's opinion, introduction of the possibility of participation in General Meetings using electronic means of communication may carry risk factors of a legal and technical nature leading to interference with the efficient conduct of General Meetings, and as a result to the possible questioning of any resolutions adopted. In the Company's opinion, current principles of participation in the General Meetings of KGHM Polska Miedź S.A. enable all shareholders to exercise the rights attached to owning the shares and protect the interests of all shareholders. The Company is considering introducing the aforementioned recommendation in situations when their technical and legal aspect no longer raises any doubts, and when such introduction will be justified by a real need for this form of communication with shareholders. Since 2016 KGHM Polska Miedź S.A. has been providing real-time streaming webcasts of its General Meetings.

Diagram 8. Corporate governance structure in KGHM Polska Miedź S.A.



### General Meeting

The General Meeting (GM) of KGHM Polska Miedź S.A. is the Company's highest authority. It meets in either Ordinary or Extraordinary form, based on generally prevailing law, the Statutes of the Company and the “Bylaws of the General Meeting of KGHM Polska Miedź S.A. with its registered head office in Lubin”. GMs are convened by the Company's Management Board. In situations defined by the Commercial Partnerships and Companies Code, General Meetings may be convened by the Supervisory Board or by shareholders. The Statutes of KGHM Polska Miedź S.A. also authorise the Polish State Treasury to convene a General Meeting. The General Meeting of the Company is convened by an announcement published on the Company website and in the manner set forth in the Act dated 29 July 2005 on public offerings and conditions governing the introduction of financial instruments to organised trading, and on public companies. A General Meeting may adopt resolutions if at least one-fourth of the share capital is represented. Resolutions are adopted by a simple majority of votes cast, unless the law or the Company's Statutes state otherwise. The principles for conducting a General Meeting are set forth by the Commercial Partnerships and Companies Code and the Company's Statutes. Additional issues related to the functioning of the General Meeting are regulated by the “Bylaws of the General Meeting of KGHM Polska Miedź S.A. with its registered head office in Lubin” adopted by the GM on 17 May 2010, which are available on the Company's website, [www.kghm.com](http://www.kghm.com).

The duties of the General Meeting include in particular:

1. examining and approving the report of the Management Board on the Company's activity and the financial statements, including the financial statements of the Group, for the past financial year,
2. adopting resolutions on the distribution of profits or coverage of losses,
3. acknowledging the fulfilment of duties performed by members of the bodies of the Company,
4. changing the subject of the Company's activity,



5. changes in the Company Statutes,
6. increasing or decreasing the share capital,
7. the manner and conditions for retiring shares,
8. merging, splitting and transforming the Company,
9. dissolving and liquidating the Company,
10. issuing convertible bonds or senior bonds,
11. consenting to the disposal and lease of an enterprise or of an organised part thereof, as well as the attachment of limited property rights to same,
12. all decisions relating to claims for redress of damage suffered during the foundation of the Company, or from management or supervisory activities,
13. purchase of the Company's own shares, which are to be offered to employees or persons who were employed by the company or by related companies for a period of at least three years,
14. establishing principles of the remuneration of members of the Supervisory Board, and
15. establishing principles of the remuneration of members of the Management Board.

The schedule of work on organising the General Meetings of the Company is planned in such a way as to ensure that the obligations towards shareholders are properly met and to enable them to exercise their rights.

The introduction of changes to the Company Statutes requires a resolution by the General Meeting and an entry in the National Court Register. Changes in the Company Statutes are made by the General Meeting in accordance with generally prevailing laws, in the manner and form prescribed by the Commercial Partnerships and Companies Code, i.e. by a majority three-fourths of the votes cast in the presence of persons representing at least half of the share capital.

Amongst the regulations of the Commercial Partnerships and Companies Code, in respect of the organisation of General Meetings and shareholder rights, the Company applies only those regulations which are obligatory, i.e. those which require the publication of announcements and relevant materials for the General Meeting on the Company website and the use of electronic forms of contact with shareholders. Regulations enabling shareholders to participate in General Meetings using electronic means of communication are not applied.

### Shareholders and their rights

Detailed information on the ownership structure is presented in Section 11.4 of this report.

Shareholders of the Company exercise their rights in a manner and within the limits prescribed by prevailing law, the Statutes of the Company and the Bylaws of the General Meeting of KGHM Polska Miedź S.A.

Shareholders are entitled to exercise their voting rights either personally or through a proxy. The authority to participate in a General Meeting and to exercise voting rights should be granted in writing or in electronic form. All of the shares are bearer shares. Each share represents one vote.

There is no limitation to the transfer of ownership rights to the shares of the Company or with respect to the execution of voting rights on the shares of the Company, other than those generally prescribed by laws in force.

The Company has not issued securities which would grant special control rights in respect of the Company.

A shareholder is entitled in particular to the following:

1. to convene an Extraordinary General Meeting if the said shareholder represents at least half of the share capital or has been authorised by a court of registration and represents at least one-twentieth of the share capital,
2. to announce draft resolutions during a General Meeting which are in regard to matters introduced to the agenda,
3. in accordance with the Statutes, the Polish State Treasury as a shareholder may convene an Ordinary General Meeting if the Management Board does not do so in the statutory timeframe as well as an Extraordinary General Meeting if it considers its convening as warranted,
4. to request that a matter included in the agenda be removed or not considered,
5. to order the convening of an Extraordinary General Meeting and to include specified matters on the agenda of this General Meeting, if the shareholder or shareholders represent at least one-twentieth of the share capital, and
6. to order the inclusion of specified matters on the agenda of the next General Meeting, if the shareholder or shareholders represent at least one-twentieth of the share capital.

