POLISH FINANCIAL SUPERVISION AUTHORITY

Consolidated annual report RS 2019

(in accordance with § 60 sec. 2 of the Decree regarding current and periodic information)

for issuers of securities involved in production, construction, trade or services activities

for the financial year **2019** comprising the period from **1 January 2019** to **31 December 2019** containing the consolidated financial statements according to International Financial Reporting Standards in PLN.

publication date: 17 March 2020

KGHM Polska Miedź Spółka Akcyjna
(name of the issuer)

KGHM Polska Miedź S.A.
(name of the issuer in brief)

Mining
(issuer branch title per the Warsaw Stock Exchange)

59 – 301
(postal code)

LUBIN
(city)

M. Skłodowskiej – Curie
(street)

48
(number)

(+48) 76 7478 200
(telephone)

(+48) 76 7478 500
(fax)

ir@kghm.com
(e-mail)

www.kghm.com
(www)

6920000013
(NIP)

390021764
(REGON)

PricewaterhouseCoopers Polska Spółka z ograniczoną odpowiedzialnością Audyt Sp.k.
(auditing company)

	SELECTED FINANCIAL DATA	in PLN mn		in EUR mn	
		2019	**2018**	**2019**	**2018**
I.	Revenues from contracts with customers	22 723	20 526	5 282	4 811
II.	Profit on sales	2 455	2 591	571	607
III.	Profit before income tax	2 122	2 466	493	578
IV.	Profit for the period	1 421	1 658	330	388
V.	Profit for the period attributable to shareholders of the Parent Entity	1 421	1 657	330	388
VI.	Profit for the period attributable to non-controlling interest	-	1	-	-
VII.	Other comprehensive income	(444)	(298)	(103)	(70)
VIII.	Total comprehensive income	977	1 360	227	318
IX.	Total comprehensive income attributable to shareholders of the Parent Entity	977	1 359	227	318
X.	Total comprehensive income attributable to non-controlling interest	-	1	-	-
XI.	Number of shares issued	200 000 000	200 000 000	200 000 000	200 000 000
XII.	Earnings per ordinary share (in PLN/EUR) attributable to shareholders of the Parent Entity	7.11	8.29	1.65	1.96
XIII.	Net cash generated from operating activities	5 048	3 826	1 173	897
XIV.	Net cash used in investing activities	(3 643)	(3 539)	(847)	(829)
XV.	Net cash generated from/(used in) financing activities	(1 308)	66	(304)	15
XVI.	Total net cash flow	97	353	22	83
XVII.	Non-current assets	31 669	29 375	7 436	6 831
XVIII.	Current assets	7 740	7 862	1 818	1 829
XIX.	Total assets	39 409	37 237	9 254	8 660
XX.	Non-current liabilities	13 171	12 147	3 093	2 825
XXI.	Current liabilities	6 036	5 865	1 417	1 364
XXII.	Equity	20 202	19 225	4 744	4 471
XXIII.	Equity attributable to shareholders of the Parent Entity	20 110	19 133	4 722	4 450
XXIV.	Equity attributable to non-controlling interest	92	92	22	21

Average EUR/PLN exchange rate announced by the National Bank of Poland

	2019	2018
Average exchange rate for the period*	4.3018	4.2669
Exchange rate at the end of the period	4.2585	4.3000

**Exchange rates are the arithmetical average of the current average exchange rates announced by the National Bank of Poland on the last day of each month respectively of 2019 and 2018*

Polish Financial Supervision Authority

This report is a direct translation from the original Polish version.
In the event of differences resulting from the translation, reference should be made to the official Polish version.

CONSOLIDATED FINANCIAL STATEMENTS FOR 2019

Lubin, March 2020

Table of contents

CONSOLIDATED STATEMENT OF PROFIT OR LOSS ... 4
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME ... 5
CONSOLIDATED STATEMENT OF CASH FLOWS ... 6
CONSOLIDATED STATEMENT OF FINANCIAL POSITION ... 7
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY ... 8
Part 1 – General information ... 9
Note 1.1 Corporate information ... 9
Note 1.2 Basis of preparation and presentation ... 9
Note 1.3 Impact of new and amended standards and interpretations ... 12
Note 1.4 Published standards and interpretations, which are not yet in force and were not applied earlier by the Group ... 15
Part 2 – Information on segments and revenues ... 16
Note 2.1 Operating segments ... 16
Note 2.2 Financial results of reporting segments ... 19
Note 2.3 Revenues from contracts with customers of the Group – breakdown by products ... 22
Note 2.4 Revenues from contracts with customers of the Group – breakdown by category ... 26
Note 2.5 Revenues from contracts with customers of the Group – geographical breakdown reflecting the location of end clients ... 28
Note 2.6 Main customers ... 29
Note 2.7 Non-current assets – geographical breakdown ... 29
Part 3 – Impairment of assets ... 30
Note 3.1. Impairment of assets as at 31 December 2019 ... 30
Note 3.2. Results of impairment testing of the Group's assets as at 31 December 2018 ... 36
Part 4 - Explanatory notes to the statement of profit or loss ... 39
Note 4.1 Expenses by nature ... 39
Note 4.2 Other operating income and (costs) ... 40
Note 4.3 Finance income and (costs) ... 40
Note 4.4 Reversal and recognition of impairment losses on assets recognised in the statement of profit or loss ... 41
Part 5 - Taxation ... 42
Note 5.1 Income tax in the consolidated statement of profit or loss ... 42
Note 5.2 Other taxes and charges ... 49
Note 5.3 Tax assets and liabilities ... 50
Part 6 – Involvement in joint ventures ... 51
Note 6.1 Joint ventures accounted for using the equity method ... 51
Note 6.2 Loans granted to joint ventures (Sierra Gorda S.C.M.) ... 53
Part 7 – Financial instruments and financial risk management ... 55
Note 7.1 Financial Instruments ... 55
Note 7.2 Derivatives ... 59
Note 7.3 Other financial instruments measured at fair value ... 62
Note 7.4 Other financial instruments measured at amortised cost ... 63
Note 7.5 Financial risk management ... 63
Part 8 - Borrowings and the management of liquidity and capital ... 82
Note 8.1 Capital management policy ... 82
Note 8.2 Equity ... 83
Note 8.3 Liquidity management policy ... 85
Note 8.4 Borrowings ... 87
Note 8.5 Cash and cash equivalents ... 92
Note 8.6 Liabilities due to guarantees granted ... 93
Part 9 – Non-current assets and related liabilities ... 94
Note 9.1 Mining and metallurgical property, plant and equipment and intangible assets ... 94
Note 9.2 Other property, plant and equipment and intangible assets ... 100
Note 9.3 Depreciation/amortisation ... 103
Note 9.4 Provision for decommissioning costs of mines and other facilities ... 103
Note 9.5 Capitalised borrowing costs ... 104
Note 9.6 Carrying amount of the assets of Group companies representing collateral of repayment of liabilities ... 104
Part 10 – Working capital ... 105
Note 10.1 Inventories ... 105
Note 10.2 Trade receivables ... 106
Note 10.3 Trade and similar payables ... 106
Note 10.4 Changes in working capital ... 108

Part 11 – Employee benefits ... 110
Note 11.1 Employee benefits liabilities ... 111
Note 11.2 Changes in liabilities related to future employee benefits programs ... 112
Part 12 – Other notes ... 115
Note 12.1 Related party transactions ... 115
Note 12.2 Dividends paid ... 116
Note 12.3 Other assets ... 116
Note 12.4 Other liabilities ... 117
Note 12.5 Assets and liabilities not recognised in the statement of financial position ... 117
Note 12.6 Capital commitments related to property, plant and equipment and intangible assets ... 118
Note 12.7 The right of perpetual usufruct of land ... 118
Note 12.8 Employment structure ... 118
Note 12.9 Other adjustments in the statement of cash flows ... 118
Note 12.10 Remuneration of key managers ... 119
Note 12.11 Remuneration of the entity entitled to audit the financial statements and of entities related to it in PLN thousands ... 121
Note 12.12 Composition of the Group ... 122
Note 12.13 Subsequent events after the reporting period ... 126
Part 13 – Quarterly financial information of the Group ... 127
CONSOLIDATED STATEMENT OF PROFIT OR LOSS ... 127
Note 13.1 Expenses by nature ... 128
Note 13.2 Other operating income and (costs) ... 129
Note 13.3 Finance income/(costs) ... 130

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Note 2.3	Revenues from contracts with customers	22 723	20 526
Note 4.1	Cost of sales	(18 767)	(16 555)
	Gross profit on sales	**3 956**	**3 971**
Note 4.1	Selling costs and administrative expenses	(1 501)	(1 380)
	Profit on sales	**2 455**	**2 591**
Note 6.1	Share of losses of joint ventures accounted for using the equity method	(438)	(662)
Note 6.2	Gains due to the reversal of allowances for impairment of loans granted to joint ventures	106	733
Note 6.2	Interest income on loans granted to joint ventures calculated using the effective interest rate method	341	257
	Profit or loss on involvement in joint ventures	9	328
Note 4.2	Other operating income	809	1 034
Note 4.2	Other operating costs	(623)	(726)
Note 4.3	Finance income	38	11
Note 4.3	Finance costs	(566)	(772)
	Profit before income tax	**2 122**	**2 466**
Note 5.1	Income tax expense	(701)	(808)
	PROFIT FOR THE PERIOD	**1 421**	**1 658**
	Profit for the period attributable to:		
	shareholders of the Parent Entity	1 421	1 657
	non-controlling interest	-	1
	Weighted average number of ordinary shares (million)	**200**	**200**
	Basic/diluted earnings per share (in PLN)	**7.11**	**8.29**