### Supervisory Board

The Supervisory Board of KGHM Polska Miedź S.A. is the permanent supervisory authority of KGHM Polska Miedź S.A., in all of the Company's functional areas. According to the Statutes of the Company, the Supervisory Board is composed of 7 to 10 members appointed by the General Meeting, 3 of whom are elected by the Company's employees. The Members of the Supervisory Board are appointed for a mutual term in the office, which lasts three years. The Supervisory Board selects from among its members a Chairman of the Supervisory Board, his Deputy and, if needed, a Secretary. The Supervisory Board should meet at least once a quarter. For resolutions of the Supervisory Board to be valid all of the

members of the Supervisory Board must be invited to attend and resolutions must be adopted by an absolute majority of votes in the presence of at least one-half of the members.

The duties of the Supervisory Board include in particular the following:

1. evaluating the separate and consolidated financial statements and the report of the Management Board on the activity of the Company for the given financial year,
2. evaluating the proposals of the Management Board with respect to the distribution of profits or coverage of losses,
3. submitting to the General Meeting an annual written report on the results of the evaluations of the documents referred to in the first two points above,
4. submitting to the General Meeting annual requests for granting approval of performance of duties of the Management Board's members with respect to their activities in a financial year,
5. examining and controlling the activity and financial condition of the Company, and submitting to the Ordinary General Meeting an annual, brief assessment of the standing of the Company,
6. choosing an auditor to audit the statements referred to in point 1,
7. setting the number of members of the Management Board,
8. appointing and dismissing the members of the Management Board, with due regard to §12 of the Company's Statutes,
9. suspending from their duties for important reasons some or all of the members of the Management Board,
10. temporarily delegating a member or members of the Supervisory Board to carry out the duties of members of the Management Board who are unable to carry out their duties,
11. establishing the remuneration of members of the Management Board, as well as the other conditions of management services contracts,
12. approving the Bylaws of the Management Board of the Company,
13. approving the Company's annual and multi-year operating plans, including the Company's Strategy and annual budget,
14. stating its opinion on any request of the Management Board addressed to the General Meeting,
15. at the request of the Management Board, expressing its consent to:
  - a. the purchase and sale of real estate, of perpetual usufruct or of a stake in real estate (this does not require a resolution of the General Meeting),
  - b. the granting of guarantees and loans to commercial entities in which the Company owns less than 1/3 of the voting rights at the General Meeting of such entities,
  - c. establishing and acceding to commercial partnerships and companies,
  - d. disposing of shares in subsidiaries of the Company,
  - e. founding branches, companies, representative offices and other organisational or economic entities abroad,
  - f. obtaining or acquiring shares of another Company,
  - g. the establishment and liquidation of foundations,
  - h. agreements for legal services, marketing services, public relations services and social communication services, and advisory services associated with management, if the total expected remuneration for providing such services exceeds the net amount of PLN 500 000 per year,
  - i. changes in agreements for legal services, marketing services, public relations services and social communication services, and advisory services associated with management which increase the amount of remuneration above the amount referred to in letter h,
  - j. agreements for legal services, marketing services, public relations services and social communication services, and advisory services associated with management, in which the maximum amount of remuneration is not determined,
  - k. donations or other agreements with similar implications, with a value exceeding PLN 20 000 or 0.1% of total assets pursuant to the Act of 29 September 1994 on accounting, determined based on the most recently approved financial statements, and
  - l. discharge of debt or other agreements with similar implications with a value exceeding PLN 50 000 or 0.1% of total assets pursuant to the Act of 29 September 1994 on accounting, determined based on the most recently approved financial statements.
16. determining the manner of voting by a representative of KGHM Polska Miedź S.A. at the General Meetings of companies in respect of which the Company is a parent entity pursuant to art. 4 point 3 of the Act of 16 February 2007 on competition and consumer protection (Journal of Laws from 2017 item 229), regarding:
  - a. the founding by a Company of another company;
  - b. amendments in the statutes or articles of association and in the subject of a company's activities;
  - c. the merger, transformation, splitting, dissolution and liquidation of a company;
  - d. increasing or decreasing a company's share capital;
  - e. the disposal and lease of an enterprise or of an organised part thereof, as well as the attachment of limited property rights to same;
  - f. the retirement of shares;
  - g. setting the remuneration of members of the management boards and supervisory boards;
  - h. decisions relating to claims for redress of damage suffered during the founding of the company, or from management or supervisory activities;

- i. regarding issues referred to in art. 17 of the Act of 16 December 2016 on the principles of state assets management (Journal of Laws from 2016, item 2259), with due regard to § 34 sec. 4 of the Statutes.
17. expressing an opinion on investments by the Company in fixed assets, which meet one of the following conditions:
  - a. investments having a value of more than 10% of the budget for expenditures on investments in tangible assets of the Company for a given financial year,
  - b. investments of more than 5% of the budget for expenditures on investments in tangible assets of the Company for a given financial year, if the investment does not meet the criteria for planned effectiveness in comparison to the accepted rate of return on equity in the Company,
18. providing an opinion on reports prepared by the Management Board on representative expenses, expenses for legal services, marketing services, public relations services and social communication services and advisory services associated with management,
19. providing an opinion on the principles of sponsoring activities and assessing the effectiveness of the sponsoring activities conducted by the Company,
20. providing an opinion on changes to the principles for the disposal of non-current assets, set forth in § 33<sup>1</sup> of the Statutes, and
21. confirmation of remuneration policy for the Group.

The Supervisory Board operates on the basis of generally prevailing law, the Statutes of the Company and the Bylaws of the Supervisory Board. The Bylaws and Statutes of the Company are available on the Company's website, [www.kghm.com](http://www.kghm.com).

The composition of the Supervisory Board and its changes in 2018 are presented in the Section 17.3 of this report.

The following members of the Supervisory Board of KGHM Polska Miedź S.A submitted declarations on meeting independence criteria, specified in principle no. II.Z.4. of "Best Practice of GPW Listed Companies 2016": Andrzej Kisielewicz, Jarosław Janas, Janusz Kowalski, Bartosz Piechota, Marek Pietrzak, Agnieszka Winnik – Kalembea.

### Supervisory Board Committees

Within the structure of the Supervisory Board are three committees which serve in an auxiliary role to the Supervisory Board in the preparation of assessments, opinions and other actions aimed at reaching decisions which must be made by the Supervisory Board.

Audit Committee	The composition of the Audit Committee in 2018:	
	1 January - 5 July	23 July - 31 December
Michał Czarnik	✓ (Chairman)	
Leszek Hajdacki	✓	
Dominik Hunek	✓	
Wojciech Myślecki	✓	
Marek Pietrzak	✓	✓
Bogusław Szarek	✓	✓
Agnieszka Winnik-Kalembea	✓	✓ (Chairman)
Jarosław Witkowski	✓	
Janusz Kowalski	✓	
Leszek Banaszak		✓
Jarosław Janas		✓
Ireneusz Pasis		✓
Bartosz Piechota		✓

The Audit Committee is responsible for supervision in the areas of financial reporting, the internal control system, risk management and internal and external audits.

In accordance with the Bylaws of the Supervisory Board the tasks of the Audit Committee are as follows:

- 1) monitoring of:
  - a) the financial reporting process,
  - b) the effectiveness of internal control systems and risk management systems as well as internal auditing, including financial reporting,
- 2) the conduct of financial review, in particular carrying out auditing research by the auditing firm, reflecting all of the conclusions of the Auditing Oversight Committee resulting from audits carried out within an auditing firm; conducting reviews of transactions carried out by the Company, which the Audit Committee considers as significant for the Company,
- 3) providing an opinion on the Company's internal audit plan and the internal audit bylaws, as well as changes in the position of Internal Audit Director who reports directly to the President or other Member of the Management Board.
- 4) analysis of the conclusions and recommendations of the Company's internal audit, including monitoring of the degree of implementation of recommendations made by the Company's Management Board,
- 5) auditing and monitoring the independence of the certified auditor and the auditing firm, in particular if the auditing firm provides services to the Company apart from auditing;
- 6) informing the Supervisory Board of audit results and explaining to what degree such audits have resulted in the transparency of financial reporting in the Company, and also the role of the Audit Committee in this process;
- 7) assessing the independence of the certified auditor and expressing consent for the certified auditor to provide permitted non-auditing services in the Company;

- 8) developing a policy to select the auditing firm for conducting audits;
- 9) developing a policy for the auditing firm conducting audits, through entities related to the said auditing firm and by a member of the auditing firm's network, to provide permitted non-auditing services;
- 10) setting forth the Company's procedures for selecting an auditing firm;
- 11) presenting the Supervisory Board with the recommendations referred to in art. 16 section 2 of Decree no. 537/2014 (i.e. recommendations regarding the appointment of a certified auditor or auditing firms), in accordance with those policies referred to in points 5 and 6 above;
- 12) submitting recommendations aimed at ensuring the transparency of the Company's financial reporting process; and
- 13) other tasks ordered by the Supervisory Board.

**Remuneration Committee**

The composition of the Remuneration Committee in 2018:

	1 January – 5 July	23 July - 31 December
Leszek Hajdacki	✓	
Dominik Hunek	✓	
Józef Czyczerski	✓	✓
Marek Pietrzak	✓ (Chairman)	✓
Bogusław Szarek	✓	✓
Andrzej Kisielewicz		✓ (Chairman)
Leszek Banaszak		✓
Jarosław Janas		✓
Ireneusz Pasis		✓

The Remuneration Committee is responsible for supervising the performance of the duties set forth in the contracts signed with the Management Board, the remuneration system and benefits paid out in KGHM Polska Miedź S.A. and the Group, training and other benefits provided by the Company, as well as audits performed by the Supervisory Board in this regard.

In accordance with the Bylaws of the Supervisory Board the tasks of the Remuneration Committee are as follows:

- 1) the management of issues related to the recruitment and employment of members of the Management Board by preparing and arranging draft documents and processes to be submitted for the acceptance of the Supervisory Board,
- 2) the preparation of draft contracts/agreements and other sample documents related to the establishment of an employment relationship with members of the Management Board and oversight of the execution of the contractual obligations by the parties,
- 3) oversight of the execution of the Management Board remuneration system, in particular the preparation of settlement documents with respect to variable elements and bonus-based remuneration in order to submit recommendations to the Supervisory Board,
- 4) monitoring and periodic assessment of the remuneration system for the Company's senior management and, if necessary, the preparation of recommendations for the Supervisory Board,
- 5) oversight of the proper execution of additional benefits for the Management Board resulting from employment contracts, such as insurance, company cars, housing, etc., and
- 6) other tasks ordered by the Supervisory Board.

**Strategy Committee**

The composition of the Strategy Committee in 2018:

	1 January – 5 July	23 July - 31 December
Michał Czarnik	✓	
Józef Czyczerski	✓	✓
Leszek Hajdacki	✓	
Wojciech Myślecki	✓	
Marek Pietrzak	✓	✓
Bogusław Szarek	✓	✓
Agnieszka Winnik-Kalemba	✓	✓
Jarosław Witkowski	✓ (Chairman)	
Bartosz Piechota		✓ (Chairman)
Leszek Banaszak		✓
Janusz Kowalski		✓
Ireneusz Pasis		✓

The Strategy Committee supervises the realisation of Company strategy, the Company's annual and multi-year operating plans, supervising the coherence of these documents, and also provides its opinion to the Supervisory Board on the strategic projects presented by the Management Board of the Company and any changes thereto, as well as on the Company's annual and multi-year operating plans.