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
	Profit for the period	**1 421**	**1 658**
Note 8.2.2	Measurement of hedging instruments net of the tax effect	(315)	283
	Exchange differences from translation of foreign operations statements with a functional currency other than PLN	(6)	(162)
	Other comprehensive income, which will be reclassified to profit or loss	**(321)**	**121**
Note 8.2.2	Measurement of equity financial instruments at fair value through other comprehensive income, net of the tax effect	(78)	(159)
	Actuarial losses net of the tax effect	(45)	(260)
	Other comprehensive income which will not be reclassified to profit or loss	**(123)**	**(419)**
	Total other comprehensive income	**(444)**	**(298)**
	TOTAL COMPREHENSIVE INCOME	**977**	**1 360**
	Total comprehensive income attributable to:		
	shareholders of the Parent Entity	977	1 359
	non-controlling interest	-	1

CONSOLIDATED STATEMENT OF CASH FLOWS

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
	Cash flow from operating activities		
	Profit before income tax	2 122	2 466
Note 9.3	Depreciation/amortisation recognised in profit or loss	1 920	1 796
Note 6.1	Share of losses of joint ventures accounted for using the equity method	438	662
Note 4.4	Gains due to the reversal of allowances for impairment of loans granted to joint ventures	(106)	(733)
Note 6.2	Interest on loans granted to joint ventures	(341)	(257)
	Other interest	244	109
	Impairment losses on non-current assets	51	69
	Exchange differences, of which:	184	(36)
	from investment activities and cash	(29)	593
	from financing activities	213	(629)
	Change in provisions and employee benefits liabilities	114	244
	Change in other receivables and liabilities	(176)	20
	Change in derivatives	(31)	(121)
	Reclassification of other comprehensive income to profit or loss due to the realisation of hedging derivatives	(86)	31
Note 12.9	Other adjustments	2	11
	Exclusions of income and costs, total	2 213	1 795
	Income tax paid	(410)	(802)
Note 10.4	Changes in working capital, including:	1 123	367
	change in trade payables transferred to factoring	595	-
	Net cash generated from operating activities	**5 048**	**3 826**
	Cash flow from investing activities		
Note 9.1.3	Expenditures on mining and metallurgical assets, including:	(2 872)	(2 609)
	paid capitalised interest on borrowings, including:	(123)	(160)
	leases	(11)	-
	Expenditures on other property, plant and equipment and intangible assets	(360)	(266)
	Expenditures on financial assets designated for decommissioning mines and other technological facilities	(293)	(26)
	Acquisition of newly-issued shares of joint ventures	(439)	(666)
	Proceeds from financial assets designated for decommissioning mines and other technological facilities	335	9
	Other	(14)	19
	Net cash used in investing activities	**(3 643)**	**(3 539)**
	Cash flow from financing activities		
	Proceeds from borrowings	4 730	2 276
	Proceeds from issue of debt financial instruments	2 000	-
	Repayments of borrowings	(7 746)	(2 100)
	Repayment of lease liabilities	(52)	(10)
	Payment of interest, including due to:	(239)	(119)
	borrowings and debt securities	(215)	(118)
	leases	(23)	(1)
	Other	(1)	19
	Net cash generated from/(used in) financing activities	**(1 308)**	**66**
	NET CASH FLOW	**97**	**353**
	Exchange gains/(losses)	(38)	18
	Cash and cash equivalents at beginning of the period	957	586
Note 8.5	**Cash and cash equivalents at end of the period, including:**	**1 016**	**957**
	restricted cash	34	8

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

		As at 31 December 2019	As at 31 December 2018
	ASSETS		
	Mining and metallurgical property, plant and equipment	19 498	17 507
	Mining and metallurgical intangible assets	1 966	1 657
Note 9.1	Mining and metallurgical property, plant and equipment and intangible assets	21 464	19 164
	Other property, plant and equipment	2 829	2 789
	Other intangible assets	155	224
Note 9.2	Other property, plant and equipment and intangible assets	2 984	3 013
Note 6.1	Joint ventures accounted for using the equity method	-	4
Note 6.2	Loans granted to joint ventures	5 694	5 199
	Total involvement in joint ventures	5 694	5 203
Note 7.1	Derivatives	124	320
Note 7.3	Other financial instruments measured at fair value	448	541
Note 7.4	Other financial instruments measured at amortised cost	656	716
	Financial instruments, total	1 228	1 577
Note 5.1.1	Deferred tax assets	157	309
Note 12.3	Other non-financial assets	142	109
	Non-current assets	**31 669**	**29 375**
Note 10.1	Inventories	4 741	4 983
Note 10.2	Trade receivables, including:	688	799
	Trade receivables measured at fair value through profit or loss	300	304
Note 5.3	Tax assets	571	417
Note 7.1	Derivatives	293	301
Note 12.3	Other financial assets	280	273
Note 12.3	Other non-financial assets	151	132
Note 8.5	Cash and cash equivalents	1 016	957
	Current assets	**7 740**	**7 862**
	TOTAL ASSETS	**39 409**	**37 237**
	EQUITY AND LIABILITIES		
Note 8.2.1	Share capital	2 000	2 000
Note 8.2.2	Other reserves from measurement of financial instruments	(738)	(444)
Note 8.2.2	Accumulated other comprehensive income, other than from measurement of financial instruments	1 954	2 005
Note 8.2.2	Retained earnings	16 894	15 572
	Equity attributable to shareholders of the Parent Entity	20 110	19 133
	Equity attributable to non-controlling interest	92	92
	Equity	**20 202**	**19 225**
Note 8.4.1	Borrowings, lease and debt securities	7 525	6 878
Note 7.1	Derivatives	183	162
Note 11.1	Employee benefits liabilities	2 613	2 447
Note 9.4	Provisions for decommissioning costs of mines and other facilities	1 774	1 564
Note 5.1.1	Deferred tax liabilities	445	498
Note 12.4	Other liabilities	631	598
	Non-current liabilities	13 171	12 147
Note 8.4.1	Borrowings, lease and debt securities	348	1 071
Note 7.1	Derivatives	91	43
Note 10.3	Trade and similar payables	2 766	2 053
Note 11.1	Employee benefits liabilities	1 150	1 044
Note 5.3	Tax liabilities	433	349
	Provisions for liabilities and other charges	222	271
Note 12.4	Other liabilities	1 026	1 034
	Current liabilities	6 036	5 865
	Non-current and current liabilities	**19 207**	**18 012**
	TOTAL EQUITY AND LIABILITIES	**39 409**	**37 237**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

		Equity attributable to shareholders of the Parent Entity						
		Share capital	Other reserves from measurement of financial instruments	Accumulated other comprehensive income	Retained earnings	Total	Equity attributable to non-controlling interest	Total equity
	As at 31 December 2017	**2 000**	**158**	**2 427**	**13 109**	**17 694**	**91**	**17 785**
	Change in accounting policies – application of IFRS 9, IFRS 15	-	(726)	-	806	80	-	80
	As at 1 January 2018	**2 000**	**(568)**	**2 427**	**13 915**	**17 774**	**91**	**17 865**
	Profit for the period	-	-	-	1 657	**1 657**	1	**1 658**
Note 8.2.2	Other comprehensive income	-	124	(422)	-	**(298)**	-	**(298)**
	Total comprehensive income	-	124	(422)	1 657	**1 359**	1	**1 360**
	As at 31 December 2018	**2 000**	**(444)**	**2 005**	**15 572**	**19 133**	**92**	**19 225**
	Profit for the period	-	-	-	1 421	**1 421**	**-**	**1 421**
Note 8.2.2	Other comprehensive income	-	(393)	(51)	-	**(444)**	-	**(444)**
	Total comprehensive income	-	(393)	(51)	1 421	**977**	**-**	**977**
	Reclassification of the result of measurement of equity instruments measured at fair value through other comprehensive income	-	99	-	(99)	**-**	-	**-**
	As at 31 December 2019	**2 000**	**(738)**	**1 954**	**16 894**	**20 110**	**92**	**20 202**

Part 1 – General information

Note 1.1 Corporate information

KGHM Polska Miedź S.A. ("the Parent Entity", "the Company") with its registered office in Lubin at 48 M.Skłodowskiej-Curie Street is a joint stock company registered at the Regional Court for Wrocław Fabryczna in Wrocław, Section IX (Economic) of the National Court Register, entry no. KRS 23302, on the territory of the Republic of Poland.

KGHM Polska Miedź S.A. has a multi-divisional organisational structure, comprised of a Head Office and 10 divisions: 3 mines (Lubin Mine Division, Polkowice-Sieroszowice Mine Division, Rudna Mine Division), 3 metallurgical plants (Głogów Smelter/Refinery, Legnica Smelter/Refinery, Cedynia Wire Rod Division), the Concentrator Division, the Tailings Division, the Mine-Smelter Emergency Rescue Division and the Data Center Division.

The shares of KGHM Polska Miedź S.A. are listed on the Warsaw Stock Exchange.

The Parent Entity's principal activities include:
- the mining of copper and non-ferrous metals ores; and
- the production of copper, precious and non-ferrous metals.

In addition, the KGHM Polska Miedź S.A. Group ("the Group") conducts other activities, which are described in Appendix no. 4 to the Management Board's Report on the activities of KGHM Polska Miedź S.A. and of the KGHM Polska Miedź S.A. Group in 2019.