In accordance with the Bylaws of the Supervisory Board the tasks of the Strategy Committee are as follows:

- 1) execution on behalf of the Company's Supervisory Board of tasks in the area of oversight of issues associated with the Company's strategy and the annual and long-term operating plans of the Company;
- 2) monitoring execution of the Company's strategy by the Management Board and issuing opinions on the degree to which the existing strategy is able to deal with changes in the actual situation;
- 3) monitoring execution of the annual and long-term operating plans of the Company by the Management Board, and assessment of whether these plans need to be modified;
- 4) assessment of the consistency of the annual and long-term operating plans of the Company with the Company's strategy as executed by the Management Board, and the presentation of any proposed changes in all such Company documents;
- 5) submission to the Company's Supervisory Board of its opinions regarding the draft strategies of the Company and

- 
- any changes thereto and of the annual and multi-year operating plans of the Company, as presented by the Company's Management Board; and
- 6) other tasks ordered by the Supervisory Board.
- 

The detailed rights, scope of activities and manner of work of these Committees are described by bylaws approved by the Supervisory Board. After the end of the year the Audit, Remuneration and Strategy Committees submit reports on their activities to the Supervisory Board.

### Management Board

The duties of the Management Board include all matters pertaining to the functioning of the Company which have not been reserved by the Commercial Partnerships and Companies Code and the Statutes of the Company to the duties of the General Meeting and the Supervisory Board. A detailed description of the Management Board's scope of duties and obligations and the manner in which it functions may be found in the Bylaws of the Management Board.

According to the Statutes of KGHM Polska Miedź S.A., the Company's Management Board may be composed of 1 to 7 persons, appointed for a mutual term of office. The term of office of the Management Board lasts three consecutive years. The number of members of the Management Board is set by the Supervisory Board, which appoints and dismisses the President of the Management Board and the Vice Presidents. The Supervisory Board appoints the members of the Management Board following the conduct of qualification proceedings, the goal of which is to review and evaluate the qualifications of candidates and to select the best candidate for Member of the Management Board, with due regard being given to sec. 5 and sections 7 to 12 concerning the appointment or recall of an employee-elected member of the Management Board. The members of the Management Board, including any such chosen by the employees, may be recalled by the Supervisory Board prior to the expiration of their term, which in no way shall interfere with their rights arising from their employment contract or other legal relationship relating to their functioning as a member of the Management Board. The result of elections of an employee-elected member of the Management Board, or the result of voting for their recalling, shall be binding upon the Supervisory Board, as long as in the said voting for either their appointment or recalling at least 50% of the Company's employees have participated. The election and recall of an employee-elected member of the Management Board requires an absolute majority of the votes cast.

The Management Board operates based on generally prevailing law, the Statutes of the Company and the Bylaws of the Management Board of KGHM Polska Miedź S.A. For resolutions of the Management Board to be valid at least two-thirds of the members of the Management Board must be present. Resolutions of the Management Board are approved by a simple majority of the votes cast. In the case of a tie vote being cast either for or against a given resolution, the President of the Management Board casts the deciding vote.

A detailed list of the matters requiring a resolution of the Management Board is included in the Bylaws of the Management Board of KGHM Polska Miedź S.A. approved by the Supervisory Board.

The authority of the Management Board to pass decisions on the issuance or redemption of shares is statutorily limited. The shares of the Company may be redeemed given shareholder consent through their acquisition by the Company. A resolution of the General Meeting on the redemption of shares may be preceded by an agreement entered into with a shareholder. In accordance with §29 sec. 1 point 6 of the Statutes of the Company, any increase in share capital or issuance of shares requires the approval of the General Meeting. The same holds true for the issuance of bonds (§29 sec. 1 point 10 of the Statutes of the Company). The Management Board of the Company does not have the authority to increase the share capital or issue the shares of the Company under conditions specified in art. 444-446 of the Commercial Partnerships and Companies Code.

The delegation of duties, the composition of the Management Board and its changes in 2018 are presented in Section 17 of this report.

### Main characteristics of internal control and risk management systems as applied by the Company in the process of preparing separate and consolidated financial statements

The system of internal control in KGHM Polska Miedź S.A., and the management of risk in the process of preparing financial statements, is performed in the following manner:

<p><b>Supervision of the application of uniform accounting principles by the Parent Entity and the companies of the KGHM Polska Miedź S.A. Group during the process of preparing reporting packets to prepare the consolidated financial statements of the KGHM Polska Miedź S.A. Group</b></p>	<p>In order to ensure reliability and accuracy in the keeping of the accounting records of the Parent Entity and the uniformity of the accounting principles applied when preparing the financial statements of Group subsidiaries, the Management Board of the Parent Entity has introduced for continuous use an Accounting Policy for the Group in accordance with International Financial Reporting Standards approved by the European Union which is regularly updated in compliance with new regulations.</p> <p>Control over the accounting policies applied in the process of preparing the financial statements of KGHM Polska Miedź S.A. and of Group subsidiaries is based on the control mechanisms embedded in the functioning of the reporting systems.</p> <p>The reporting packets of subsidiaries are also reviewed by appropriate units in the Parent Entity as well as by an independent auditor during the process of reviewing and auditing the consolidated financial statements of the Group.</p>
<p><b>Centralised financial and accounting services</b></p>	<p>KGHM Polska Miedź S.A. performs its accounting activities within a centralised financial and accounting services structure. Bookkeeping in the Parent Entity is performed by the Accounting Services Center under the Head Office of KGHM Polska Miedź S.A. The centralisation of accounting services under a</p>

	<p>model which provides for the transparent breakdown of duties and responsibilities ensures minimisation of the risk of bookkeeping errors and high-quality financial statements. Further actions are systematically being taken aimed at optimising the functioning of the accounting services and enhancing the security of the process of bookkeeping accounting services.</p>
<b>Finance and accounting systems</b>	<p>KGHM Polska Miedź S.A. keeps accounting records in an integrated IT system. The modular structure of this system ensures a transparent segregation of processes and duties, coherence of accounting records and control over ledgers: special purpose ledger, general ledger and sub-ledgers. Access to this data at various levels and in various units is available via a well-developed reporting system. The Parent Entity continuously adapts the IT information system to changing accounting principles or other legal standards. The Parent Entity's solutions are implemented in the systems of Group entities.</p> <p>To ensure the legitimate utilisation and protection of systems, data, secure access to data and computer equipment, appropriate organisational and systemic solutions have been introduced. Access to the resources of the financial and accounting system, as well as financial reporting, is limited to the respective entitlements of authorised employees solely with respect to the duties which they carry out. These entitlements are subject to regular review and audits. Control over this access is carried out at each stage of financial statements preparation, beginning with the entering of source data, through the processing of data, to the generation of output information.</p> <p>A key element in limiting the risk of errors and misstatements in accounting for economic activities are the actions taken which are aimed at increasing the use of IT tools to automate control over and the settlement of purchases by the Company. These actions include:</p> <ul style="list-style-type: none"> <li>- on-going expansion of the scope of the Workflow system of electronic document settlement and approval,</li> <li>- implementation of the electronic system for transmitting data between the system in the Parent Entity and IT systems in Group companies; and</li> <li>- customer settlement based on e-invoices for procurement and sales.</li> </ul>
<b>Corporate risk management</b>	<p>Under the Corporate Risk Management Policy and Procedures and the Corporate Risk and Compliance Committee Rules updated in 2018, corporate risk management is an on-going process in the KGHM Polska Miedź S.A. Group. Risk factors associated with the Group's various operations are continuously identified, assessed and analysed in terms of their possible limitation.</p> <p>The Department of Corporate Risk Management and Compliance is responsible for coordination of the entire corporate risk management process and for developing the methods and tools used by managers in the Parent Entity, its subsidiaries and projects, as well as for risk monitoring and escalation, and for reporting incidents.</p> <p>These activities also comprise risk management with respect to the process of preparing the consolidated financial statements of the Group.</p> <p>This comprehensive approach to analysing risk factors also comprises the identification of risk factors related to achieving the strategic goals. In 2018, the risks associated with advancement of the strategic goals contained in the Main Strategy and in Executory and Supporting Strategies were revised. The efficiency of the process of corporate risk management is audited annually (in compliance with the guidelines of Code of Best Practice for WSE Listed Companies 2016).</p>
<b>Internal audit</b>	<p>A fundamental element of risk management with respect to the functioning of control mechanisms and the existence of risks in the operations of KGHM Polska Miedź S.A. is the work carried out by the Internal Audit Department. This work also indirectly augments the process of preparing financial statements as well as their accuracy.</p> <p>The Internal Audit Department carries out its tasks based on the "Integrated Audit Plan" for the given calendar year approved by the Management Board of KGHM Polska Miedź S.A. This document was developed in conformity with the International Standards for the Professional Practice of Internal Auditing published by the Institute of Internal Auditors and which received the positive opinion of the Audit Committee of KGHM Polska Miedź S.A.</p> <p>The goal of the audit is to provide the Management Board and the Audit Committee of the Supervisory Board of KGHM Polska Miedź S.A. with independent and objective information on internal control and risk management systems as well as with analyses of business processes within KGHM Polska Miedź S.A. and in the Group's companies. Independently from internal audit and institutional control, the obligation fully remains in KGHM Polska Miedź S.A. for each employee to exercise self-control in respect of their duties and for every level of management staff to exercise their control as part of their coordination and supervision duties.</p>
<b>External audit</b>	<p>In accordance with prevailing law, KGHM Polska Miedź S.A. submits its consolidated financial statements for half-year review and annual auditing by a certified auditor. The Supervisory Board selects the certified auditor through a tender process, based on the recommendations of the Audit Committee and the report on the tender conducted by the Committee.</p> <p>The appropriate entity to audit the financial statements of KGHM Polska Miedź S.A. for the years 2016-2018 is Deloitte Audyt Sp. z o.o. Sp. k. As part of the audit work performed the certified auditor performs an independent evaluation of the accounting principles applied by Parent Entity in preparing the financial statements and the accuracy and reliability of the consolidated financial statements.</p> <p>The effectiveness of the internal control system and the risk management system in the process of preparing the financial statements is confirmed by the unqualified opinions issued by the certified auditor from its audit of the consolidated financial statements of KGHM Polska Miedź S.A.</p>
<b>Supervision over the process</b>	<p>The body which supervises the process of financial reporting in KGHM Polska Miedź S.A. and which</p>



**of financial reporting**

cooperates with the independent auditor is the Audit Committee, which is appointed by the Supervisory Board of the Parent Entity. The Audit Committee, in accordance with its duties as set forth in the Act dated 11 May 2017 on certified auditors, auditing firms and public oversight (Journal of Laws from 2017, item 1089), in particular:

- monitors the process of financial reporting in terms of compliance with the Accounting Policy approved by the KGHM Polska Miedź S.A. Group and prevailing laws,
- monitors the effectiveness of internal control systems, internal audit and risk management,
- monitors the independence of the certified auditor and of the entity entitled to audit financial statements, and
- conducts the process of selecting the entity entitled to audit financial statements of the Parent Entity to provide a recommendation to the Supervisory Board.