The consolidated financial statements were prepared under the assumption that the Group's companies will continue as a going concern during a period of at least 12 months from the end of the reporting period in an unaltered form and business scope, and there are no reasons to suspect any intentional or forced discontinuation or significant limitation of its current activities. As at the date of signing of the consolidated financial statements the Management Board of the Parent Entity is not aware of any facts or circumstances that may cast doubt about the going concern in the foreseeable future.

The KGHM Polska Miedź S.A. Group carries out exploration and the mining of copper, nickel and precious metals based on concessions given for the Polish deposits to KGHM Polska Miedź S.A., and also based on legal titles held by KGHM INTERNATIONAL LTD. and KGHM AJAX MINING INC. for the exploration for or mining of these resources in the USA, Canada, and Chile. Detailed information is presented in the Management Board's report on the activities of KGHM Polska Miedź S.A and of the KGHM Polska Miedź S.A. Group in 2019 (point 2.4).

In 2019, the Parent Entity of the Group consolidated 72 subsidiaries and used the equity method to account for the shares of two joint ventures (Sierra Gorda S.C.M. and NANO CARBON Sp. z o.o. in liquidation). TUW Cuprum is excluded from consolidation.

Declaration by the Management Board on the accuracy of the prepared financial statements

The Management Board of KGHM Polska Miedź S.A. declares that according to its best judgement the annual consolidated financial statements for 2019 and the comparative data have been prepared in accordance with accounting principles currently in force, and give a true, fair and clear view of the financial position of the KGHM Polska Miedź S.A. Group and the profit for the period of the Group.
The Management Board's report on the activities of KGHM Polska Miedź S.A. and of the KGHM Polska Miedź S.A. Group in 2019 presents a true picture of the development and achievements, as well as the condition, of KGHM Polska Miedź S.A. and the KGHM Polska Miedź S.A. Group, including a description of the basic exposures and risks.

The consolidated financial statements were authorised for issue and signed by the Management Board of the Parent Entity on 16 March 2020.

Note 1.2 Basis of preparation and presentation

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as adopted by the European Union, on the basis of historical cost, except for financial instruments classified as measured at fair value and investment properties measured at fair value.

Accounting Policies

The accounting policies of the Group which apply to the consolidated financial statements as a whole, as well as significant estimates and their impact on amounts presented in the consolidated financial statements, are presented in the following note.

<table>
<tr><th>Topic</th><th>Accounting policies</th><th>Significant estimates</th></tr>
<tr><td>Consolidation principles</td><td>The consolidated financial statements include the financial statements of the Parent Entity and its subsidiaries. Subsidiaries are understood as being entities which are either directly controlled by the Parent Entity or indirectly through its subsidiaries.

Obtaining control of a subsidiary, which is a business, is accounted for using the acquisition method.

Subsidiaries are fully consolidated from the date on which control is obtained to the date on which control is lost.

Balances, incomes, expenses and unrealised gains recognised in assets from intra-group transactions, are eliminated.</td><td>Determining whether the Parent Entity has control over a company requires an assessment as to whether it has rights to direct relevant activities of the company.
Determining what constitutes relevant activities of the company and by which investor it is controlled requires a judgment.
Among others, the following factors are taken into consideration when assessing the situation and determining the nature of relationships: voting rights, relative voting power, dilution of voting rights of other investors and their ability to appoint members of key management personnel or members of the supervisory board.</td></tr>
<tr><td>Fair value measurement</td><td>Fair value is the price that would be received from selling an asset or would be paid for a transfer of a liability in an orderly transaction between market participants at the measurement date. For financial reporting purposes, a fair value hierarchy was established that categorises the inputs into three levels. The fair value hierarchy levels are as follows:
Level 1 Value is based on inputs from active markets, as they are seen as the most reliable source of data.
Level 2 Value is based on inputs other than from active markets, which are nevertheless observable (unbiased, measurable).
Level 3 Value is based on unobservable inputs, used when it is not possible to acquire data from the first two measurement levels. It includes all measurements based on subjective inputs.</td><td>Fair value presents current estimates which may be subject to change in subsequent reporting periods due to market conditions or due to other factors. There are many methods of measuring fair value, which may result in differences in fair values.
Moreover, assumptions constituting the basis of fair value measurement may require estimating the changes in costs/prices over time, the discount rate, inflation rate or other significant variables.

Certain assumptions and estimates are necessary to determine to which level of fair value hierarchy a given instrument should be classified.</td></tr>
<tr><td>Financial statements of subsidiaries with a functional currency other than PLN</td><td>For purposes of preparing the consolidated financial statements in the presentation currency of the KGHM Polska Miedź S.A. Group, i.e. in PLN, individual items of financial statements of foreign operations whose functional currencies are other than PLN are translated in the following manner:
(i) assets and liabilities – at the closing rate, i.e. at the average exchange rate for that currency announced by the NBP at the end of the reporting period,
(ii) items of the statement of profit or loss, the statement of comprehensive income and the statement of cash flows - at the arithmetical average of average exchange rates announced for a given currency by the NBP at the end of each month of a given reporting period. If there is a significant volatility of exchange rates in a given period, revenues and costs in the statement of profit or loss and the statement of comprehensive income are translated using the exchange rates as at the transaction date.
Exchange differences from the translation of foreign operations statements are recognised in other comprehensive income of a given period.</td><td>The consolidated financial statements are presented in PLN, which is also the functional currency of the Parent Entity and the Group's subsidiaries, with the exception of: the subsidiary Future 1 Sp. z o.o. and subsidiaries of the subgroup KGHM INTERNATIONAL LTD. in which mainly the US dollar (USD) is the functional currency.

The balance of exchange differences from the translation of financial statements of the aforementioned entities:
• 2019 – PLN 2 650 million,
• 2018 – PLN 2 656 million.</td></tr>
</table>

For a greater understanding of the data presented in the consolidated financial statements, important principles of measurement and accounting policies are presented in individual, detailed notes specified below:

Note	Title	Amount recognised in the financial statements		Accounting policies	Important estimates and judgements
		2019	2018		
2.3	Revenues from contracts with customers	22 723	20 526	X	
3.1	Test for impairment of assets	106	733	X	X
4.4	(Recognition)/reversal of impairment losses	48	657		
5.1	Income tax	(701)	(808)	X	
5.1.1	Deferred income tax	(288)	(189)	X	X
5.3	Tax assets	571	417	X	
5.3	Tax liabilities	(433)	(349)	X	
6.1	Joint ventures accounted for using the equity method	-	4	X	X
6.2	Loans granted to joint ventures	5 694	5 199	X	X
7.2	Derivatives	143	416	X	
7.3	Other financial instruments measured at fair value	448	541	X	X
7.4	Other financial instruments measured at amortised cost	656	716	X	X
8.1	Equity	(20 202)	(19 225)	X	
8.4.1	Borrowings	(7 873)	(7 949)	X	
8.5	Cash and cash equivalents	1 016	957	X	
9.1	Mining and metallurgical property, plant and equipment and intangible assets	21 464	19 164	X	X
9.2	Other property, plant and equipment and intangible assets	2 984	3 013	X	
9.4	Provisions for decommissioning costs of mines and other facilities*	(1 794)	(1 576)	X	X
10.1	Inventories	4 741	4 983	X	X
10.2	Trade receivables	795	961	X	
10.3	Trade and similar payables	(2 940)	(2 224)	X	X
11.1	Employee benefits liabilities	(3 763)	(3 491)	X	X
12.3	Other assets	573	514	X	
12.4	Other liabilities	(1 657)	(1 632)	X	

** In the statement of financial position, current provisions for decommissioning costs of mines and other technological facilities are recognised in the item Provisions for liabilities and other charges.*

The accounting policies described in this note and in individual notes were applied by the Group in a continuous manner to all presented periods with the exception of accounting policies and measurement arising from the application of IFRS 16 and amendments to IAS 23 from 1 January 2019.

Note 1.3 Impact of new and amended standards and interpretations

The International Accounting Standards Board approved the following new standards for use from 1 January 2019:

- IFRS 16 Leases,
- Amendments to IAS 19 on plan amendment, curtailment or settlement,
- Amendments to IAS 28 on long-term interests in associates and joint ventures,
- IFRIC 23 interpretation on uncertainty over income tax treatments,
- Amendments to IFRS 9 on early repayment with negative compensation,
- Annual improvements to IFRS Standards, 2015-2017 cycle.

Up to the date of publication of these financial statements, the aforementioned amendments to the standards were adopted for use by the European Union and with the exception of IFRS 16 and amendments to IAS 23 introduced as part of annual improvements to IFRS Standards, 2015-2017 cycle, they did not have an impact on the Company's accounting policy or on the consolidated financial statements for 2019.

Impact of application of IFRS 16 "Leases" and amendments to IAS 23 on the Company's accounting policy and on the Company's separate financial statements.

IFRS 16 Leases

Basic information on the standard

Date of implementation and transitional rules
IFRS 16 is effective for annual periods beginning on or after 1 January 2019 and has been adopted by the European Union. It superseded the IAS 17 standard, interpretations IFRIC 4 and SIC 15 and 27. The Group applies IFRS 16 from 1 January 2019.

Main changes introduced by the standard
The new standard introduced a single model for recognising a lease in a lessee's accounting books, conforming to the recognition of a finance lease under IAS 17. Pursuant to IFRS 16, an agreement is a lease or contains a lease if it transfers the rights to control the use of an identified asset for a given period in exchange for consideration. The essential element differentiating the definition of a lease from IAS 17 and from IFRS 16 is the requirement to have control over the used, specific asset, indicated directly or implied in the agreement. Transfer of the right to use takes place when we have an identified asset, with respect to which the lessee has the right to obtain substantially all of the economic benefits from its use, and controls the use of a given asset in a given period. If the definition of a "lease" is met, the right to use an asset is recognised alongside a corresponding lease liability, set in the amount of future discounted payments – for the duration of the lease. Expenses related to the use of lease assets, the majority of which were previously recognised in external services costs, are currently classified as depreciation/amortisation and interest costs. Right-to-use assets are depreciated in accordance with IAS 16, while lease liabilities are settled using the effective interest rate. The requirements of the new standard with respect to recognition and measurement by the lessor are similar to the requirements of IAS 17. A lease is classified as financial or operational also in accordance with IFRS 16. Compared to IAS 17, the new standard changed the principles of classification of a sublease and requires the lessor to disclose additional information.

Impact of IFRS 16 on the financial statements

The Group had completed the work related to implementation of the new standard IFRS 16 in the fourth quarter of 2018. The project to implement IFRS 16 (project), was executed in three stages:

- stage I – analysis of all executed agreements for the purchase of services, regardless of their classification, the goal of which was to identify agreements based on which the Group companies use assets belonging to suppliers; in addition, this stage comprised the analysis of perpetual usufruct rights to land as well as land easements and transmission easements,

- stage II – the evaluation of each agreement identified in stage I in terms of its meeting the criteria to be recognised as a lease pursuant to IFRS 16,

- stage III - implementation of IFRS 16 based on the developed concept.

All agreements involving a finance lease, operating lease, rentals, leases, perpetual usufruct rights to land or transmission easements and land easements were analysed. Also analysed were transactions involving purchased services (external service costs under operating activities) in terms of any occurrence of use of the identified assets.

Under this project the Group carried out appropriate changes in accounting policy and operating procedures. Methods were developed and implemented for the proper identification of lease agreements and for gathering data needed in order to properly account for such transactions.
The Group decided to apply the standard from 1 January 2019. In accordance with the transition rules described in IFRS 16.C5 (b), the new principles were adopted retrospectively, and the accumulated impact of initial application of the new standard was recognised in equity as at 1 January 2019. Consequently, comparable data for financial year 2018 were not restated (the modified retrospective approach).

Following are the individual adjustments arising from the implementation of IFRS 16.

Description of adjustments

a) Recognition of lease liabilities

Following the adoption of IFRS 16, the Group recognises lease liabilities related to agreements which were previously classified as "operating leases" in accordance with IAS 17 *Leases*. These liabilities were measured at the present value of lease payments due to be paid as at the date of commencement of the application of IFRS 16. For purposes of implementation of IFRS 16 and disclosure with respect to the impact of implementation of IFRS 16, discounting was applied using the Group's incremental borrowing rate as at 1 January 2019.
At their date of initial recognition, lease payments contained in the amount of lease liabilities comprise the following types of payments for the right to use the underlying asset for the life of the lease:

- fixed lease payments less any lease incentives,
- variable lease payments which are dependent on indices or market interest rates,
- amounts expected to be payable under guaranteed residual value of the leased object,
- the strike price of a purchase option, if it is reasonably certain that the option will be exercised, and
- payment due to contractual penalties for terminating the lease, if the lease period reflects the lessee's use of the option of terminating the lease.

For the purposes of calculating the discount rate under IFRS 16, the Group assumed that the discount rate should reflect the cost of financing which would be drawn to purchase an asset with a similar value to right to use of the object of a given lease. To estimate the amount of the discount rate, the Group considered the following contractual parameters: the type and life of an agreement, the currency applied and the potential margin which would have to be paid to financial institutions to obtain financing.

As at 1 January 2019, the discount rates calculated by the Group were within the following ranges (depending on the life of the agreement):

- for PLN-denominated agreements: from 4.25% to 5.86%,
- for EUR-denominated agreements: from 2.10% to 4.63%.
- for USD-denominated agreements: from 5.42% to 6.08%.
- for CAD-denominated agreements: from 4.70% to 5.75%.

The Group used expedients with respect to short-term leases (up to 12 months) as well as in the case of leases in respect of which the underlying asset has a low value (up to PLN 20 000) and for which agreements the Group does not recognise financial liabilities nor any respective right-to-use assets. These types of lease payments are recognised as costs using the straight-line method during the life of the lease.

b) Recognition of right-to-use assets

Right-to-use assets are measured at cost.
The initial cost of a right-to-use asset comprises:

- the amount of the initial measurement of lease liabilities,
- any lease payments paid at the commencement date or earlier, less any lease incentives received,
- initial direct costs incurred by the lessee as a result of entering into a lease agreement,
- estimates of costs which are to be incurred by the lessee as a result of an obligation to disassemble and remove an underlying asset or to carry out renovation.

On the day of initial application, in the case of leases previously classified as operating leases under IAS 17, right-to-use assets were measured by the Group at the amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments related to that lease, recognised in the statement of financial position directly preceding the date of the initial application of IFRS 16.
Following initial recognition, right-to-use assets are depreciated under IAS 16 and are subjected to impairment testing pursuant to IAS 36.

c) Application of estimates

The implementation of IFRS 16 required making certain estimates and calculations which effected the measurement of lease liabilities and of right-to-use assets. These include among others:

- determining which agreements are subject to IFRS 16,
- determining the remaining life of leases for agreements entered into before 1 January 2019 (including for agreements with unspecified lives or which may be prolonged),
- determining the incremental borrowing rates applied for the purpose of discounting future cash flows, and
- determining useful lives and the depreciation rates of right-to-use assets, recognised as at 1 January 2019.

d) Application of practical expedients

In applying IFRS 16 for the first time, the Group used the following practical expedients permitted by the standard:

- application of a single discount rate to a portfolio of leases with similar characteristics,
- assessment as to whether leases are onerous as defined by IAS 37 at the moment of implementation of the standard as an alternative to performing impairment testing of a leased asset,
- the treatment of operating lease agreements for which the remaining lease term is less than 12 months as at 1 January 2019 as short-term leases, and
- the use of hindsight (i.e. knowledge gained after the fact) in determining the lease period if the agreement contains options to prolong or terminate the lease.

e) Impact of implementation of IFRS 16 on the financial statements

As at 31 December 2018, the Group had non-cancellable, off-balance sheet operating lease liabilities in respect of the following agreements: perpetual usufruct of land, lease of land, lease of machines and equipment and other leases. As at 31 December 2018, their notional amount was PLN 1 489 million, of which the amount of PLN 1 478 million concerns lease agreements in accordance with IFRS 16, and excludes short-term leases and the lease of low-value assets.

For the aforementioned agreements, the Group measured the present value of assets used under these agreements and recognised, as at 1 January 2019, right-to-use assets in the amount of PLN 637 million and a corresponding lease liability in the same amount.

In the case of lease agreements previously classified as financial leases, the carrying amounts of right-to-use assets and lease liabilities as at 1 January 2019 are equal to amounts measured pursuant to IAS 17 as at 31 December 2018.

Off-balance sheet lease liabilities in the amount of PLN 1 478 million were written-off.

In the case of agreements in which the Group companies are lessors, application of IFRS 16 did not necessitate the recognition of adjustments as at 1 January 2019.

Summary of the financial impact of the implementation of IFRS 16 (this only concerns lease agreements entered into or amended before 1 January 2019);

Reconciliation of transition from IAS 17 to IFRS 16:

		Amount
Finance lease liabilities	IAS 17	27
Off-balance sheet operating lease liabilities (excluding discount)	IAS 17	1 489
Total - 31 December 2018		**1 516**
(-) Impact of the discount using the incremental borrowing rate as at 1 January 2019 with respect to leases other than perpetual usufruct	IFRS 16	(139)
(-) Impact of the discount of perpetual usufruct right to land as at 1 January 2019	IFRS 16	(702)
(-) Short-term lease agreements recognised as a cost in the period	IFRS 16	(11)
(-) Lease agreements of low value assets recognised as a cost in the period	IFRS 16	-
Lease liabilities – 1 January 2019		**664**

Impact of implementation of IFRS 16 on items of the statement of financial position as at 1 January 2019

	As at 1 January 2019
Right-to-use assets – property, plant and equipment	716
Intangible assets – reclassification of purchased perpetual usufruct right to land and transmission easements	(79)
Lease liability	637

Impact on the consolidated financial statements as at 31 December 2019

Right-to-use assets – by asset	As at 31 December 2018	Impact of IFRS 16	As at 1 January 2019	As at 31 December 2019
Land	5	249	254	250
Perpetual usufruct right to land	74	302	376	373
Buildings	-	8	8	9
Technical equipment and machines	19	59	78	95
Motor vehicles	15	18	33	28
Other fixed assets	2	1	3	4
Total	**115**	**637**	**752**	**759**

	from 1 January 2019 to 31 December 2019
Impact on the statement of comprehensive income:	
- decrease in taxes, charges and services	(78)
- increase in interest costs	32
- increase in depreciation/amortisation	55
Impact on the statement of cash flows:	
- increase in net cash flows - operating activities	73
- decrease in net cash flows - financing activities	(73)

In 2019, the Group additionally allocated a lease interest cost in the amount of PLN 12 million to the initial value of fixed assets under construction as capitalised costs of external financing.

The costs of short-term lease agreements and of low-value assets lease agreements entered into or modified in 2019 are immaterial.