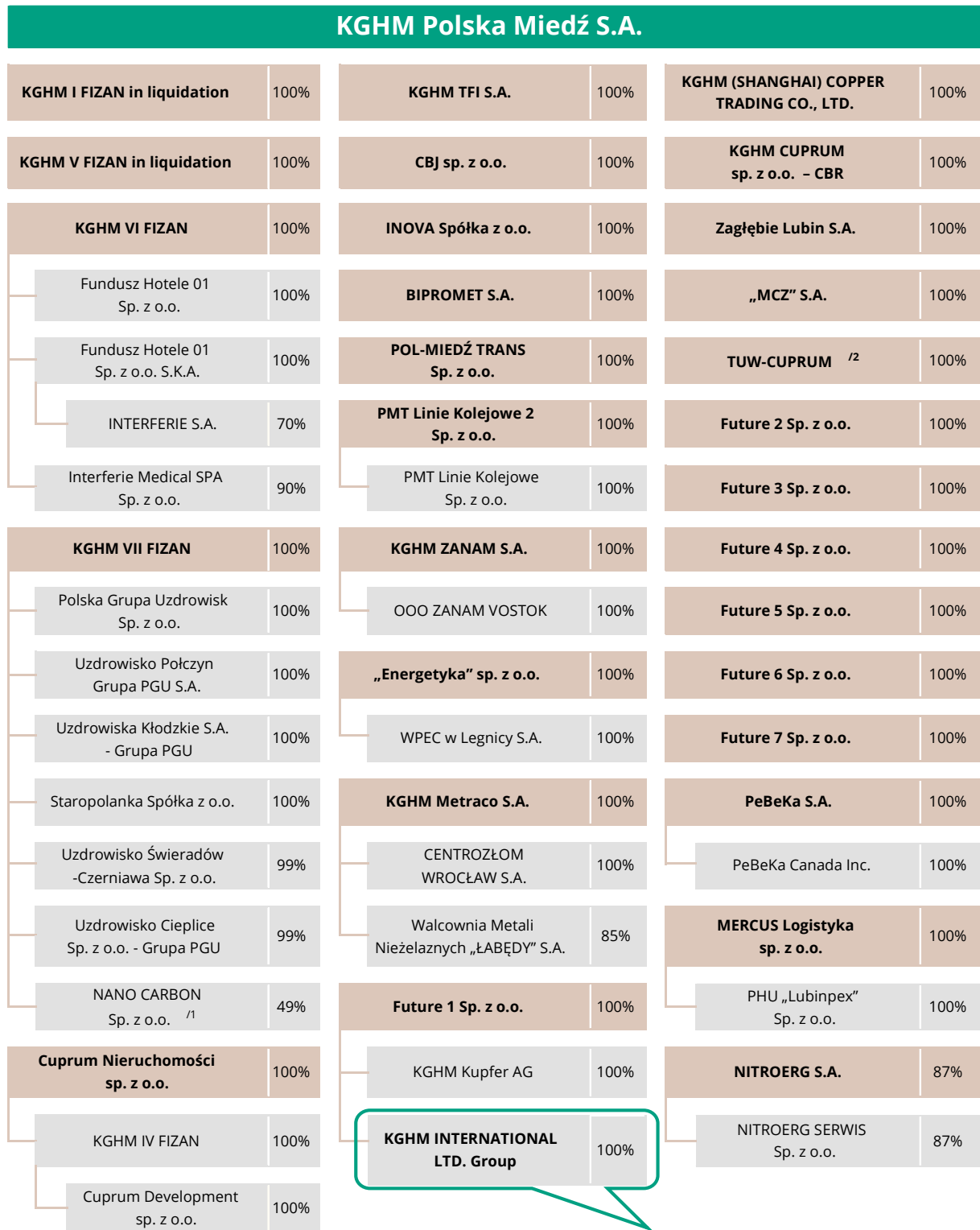
Monitoring of the process of financial reporting and assessment of the financial statements by the Supervisory Board is the final step of the review and control carried out by an independent body, ensuring the reliability and accuracy of the data presented in the consolidated financial statements of KGHM Polska Miedź S.A.

Proper management of the process of keeping records and preparing financial statements ensures the security and the high quality of the information.

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**Appendix 2 KGHM Polska Miedź S.A. Group structure**