Agreements for 2019 were measured using the following discount rates:

- for PLN-denominated agreements: from 3.93% to 5.86%,
- for EUR-denominated agreements: from 1.93% to 4.63%,
- for USD-denominated agreements: from 4.89% to 6.08%,
- for CAD-denominated agreements: from 4.11% to 5.75%,

Impact on financial ratios

Given the fact that lease agreements are recognised in the consolidated statement of financial position, the implementation of IFRS 16 by the Group affected its balance sheet ratios, including the debt to equity ratio. Moreover, as a result of the implementation of IFRS 16 there were changes in profit ratios (such as operating profit, EBITDA), as well as in cash flow from operating activities. The Parent Entity has analysed the impact of all of these changes in terms of compliance with covenants contained in credit agreements to which it is a party, and did not identify any risk of breaches in these covenants.

Amendments to IAS 23

Amendments to IAS 23, introduced as part of annual improvements to IFRS Standards, 2015-2017 Cycle, clarify that, in the case of general financing, in order to apply a capitalisation rate to expenditures incurred on individual assets, all borrowing costs related to items of external financing representing liabilities of an entity in a given period, other than borrowing drawn specifically in order to obtain an adjusted asset, are recognised. This means that only borrowing costs related to items of borrowing drawn specifically in order to obtain an adjusted asset up to the moment of finalisation of its adjustment are not included when calculating the capitalisation rate. In accordance with transition rules, the change is applied to borrowing costs incurred from the beginning of the annual period in which an entity applies these changes for the first time. Because of this, from 1 January 2019 the Group additionally included in the capitalisation rate calculation the costs of financing related to specific purpose bank loans, insofar as they did not finance the construction of specified adjusted assets and lease finance costs in 2019. The application of the amendments to IAS 23 did not have a significant impact on the financial statements of the Group.

Note 1.4 Published standards and interpretations, which are not yet in force and were not applied earlier by the Group

The Group did not decide to apply early published standards, interpretations or amendments to existing standards before their entry into force in these financial statements.

Other standards and interpretations published but not yet in force:

- Amendments to IFRS 10 and IAS 28 with respect to the sale or contribution of assets between an investor and its associate or joint venture,
- IFRS 17 Insurance contracts,
- Revision of IFRS Conceptual Framework,
- Amendments to IFRS 3 on the definition of a business,
- Amendments to IAS 1 and IAS 8 on the definition of "material",
- Amendments to IFRS 9, IAS 39 and IFRS 7 in connection with interest rate benchmark reform,
- Amendments to IAS 1 on classification of liabilities as current or non-current.

The aforementioned standards, with the exception of the Revision of the IFRS Conceptual Framework, amendments to IAS 1 and IAS 8 on the definition of "material" and amendments to IFRS 9, IAS 39 and IFRS 7 in connection with interest rate benchmark reform, are awaiting adoption by the European Union. The Company aims to apply all of the amendments at their effective dates. Except for IFRS 17, which will not have an impact on the Group's financial statements, in the Group's opinion as at 31 December 2019, these standards will be applicable to its activities in the scope of future economic operations, transactions or other events, towards which these amendments to standards are applicable.

Part 2 – Information on segments and revenues

Note 2.1 Operating segments

The operating segments identified in the KGHM Polska Miedź S.A. Group reflect the structure of the Group, the manner in which the Group and its individual entities are managed and the regular reporting to the Parent Entity's Management Board.

Based on the aggregation of operating segments and taking into account the criteria stipulated in IFRS 8, the following reporting segments are currently identified within the KGHM Polska Miedź S.A. Group:

Reporting segment	Operating segments aggregated in a given reporting segment	Indications of similarity of economic characteristics of segments, taken into account in aggregations
KGHM Polska Miedź S.A.	KGHM Polska Miedź S.A.	Not applicable (it is a single operating and reporting segment)
KGHM INTERNATIONAL LTD.	Companies of the KGHM INTERNATIONAL LTD. Group, where the following mines, deposits or mining areas constitute the operating segments: Sudbury Basin, Robinson, Carlota, Franke and Ajax.	Operating segments within the KGHM INTERNATIONAL LTD. Group are located in North and South America. The Management Board analyses the results of the following operating segments: Sudbury Basin, Robinson, Carlota, Franke, Ajax and others. In addition, the Management Board receives and analyses reports on the whole KGHM INTERNATIONAL LTD. Group. Operating segments are engaged in the exploration and mining of copper, molybdenum, silver, gold and nickel deposits. The operating segments were aggregated based on the similarity of long term margins achieved by individual segments, and the similarity of products, processes and production methods.
Sierra Gorda S.C.M.	Sierra Gorda S.C.M. (joint venture)	Not applicable (it is a single operating and reporting segment)
Other segments	This item includes other Group companies (every individual company is a separate operating segment).	Aggregation was carried out as a result of not meeting the criteria necessitating the identification of a separate additional reporting segment.

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. and 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.

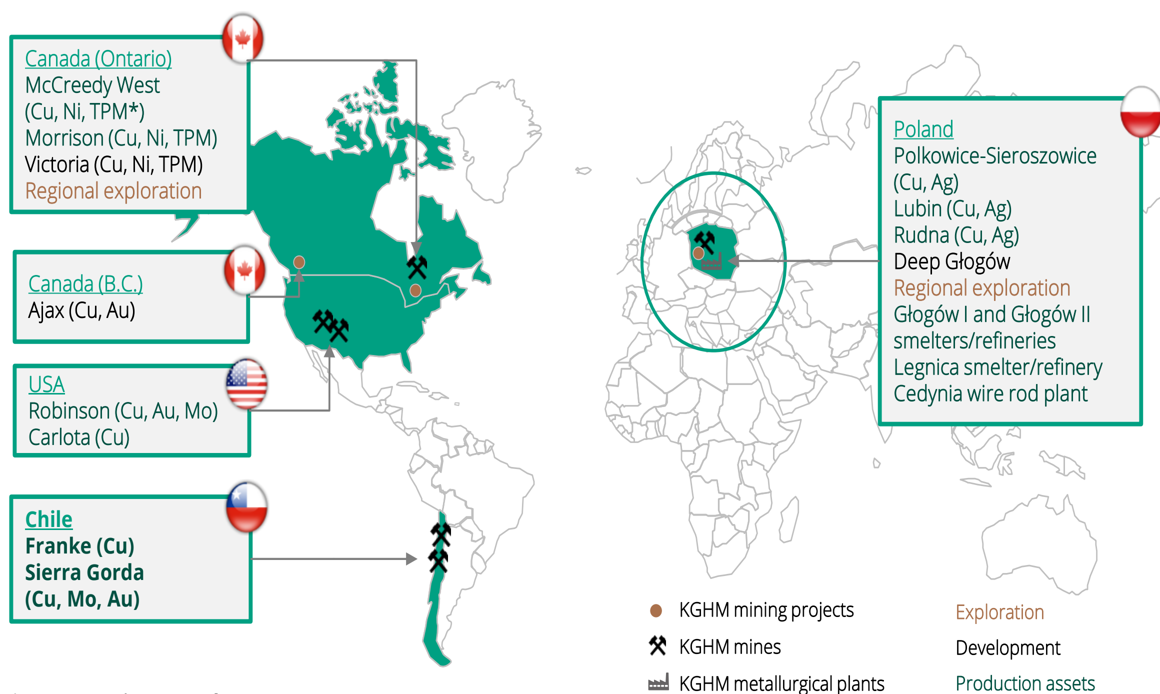
Each of the segments KGHM Polska Miedź S.A., KGHM INTERNATIONAL LTD. and Sierra Gorda S.C.M. have their own Management Board, which reports the results of their business activities to the Management Board of the Parent Entity.

The segment KGHM Polska Miedź S.A. is composed only of the Parent Entity, and the segment Sierra Gorda S.C.M. is composed only of the joint venture Sierra Gorda. Other companies of the KGHM Polska Miedź S.A. Group are presented below by segment: KGHM INTERNATIONAL LTD. and Other segments.

The SEGMENT KGHM INTERNATIONAL LTD.	
Location	**Company**
The United States of America	Carlota Copper Company, Carlota Holdings Company, DMC Mining Services Corporation, FNX Mining Company USA Inc., Robinson Holdings (USA) Ltd., Robinson Nevada Mining Company, Wendover Bulk Transhipment Company
Chile	Aguas de la Sierra Limitada, Minera Carrizalillo Limitada, KGHM Chile SpA, Quadra FNX Holdings Chile Limitada, Sociedad Contractual Minera Franke, DMC Mining Services Chile SpA
Canada	KGHM INTERNATIONAL LTD., 0899196 B.C. Ltd., Centenario Holdings Ltd., DMC Mining Services Ltd., FNX Mining Company Inc., Franke Holdings Ltd., KGHM AJAX MINING INC., KGHMI Holdings Ltd., Quadra FNX Holdings Partnership, Sugarloaf Ranches Ltd.
Mexico	Raise Boring Mining Services S.A. de C.V.
Colombia	DMC Mining Services Colombia SAS
The United Kingdom	DMC Mining Services (UK) Ltd.
Luxembourg	Quadra FNX FFI S.à r.l.

OTHER SEGMENTS	
Type of activity	**Company**
Support of the core business	BIPROMET S.A., CBJ sp. z o.o., Energetyka sp. z o.o., INOVA Spółka z o.o., KGHM CUPRUM sp. z o.o. – CBR, KGHM ZANAM S.A., KGHM Metraco S.A., PeBeKa S.A., POL-MIEDŹ TRANS Sp. z o.o., WPEC w Legnicy S.A.
Sanatorium-healing and hotel services	Interferie Medical SPA Sp. z o.o., INTERFERIE S.A., Uzdrowiska Kłodzkie S.A. - Grupa PGU, Uzdrowisko Cieplice Sp. z o.o. - Grupa PGU, Uzdrowisko Połczyn Grupa PGU S.A., Uzdrowisko Świeradów - Czerniawa Sp. z o.o. – Grupa PGU
Investment funds, financing activities	Fundusz Hotele 01 Sp. z o.o., Fundusz Hotele 01 Sp. z o.o. S.K.A., KGHM TFI S.A., KGHM VI FIZAN, KGHM VII FIZAN, Polska Grupa Uzdrowisk Sp. z o.o.
Other activities	CENTROZŁOM WROCŁAW S.A., CUPRUM Development sp. z o.o., CUPRUM Nieruchomości sp. z o.o., KGHM (SHANGHAI) COPPER TRADING CO., LTD., KGHM Kupfer AG, MERCUS Logistyka sp. z o.o., MIEDZIOWE CENTRUM ZDROWIA S.A., NITROERG S.A., NITROERG SERWIS Sp. z o.o., PeBeKa Canada Inc., PHU "Lubinpex" Sp. z o.o., PMT Linie Kolejowe Sp. z o.o., Staropolanka Sp. z o.o., WMN "ŁABĘDY" S.A., Zagłębie Lubin S.A., OOO ZANAM VOSTOK

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



*** TPM – precious metals**

The Parent Entity and the KGHM INTERNATIONAL LTD. Group (a subgroup) have a fundamental impact on the assets and the generation of revenues in the KGHM Polska Miedź S.A. Group. The activities of KGHM Polska Miedź S.A. are concentrated on the mining industry in Poland, while those of the KGHM INTERNATIONAL LTD. Group are concentrated on the mining industry in the countries of North and South America. The profile of activities of the majority of the remaining subsidiaries of the KGHM Polska Miedź S.A. Group differs from the main profile of the Parent Entity's activities.

The Parent Entity's Management Board monitors the operating results of individual segments in order to make decisions on allocating the Group's resources and to assess the financial results achieved.

Financial data prepared for management reporting purposes is based on the same accounting policies as those applied when preparing the consolidated financial statements of the Group, while the financial data of individual reporting segments constitutes the amounts presented in appropriate financial statements prior to consolidation adjustments at the level of the KGHM Polska Miedź S.A. Group, i.e.:

- The segment KGHM Polska Miedź S.A. – comprises data from the separate financial statements of the Parent Entity prepared in accordance with IFRSs. In the separate financial statements, investments in subsidiaries (including the investment in KGHM INTERNATIONAL LTD.) are measured at cost.
- The segment KGHM INTERNATIONAL LTD. – comprises consolidated data of the KGHM INTERNATIONAL LTD. Group prepared in accordance with IFRSs. The involvement in Sierra Gorda S.C.M. is accounted for using the equity method,
- The segment Sierra Gorda S.C.M – comprises the 55% share of assets, liabilities, revenues and costs of this venture presented in the separate financial statements of Sierra Gorda S.C.M. prepared in accordance with IFRSs.
- Other segments – comprises aggregated data of individual subsidiaries after excluding transactions and balances between them.

The Management Board of the Parent Entity assesses a segment's performance based on adjusted EBITDA and the profit or loss for the period.

The Group defines adjusted EBITDA as profit/loss for the period pursuant to IFRS, excluding income tax (current and deferred), finance income and (costs), other operating income and costs, the share of losses of joint ventures accounted for using the equity method, impairment losses on interest in a joint venture, depreciation/amortisation and impairment losses on property, plant and equipment included in the cost of sales, selling costs and administrative expenses. Since adjusted EBITDA is not a measure defined by IFRS, it is not a standardised measure and therefore its method of calculation may vary between entities, and consequently the presentation and calculation of adjusted EBITDA applied by the Group may not be comparable to that applied by other market entities.

Revenues from transactions with external entities and inter-segment transactions are carried out at arm's length. Eliminations of mutual settlements, revenues and costs between segments were presented in the item "Consolidation adjustments".

Unallocated assets and liabilities concern companies which have not been allocated to any segment. Assets which have not been allocated to the segments comprise cash, trade receivables and deferred tax assets. Liabilities which have not been allocated to the segments comprise trade liabilities and current tax liabilities.

Note 2.2 Financial results of reporting segments

		KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Sierra Gorda S.C.M.*	Other segments	Reconciliation items to consolidated data: Elimination of data of the segment Sierra Gorda S.C.M	Reconciliation items to consolidated data: Consolidation adjustments****	Consolidated financial statements
	from 1 January 2019 to 31 December 2019							
Note 2.3	**Revenues from contracts with customers, of which:**	**17 683**	**3 084**	**2 002**	**7 448**	(2 002)	(5 492)	22 723
	- inter-segment	315	19	-	5 147	-	(5 481)	-
	- external	17 368	3 065	2 002	2 301	(2 002)	(11)	22 723
	Segment result – profit/(loss) for the period	**1 264**	**(555)**	**(556)**	**(275)**	**556**	**987**	**1 421**
	Additional information on significant revenue/cost items of the segment							
	Depreciation/amortisation recognised in profit or loss	(1 220)	(409)	(522)	(242)	522	(49)	(1 920)
	(Recognition)/reversal of impairment losses on non-current assets, including:	(357)	169	-	(202)	-	339	(51)
	(recognition)/reversal of impairment losses on investments in subsidiaries	(460)	-	-	-	-	460	-
	reversal of allowances for impairment of loans granted	113	-	-	-	-	(113)	-
	Share of losses of joint ventures accounted for using the equity method	-	(433)	-	-	-	(5)	(438)
	As at 31 December 2019							
	Assets, including:	**35 990**	**10 689**	**9 156**	**5 386**	**(9 156)**	**(12 656)**	**39 409**
	Segment assets	35 990	10 689	9 156	5 386	(9 156)	(12 665)	39 400
	Joint ventures accounted for using the equity method	-	-	-	-	-	4	4
	Assets unallocated to segments	-	-	-	-	-	5	5
	Liabilities, including:	**16 100**	**16 849**	**12 801**	**2 552**	**(12 801)**	**(16 294)**	**19 207**
	Segment liabilities	16 100	16 849	12 801	2 552	(12 801)	(16 314)	19 187
	Liabilities unallocated to segments	-	-	-	-	-	20	20
	Other information – from 1 January 2019 to 31 December 2019							
	Cash expenditures on property, plant and equipment and intangible assets	2 366	654	629	289	(629)	(77)	3 232
	Production and cost data – from 1 January 2019 to 31 December 2019							
	Payable copper (kt)	565.6	76.5	59.5				
	Molybdenum (million pounds)	-	0.8	11.2				
	Silver (t)	1 400.2	2.4	14.6				
	TPM (koz t)	103.7	85.2	31.2				
	C1 cash cost of producing copper in concentrate (USD/lb PLN/lb)**	1.74 6.69	1.74 6.69	1.41 5.42				
	Segment result - adjusted EBITDA	**3 619**	**709**	**660**	**241**	**-**	**-**	**5 229**
	EBITDA margin* **	**20%**	**23%**	**33%**	**3%**	**-**	**-**	**21%**

** 55% of the Group's share in Sierra Gorda S.C.M.'s financial and production data.*

*** Unit cash cost of payable copper production, 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.*

C1 cost in PLN/lb was calculated using the average exchange rate by the NBP (arithmetical average of daily quotations per the NBP's tables).

**** Adjusted EBITDA to revenues from sales. For the purposes of calculating the Group's EBITDA margin (21%), the consolidated revenues from sales were increased by revenues from sales of the segment Sierra Gorda S.C.M.*

*[5 229 / (22 723 + 2 002) * 100]*

***** Adjustments arise from consolidation eliminations and financial data of companies unallocated to any segment.*

Financial results of reporting segments for the comparable period

		KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Sierra Gorda S.C.M.*	Other segments	Reconciliation items to consolidated data: Elimination of data of the segment Sierra Gorda S.C.M	Reconciliation items to consolidated data: Consolidation adjustments****	Consolidated financial statements
		from 1 January 2018 to 31 December 2018						
Note 2.3	**Revenues from contracts with customers, of which:**	**15 757**	**2 856**	**1 948**	**6 990**	**(1 948)**	**(5 077)**	**20 526**
	- inter-segment	293	16	-	4 788	-	(5 097)	-
	- external	15 464	2 840	1 948	2 202	(1 948)	20	20 526
	Segment result - profit/(loss) for the period	**2 025**	**(308)**	**(767)**	**(41)**	**767**	**(18)**	**1 658**
	Additional information on significant revenue/cost items of the segment							
	Depreciation/amortisation recognised in profit or loss	(1 119)	(461)	(546)	(225)	546	9	(1 796)
	(Recognition)/reversal of impairment losses on non-current assets, including:	623	684	-	(13)	-	(630)	664
	(Recognition)/reversal of impairment losses on investments in subsidiaries	355	-	-	(4)	-	(351)	-
	Reversal of allowances for impairment of loans granted	279	733	-	-	-	(279)	733
	Share of losses of joint ventures accounted for using the equity method	-	(658)	-	-	-	(4)	(662)
		As at 31 December 2018						
	Assets, including:	**34 250**	**9 587**	**8 851**	**5 848**	**(8 851)**	**(12 448)**	**37 237**
	Segment assets	34 250	9 587	8 851	5 848	(8 851)	(12 466)	37 219
	Joint ventures accounted for using the equity method	-	-	-	-	-	4	4
	Assets unallocated to segments	-	-	-	-	-	14	14
	Liabilities, including:	**15 205**	**15 178**	**12 340**	**2 606**	**(12 340)**	**(14 977)**	**18 012**
	Segment liabilities	15 205	15 178	12 340	2 606	(12 340)	(15 030)	17 959
	Liabilities unallocated to segments	-	-	-	-	-	53	53
	Other information	**from 1 January 2018 to 31 December 2018**						
	Cash expenditures on property, plant and equipment and intangible assets	1 907	620	572	246	(572)	102	2 875
	Production and cost data	**from 1 January 2018 to 31 December 2018**						
	Payable copper (kt)	501.8	78.8	53.3				
	Molybdenum (million pounds)	-	0.6	14.7				
	Silver (t)	1 188.8	1.6	14.5				
	TPM (koz t)	83.2	67.6	23.2				
	C1 cash cost of producing copper in concentrate (USD/lb PLN/lb)**	1.85 6.69	1.92 6.92	1.31 4.75				
	Segment result - adjusted EBITDA	**3 416**	**722**	**633**	**201**	**-**	**-**	**4 972**
	EBITDA margin* **	**22%**	**25%**	**32%**	**3%**	**-**	**-**	**22%**