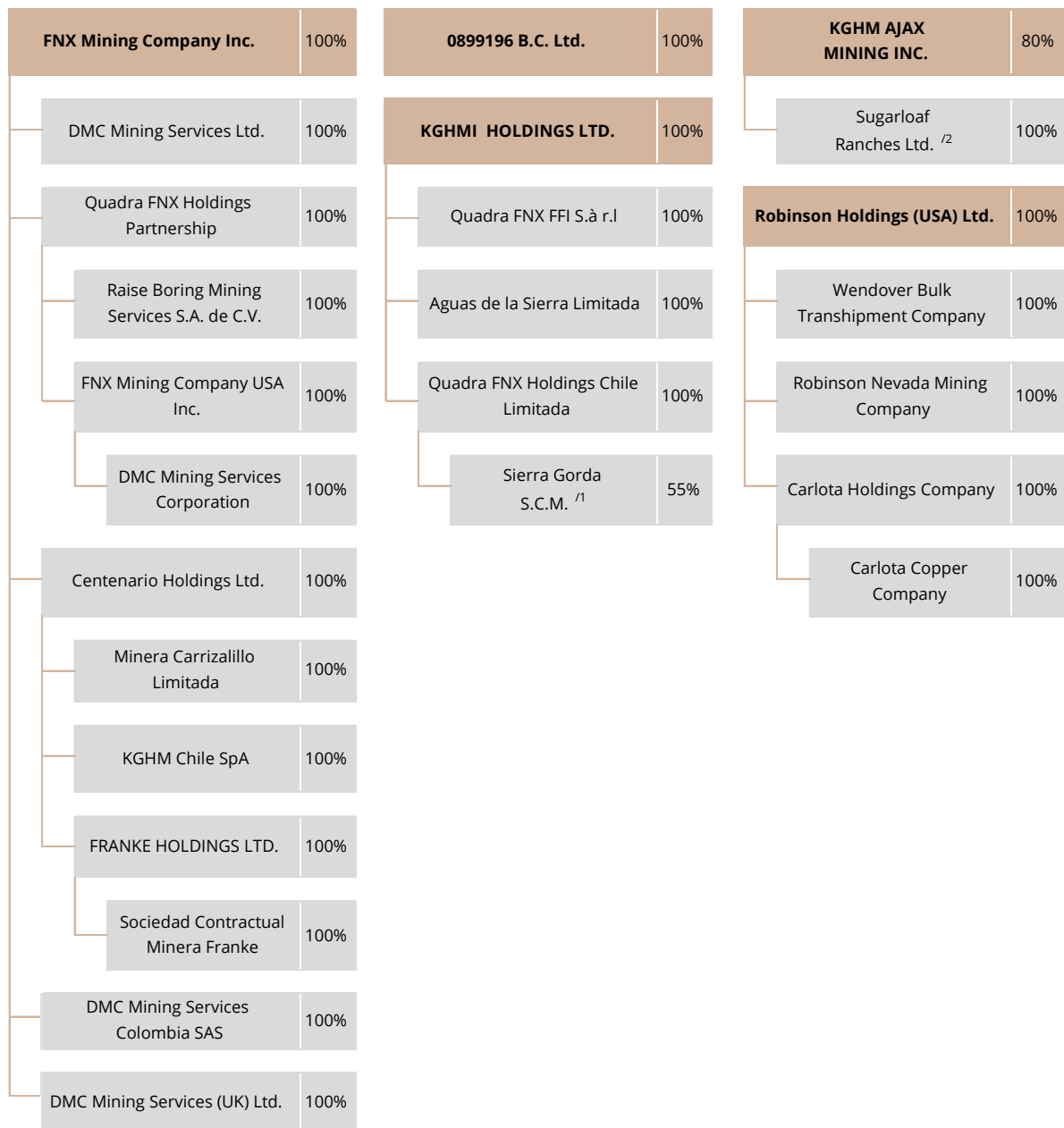
Group structure presented in Appendix 3

1/ joint venture accounted for using the equity method

2/ unconsolidated subsidiary

## Appendix 3 KGHM INTERNATIONAL LTD. Group structure

## KGHM INTERNATIONAL LTD.



1/ joint venture accounted for using the equity method

2/ actual Group share 80%

## Appendix 4 Activities of subsidiaries and joint ventures of KGHM Polska Miedź S.A.

### Companies in Poland

Entity	Head Office	Activities
KGHM Polska Miedź S.A.	Poland	mining of copper ore, excavation of salt, production of copper and precious metals
„Energetyka” sp. z o.o.	Poland	generation, transmission and distribution of electrical and heating energy, water-sewage management; trade in oil-based products
PeBeKa S.A.	Poland	mine construction (construction of shafts and drifts), construction of roadway/railway tunnels; specialist construction, drilling services (geological/exploration drilling)
KGHM ZANAM S.A.	Poland	production of mining machinery and equipment, construction machinery; machinery repairs; production maintenance services; advancement of investments; steel construction services; roadway cargo transport
KGHM CUPRUM sp. z o.o. - CBR	Poland	design and R&D activities
CBJ sp. z o.o.	Poland	research and chemical-physical analysis; measurement of imissions and emissions; industrial research
INOVA Spółka z o.o.	Poland	design and production – innovative solutions in electrical engineering, automated equipment and communication systems; certification and attestation of machinery and equipment
KGHM Metraco S.A.	Poland	trade and processing of non-ferrous metals scrap; rhenium recovery from acidic industrial waste; processing of shaft slag into road-building material and sale of such; trading in salt; recovery of copper and silver from smelter tiles; trading in chemical factors
POL-MIEDŹ TRANS Sp. z o.o.	Poland	railway cargo transport
NITROERG S.A.	Poland	production of explosives, Nitroacet 50 and initiating systems
MERCUS Logistyka sp. z o.o.	Poland	materials logistics; trade in consumer goods; production of bundled electrical cables and hydraulic cables; passenger roadway transport
NITROERG SERWIS Sp. z o.o.	Poland	comprehensive drilling and blasting work for mines, sales of explosives and initiating systems
CENTROŻŁOM WROCŁAW S.A.	Poland	recovery of raw materials from segregated materials – purchase and sale of metal scrap, waste recycling, sale of steel and aluminium and production of reinforcing building materials
Walcownia Metali Nieżelaznych „ŁABĘDY” S.A.	Poland	production of pressed goods from copper and its alloys; rolling services
PHU „Lubinpex” Sp. z o.o.	Poland	gastronomic, commercial and catering services
PMT Linie Kolejowe Sp. z o.o.	Poland	maintenance of railway infrastructure, repair services, management of railways
PMT Linie Kolejowe 2 Sp. z o.o.	Poland	management of railway industrial spurs
KGHM TFI S.A.	Poland	creation and management of investment funds
INTERFERIE S.A.	Poland	hotel services combining active recreation with sanatorium-healing, rehabilitation, SPA and wellness services
Interferie Medical SPA Sp. z o.o.	Poland	hotel, recreation, rehabilitation, health tourism and wellness services
WPEC w Legnicy S.A.	Poland	production of heat from its own sources, transmission and distribution of heat, servicing
Uzdrowiska Kłodzkie S.A. - Grupa PGU		
Uzdrowisko Połczyn Grupa PGU S.A.	Poland	services in the following areas: spa-healing, sanatorium, preventative medicine, rehabilitation, biological renewal, recreation based on natural healing materials and bioclimatic conditions
Uzdrowisko Cieplice sp. z o.o. – Grupa PGU		
Uzdrowisko Świeradów -Czerniawa Sp. z o.o. - Grupa PGU		
Staropolanka Spółka z o.o.	Poland	production and sale of mineral water (the company has not commenced operations)
Fundusz Hotele 01 Sp. z o.o.	Poland	special-purpose companies operating within the structures of the KGHM VI FIZAN investment fund
Fundusz Hotele 01 Sp. z o.o. S.K.A.		
Polska Grupa Uzdrowisk Sp. z o.o.	Poland	special-purpose company operating within the structures of the KGHM VII FIZAN investment fund
KGHM I FIZAN in liquidation		
KGHM IV FIZAN		
KGHM V FIZAN in liquidation	Poland	closed-end, non-public investment funds - investing cash
KGHM VI FIZAN		
KGHM VII FIZAN		
„MCZ” S.A.	Poland	hospital services; medical practice; activities related to protecting human health; occupational medicine
Zagłębie Lubin S.A.	Poland	management of a football club, organisation of professional sporting events