** 55% of the Group's share in Sierra Gorda S.C.M.'s financial and production data.*
*** Unit cash cost of payable copper production, 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. C1 cost in PLN/lb was calculated using the average exchange rate by the NBP (arithmetical average of daily quotations per the NBP's tables).*
**** Adjusted EBITDA to revenues from sales. For the purposes of calculating the Group's EBITDA margin (22%), the consolidated revenues from sales were increased by revenues from sales of the segment Sierra Gorda S.C.M. . [4 972 / (20 526 + 1 948) * 100]*
***** Adjustments arise from consolidation eliminations and financial data of companies unallocated to any segment.*

Reconciliation of adjusted EBITDA

	from 1 January 2019 to 31 December 2019						
	KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Other segments	Consolidation adjustments*	Consolidated financial statements	Sierra Gorda S.C.M. **	Adjusted EBITDA (segments, total)
	1	2	3	4	5 (1+2+3+4)	6	7 (5+6-4)
Profit/(Loss) for the period	**1 264**	**(555)**	**(275)**	**987**	**1 421**	**(556)**	
[+] Profit or loss on involvement in joint ventures	**-**	**14**	**-**	**(5)**	**9**	**-**	
[-] Current and deferred income tax	(663)	(102)	10	54	(701)	156	
[-] Depreciation/amortisation recognised in profit or loss	(1 220)	(409)	(242)	(49)	(1 920)	(522)	
[-] Finance income and (costs)	(504)	(961)	(18)	955	(528)	(841)	
[-] Other operating income and (costs)	39	175	(64)	36	186	(9)	
[-] (Recognition)/reversal of impairment losses on non-current assets recognised in cost of sales, selling costs and administrative expenses	(7)	19	(202)	(8)	(198)	-	
Segment result - adjusted EBITDA	**3 619**	**709**	**241**	**4**	**4 573**	**660**	**5 229**

** Adjustments arise from consolidation eliminations and financial data of companies unallocated to any segment.*
***55% share of the Group in the financial data of Sierra Gorda S.C.M.*

Reconciliation of adjusted EBITDA

	from 1 January 2018 to 31 December 2018						
	KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Other segments	Consolidation adjustments*	Consolidated financial statements	Sierra Gorda S.C.M. **	Adjusted EBITDA (segments, total)
	1	2	3	4	5 (1+2+3+4)	6	7 (5+6-4)
Profit/(Loss) for the period	**2 025**	**(308)**	**(41)**	**(18)**	**1 658**	**(767)**	
[+] Profit or loss on involvement in joint ventures	**-**	**332**	**-**	**(4)**	**328**	**-**	
[-] Current and deferred income tax	(647)	(28)	(24)	(109)	(808)	(60)	
[-] Depreciation/amortisation recognised in profit or loss	(1 119)	(461)	(225)	9	(1 796)	(546)	
[-] Finance income and (costs)	(774)	(854)	(13)	880	(761)	(797)	
[-] Other operating income and (costs)	1 149	(19)	29	(851)	308	3	
[-] (Recognition)/reversal of impairment losses on non-current assets recognised in cost of sales, selling costs and administrative expenses	-	-	(9)	-	(9)	-	
Segment result - adjusted EBITDA	**3 416**	**722**	**201**	**57**	**4 396**	**633**	**4 972**

** Adjustments arise from consolidation eliminations and financial data of companies unallocated to any segment.*
***55% share of the Group in the financial data of Sierra Gorda S.C.M.*

A detailed description of the results of individual segments is presented in the following sections of the Management Board's report on the activities of KGHM Polska Miedź S.A. and of the KGHM Polska Miedź S.A. Group in 2019:

- the segment KGHM Polska Miedź S.A. – in section 7,
- the segment KGHM INTERNATIONAL LTD. – in section 8,
- the segment Sierra Gorda S.C.M. – in section 9.

Note 2.3 Revenues from contracts with customers of the Group – breakdown by products

Accounting policies

The Group generates its revenues mainly from the sale of: copper, silver and gold. Other, smaller streams of revenues arise from the sale of services and other products (including electricity), merchandise and materials (including steel and petroleum and its derivatives).

In accordance with IFRS 15, from 1 January 2018 the Group recognises revenue from contracts with customers when the Group satisfies a performance obligation by transferring a promised good or providing a service to a customer, which is when the customer obtains control of that asset, i.e. the ability to direct the use of, and obtain substantially all of the remaining benefits from, the asset, as well as the ability to prevent other entities from directing the use of, and obtaining the benefits from, the asset.

The Group recognises as a performance obligation every contractual promise to transfer to a customer a good or provide a service that is distinct, or a series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer. For each performance obligation, the Group determines (based on contractual terms), whether the obligation will be performed over time or at a specified moment.

The Group recognises revenues from the sale of products, merchandise and materials in profit or loss once, when the performance obligation is satisfied (in particular in accordance with the applied INCOTERMS principles). In the majority of contracts, control is transferred to the customer after delivery of the goods, which is also understood as delivery of the goods to the carrier or to a designated facility (DAP, FCA and EX WORKS bases). In other contracts, control is transferred to the customer at the moment it is handed over to the carrier and loaded aboard a ship (CFR, CIF, CPT and CIP bases). In these contracts, the Group is also obliged to organise a shipping service.

The Group uses various payment dates in trade contracts, including prepayments of up to several days before delivery and deferred payments of up to 120 days, although the deferred payments do not concern silver. The payment dates depend on the evaluation of the recipient's credit risk and the possibility of securing receivables. The payment dates are not contingent on the moment of satisfying a performance obligation. The Group recognises received prepayments as contractual payables, while in the case of deferred payments the Company recognises due consideration as contractual assets and transfers them to receivables at the moment the right to consideration becomes unconditional. The date on which the consideration comes due depends on the payment conditions specified in individual contracts, or comes before the realisation of the delivery (prepayment) or is set as a specified number of days after the date of sale indicated in a given invoice.

Revenues from the sale of services are recognised in profit or loss over time if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group's performance to the extent that the entity performs its obligations, or
- the Group satisfies a performance obligation and creates or enhances an asset (for example, work in progress) that the customer controls as the asset is created or enhanced, or
- the Group's performance creates an asset without an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

The Group recognises revenues over time due to realised mine construction services and other geological work. The Group meets liabilities in time, because the client simultaneously receives and makes use of economic benefits arising from the performed service as it is performed, or because components are made which do not have an alternative application for the Group and simultaneously the Group has an enforceable right to payment. To measure the degree of advancement of obligation performance, the Group applies a method based on expenses incurred while meeting the performance obligation on the basis of incurred costs and for other contracts, a method based on results, where the unit cost set in advance is applied to measure the unit of production (e.g. meters of drilled tunneling).

Revenues arising from ordinary operating activities of the Group, i.e. revenues from sales of products, merchandise and materials, are recognised in the statement of profit or loss as revenues from contracts with customers.

Revenues from contracts with customers are recognised in the amount of the transaction price, consisting of the amount of consideration to which – in accordance with the Group's expectations – it will be given in return for the transfer of promised goods or services to the customer, excluding consideration collected on behalf of third parties.

The transaction price also reflects the effects of the time value of money if a contract with a customer contains a significant financing element, which is determined based on the contractual payment terms, regardless of whether the promise of financing is explicitly stated in the contract. In determining whether a financing component is significant for a given agreement, all of the facts and circumstances are taken into consideration, including the eventual difference between the promised consideration and the cash selling price of the promised goods and services, as well as the total impact of the following two factors: (i) the estimated period from the moment an entity transfers the promised goods or services to a customer to the moment the customer pays for these goods or services, and (ii) prevailing interest rates on a given market. In the realised contracts of sales to customers in 2019 and 2018, the Group identified a significant financing component in the contract with Franco Nevada (contract described below in Important estimates and assumptions).

The Group presents the results of financing (interest costs) in revenues from contracts with customers in the statement of comprehensive income. In the Franco Nevada contract, there is also an element of variable consideration. In such a situation, the Group recognises revenues by estimating the amount of consideration, to which it will be entitled to in exchange for transferring the good to the customer and includes a part or all of the amount of variable consideration in the transaction price

only to such an extent to which it is highly probable that there will not be a reversal of a significant part of previously recognised accumulated revenues at the moment when uncertainty as to the amount of consideration ceases to be.

In the case of copper and silver products sales transactions for which the price is set after the date of recognition of a given sale, at the moment of initial recognition of a transaction an adjustment of revenues from sales is made, arising from the difference between the forward price of a metal expressed in USD from the date of recognition of a sale in the period corresponding to the period of settlement of the transaction, and the price from provisional invoice. This adjustment brings the amount of the transaction to the expected amount as a transaction price at the moment of initial recognition. This only concerns cases where the change in transaction price arises from a change in the metal's price. For these types of variable revenues, the limitation of IFRS 15 on recognising variable consideration only to the amount in respect of which it is highly probable that a reversal will not be recognised, is not applicable. Changes to the booked amount after the moment of recognition do not impact the revenues from sales but are fair value gains/losses on measurement of receivables pursuant to the policy presented in Note 10.2.