Entity	Head Office	Activities
BIPROMET S.A.	Poland	design services, consulting, technical conceptual work; general realisation of investments
Cuprum Nieruchomości sp. z o.o.	Poland	activities related to real estate market services, construction services, design work and financing
Cuprum Development sp. z o.o.		
Future 2 Sp. z o.o.	Poland	companies not engaged in operations
Future 3 Sp. z o.o.		
Future 4 Sp. z o.o.		
Future 5 Sp. z o.o.		
Future 6 Sp. z o.o.		
Future 7 Sp. z o.o.	Poland	production of epitaxial graphene
NANO CARBON Sp. z o.o.		

### International companies (and Future 1 Sp. z o.o.)

Entity	Head Office	Activities
<b>DIRECT SUBSIDIARIES</b>		
Future 1 Sp. z o.o.	Poland	management and control of other companies, including the KGHM INTERNATIONAL LTD. Group
KGHM (SHANGHAI) COPPER TRADING CO. LTD.	China	commercial activities involving copper/silicon merchandise
<b>INDIRECT SUBSIDIARIES</b>		
<b>COMPANIES BELONGING TO Future 1 Sp. z o.o.</b>		
KGHM INTERNATIONAL LTD.	Canada	the founding, development, management or control of companies in the KGHM INTERNATIONAL LTD. Group
KGHM Kupfer AG	Germany	in 2018 did not engage in operations
<b>COMPANIES BELONGING TO KGHM INTERNATIONAL LTD.</b>		
KGHM Ajax Mining Inc.	Canada	exploration for and assessment of mineral deposits
Sugarloaf Ranches Ltd.	Canada	agricultural activities (this company owns assets in the form of land designated for future mining activities related to the Ajax project)
Robinson Nevada Mining Company	USA	copper ore mining, production and sale of copper
Carlota Copper Company	USA	copper ore leaching, production and sale of copper
FNX Mining Company Inc.	Canada	mining of copper and nickel ore, production and sale of copper and nickel
Sociedad Contractual Minera Franke	Chile	copper ore leaching, production and sale of copper
Aguas de la Sierra Limitada	Chile	the ownership and exercise of water rights in Chile
Robinson Holdings (USA) Ltd.	USA	technical and management services
DMC Mining Services Corporation	USA	contract mining services
KGHM Chile SpA (formerly Minería y Exploraciones KGHM International SpA)	Chile	management and exploration services
Minera Carrizalillo Limitada	Chile	the ownership of water and deposits rights
Wendover Bulk Transshipment Company	USA	shipment services
Malmberg Molybdenum A/S (company liquidated in May 2018)	Greenland	in 2018 did not engage in operations
Raise Boring Mining Services, S.A. de C.V.	Mexico	mine drilling services
KGHMI Holdings Ltd.	Canada	the management and control of other companies
Carlota Holdings Company	USA	the management and control of other companies
Quadra FNX FFI S.à r.l.	Luxembourg	financial services
Centenario Holdings Ltd.	Canada	the management and control of other companies
Franke Holdings Ltd.	Canada	the management and control of other companies
Quadra FNX Holdings Chile Limitada	Chile	the management and control of other companies
FNX Mining Company USA Inc.	USA	the management and control of other companies
Quadra FNX Holdings Partnership	Canada	the management and control of other companies
0899196 B.C. Ltd.	Canada	the management and control of other companies
DMC Mining Services Ltd.	Canada	contract mining services
Sierra Gorda S.C.M.	Chile	the construction and operation of an open-pit copper and molybdenum mine
DMC Mining Services Colombia SAS	Columbia	contract mining services
DMC Mining Services (UK) Ltd.	United Kingdom	contract mining services
<b>COMPANY BELONGING TO Przedsiębiorstwo Budowy Kopalń PeBeKa Spółka Akcyjna</b>		
PEBEKA CANADA INC.	Canada	in 2018 did not engage in operations
<b>COMPANY BELONGING TO KGHM ZANAM S.A. (99%) and Przedsiębiorstwo Budowy Kopalń PeBeKa S.A. (1%)</b>		
Obszczestwo s ograniczennoj otwietwiennoştju ZANAM VOSTOK	Russian Federation	sale and after-sales service of mining machinery produced by KGHM ZANAM S.A.

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## SIGNATURES OF ALL MEMBERS OF THE MANAGEMENT BOARD

This report was authorised for issue on 13 March 2019.

President of the Management Board

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Marcin Chludziński

Vice President of the Management Board

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Adam Bugajczuk

Vice President of the Management Board

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Paweł Gruza

Vice President of the Management Board

---

Katarzyna Kreczmańska-Gigol

Vice President of the Management Board

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Radosław Stach