Sales revenue is adjusted for the gain or loss on the settlement of cash flow hedging derivatives, in accordance with the general principle that the portion of gain or loss on a derivative hedging instrument that is determined to be an effective hedge is recognised in the same position of profit or loss in which the gain or loss on the hedged item is recognised at the moment when the hedged item affects profit or loss.

Important estimates and assumptions

The contract with Franco Nevada

The Group realises the streaming arrangement contract, which is a source of financing available on the market for entities operating in the mining sector.

The contract (signed in 2008 between Quadra FNX Mining Ltd. and Franco Nevada) concerns the sale of half of the production of gold, platinum and palladium contained in the ore extracted during the lives of the following mines: Morrison, McCreedy West and Podolsky (CGU Sudbury). Pursuant to the contract Quadra FNX Mining Ltd. received a prepayment in the amount of CAD 400 million.
Moreover, pursuant to the contract, the selling price for one ounce of gold equivalent is the lower of these two amounts: (a) USD 400, increased by an indexation rate in each year after 2011, or (b) the market price of gold. The received prepayment covers the difference between the market price of ore sold and its fixed selling price. The Group recognised a liability due to the contract in the amount of prepayment due to the obligation put on the entity to meet the obligation to transfer or be ready to transfer goods or services in the future. The entity will cease to recognise this contractual obligation (and will recognise revenues) at the moment it transfers these goods or services and therefore meet its performance obligation.

Variable consideration

In the contract with Franco Nevada the total transaction price is variable and depends on the amount of the raw material sold, and this in turn depends on ore extraction in the future throughout the life of the mine (including for example on the size of the deposit). Therefore, if in subsequent reporting periods the Group enacts any changes to the planned amount of ore to be extracted, and consequently to the amount of raw material sold, the transaction price will also be updated.

The Group recognises amounts related to satisfied performance obligations as revenue or as a decrease of revenue in the period in which the transaction price was changed.

Significant financing component

In the context of the contract with Franco Nevada, taking into consideration the expected period from the moment when prepayment is received to the moment when the Group transfers the promised good (the life of the mine, or several decades) and the nature of this contract, it was determined that the extension of payments over time provides benefits to the Group due to the financing of deliveries of raw material to the buyer (Franco Nevada), and as a result the contract includes a significant financing element.

The Group presents the effects of financing (interest costs) separately from revenue from contracts with customers in the statement of comprehensive income. Interest costs are recognised solely to the extent to which the liabilities related to the contract with Franco Nevada were recognised.

	from 1 January 2019 to 31 December 2019						
					Reconciliation items to consolidated data		
	KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Sierra Gorda S.C.M.*	Other segments	Elimination of data of the segment Sierra Gorda S.C.M	Consolidation adjustments	Consolidated data
Copper	13 474	1 565	1 311	5	(1 311)	(18)	**15 026**
Silver	2 789	10	30	-	(30)	-	**2 799**
Gold	543	249	176	-	(176)	-	**792**
Services	110	998	-	2 185	-	(1 558)	**1 735**
Energy	-	-	-	170	-	(75)	**95**
Salt	37	-	-	62	-	(37)	**62**
Blasting materials and explosives	-	-	-	215	-	(80)	**135**
Mining machinery, transport vehicles and other types of machinery and equipment	-	-	-	181	-	(144)	**37**
Fuel additives	-	-	-	94	-	-	**94**
Lead	247	-	-	3	-	(3)	**247**
Products from other non-ferrous metals	-	-	-	79	-	(3)	**76**
Steel	-	-	-	463	-	(39)	**424**
Petroleum and its derivatives	-	-	-	289	-	(241)	**48**
Merchandise and materials	236	-	-	3 260	-	(3 025)	**471**
Other products	247	262	485	442	(485)	(269)	**682**
TOTAL	**17 683**	**3 084**	**2 002**	**7 448**	**(2 002)**	**(5 492)**	**22 723**

* 55% of the Group's share in revenues of Sierra Gorda S.C.M.

	from 1 January 2018 to 31 December 2018						
					Reconciliation items to consolidated data		
	KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Sierra Gorda S.C.M.*	Other segments	Elimination of data of the segment Sierra Gorda S.C.M	Consolidation adjustments	Consolidated data
Copper	12 342	1 666	1 065	6	(1 065)	(21)	**13 993**
Silver	2 242	10	24	-	(24)	-	**2 252**
Gold	381	206	102	-	(102)	-	**587**
Services	88	771	-	2 117	-	(1 551)	**1 425**
Energy	-	-	-	177	-	(85)	**92**
Salt	40	-	-	53	-	(40)	**53**
Blasting materials and explosives	-	-	-	226	-	(80)	**146**
Mining machinery, transport vehicles and other types of machinery and equipment	-	-	-	191	-	(164)	**27**
Fuel additives	-	-	-	85	-	-	**85**
Lead	262	-	-	2	-	(2)	**262**
Products from other non-ferrous metals	-	-	-	87	-	-	**87**
Steel	-	-	-	456	-	(38)	**418**
Petroleum and its derivatives	-	-	-	276	-	(233)	**43**
Merchandise and materials	185	-	-	2 910	-	(2 657)	**438**
Other products	217	203	757	404	(757)	(206)	**618**
TOTAL	**15 757**	**2 856**	**1 948**	**6 990**	**(1 948)**	**(5 077)**	**20 526**

* 55% of the Group's share in revenues of Sierra Gorda S.C.M.

Note 2.4 Revenues from contracts with customers of the Group – breakdown by category

	from 1 January 2019 to 31 December 2019						
					Reconciliation items to consolidated data		
	KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Sierra Gorda S.C.M.*	Other segments	Elimination of data of the segment Sierra Gorda S.C.M	Consolidation adjustments	Consolidated data
Total revenues from contracts with customers	**17 683**	**3 084**	**2 002**	**7 448**	**(2 002)**	**(5 492)**	**22 723**
Revenues from sales contracts, for which the sales price is set after the date of recognition of the sales (M+ principle), of which:	14 474	2 085	2 009	-	(2 009)	(75)	**16 484**
settled	13 745	1 355	1 053	-	(1 053)	(75)	**15 025**
unsettled	729	730	956	-	(956)	-	**1 459**
Revenues from realisation of long-term contracts	-	979	-	194	-	(173)	**1 000**
Revenues from other sales contracts	3 209	20	(7)	7 254	7	(5 244)	**5 239**
Total revenues from contracts with customers, of which:	**17 683**	**3 084**	**2 002**	**7 448**	**(2 002)**	**(5 492)**	**22 723**
in factoring	6 985	74	-	-	-	-	**7 059**
not in factoring	10 698	3 010	2 002	7 448	(2 002)	(5 492)	**15 664**

* 55% of the Group's share in revenues of Sierra Gorda S.C.M.

	from 1 January 2018 to 31 December 2018						
					Reconciliation items to consolidated data		
	KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Sierra Gorda S.C.M.*	Other segments	Elimination of data of the segment Sierra Gorda S.C.M	Consolidation adjustments	Consolidated data
Total revenues from contracts with customers	**15 757**	**2 856**	**1 948**	**6 990**	**(1 948)**	**(5 077)**	**20 526**
Revenues from sales contracts, for which the sales price is set after the date of recognition of the sales (M+ principle), of which:	12 220	2 082	2 051	-	(2 051)	(79)	**14 223**
settled	11 389	1 490	1 064	-	(1 064)	(79)	**12 800**
unsettled	831	592	987	-	(987)	-	**1 423**
Revenues from realisation of long-term contracts	-	756	-	168	-	(162)	**762**
Revenues from other sales contracts	3 537	18	(103)	6 822	103	(4 836)	**5 541**

Total revenues from contracts with customers, of which:	**15 757**	**2 856**	**1 948**	**6 990**	**(1 948)**	**(5 077)**	**20 526**
in factoring	5 162	173	-	-	-	-	**5 335**
not in factoring	10 595	2 683	1 948	6 990	(1 948)	(5 077)	**15 191**

* 55% of the Group's share in revenues of Sierra Gorda S.C.M.

Note 2.5 Revenues from contracts with customers of the Group – geographical breakdown reflecting the location of end clients

	from 1 January 2019 to 31 December 2019							from 1 January 2018 to 31 December 2018
					Reconciliation items to consolidated data			
	KGHM Polska Miedź S.A.	KGHM INTERNATIONAL LTD.	Sierra Gorda S.C.M.*	Other segments	Elimination of data of the segment Sierra Gorda S.C.M	Consolidation adjustments	Consolidated data	KGHM Polska Miedź S.A. Group
Poland	4 427	-	7	7 143	(7)	(5 470)	**6 100**	5 754
Austria	204	-	-	20	-	-	**224**	258
Belgium	49	-	-	7	-	-	**56**	-
Bulgaria	11	259	-	10	-	-	**280**	25
Czechia	1 314	-	-	19	-	-	**1 333**	1 347
Denmark	60	-	-	2	-	-	**62**	58
Finland	11	53	-	4	-	-	**68**	57
France	712	-	-	3	-	-	**715**	707
Spain	1	297	-	2	-	-	**300**	709
Netherlands	4	-	135	2	(135)	-	**6**	3
Germany	2 505	(54)	-	63	-	-	**2 514**	2 112
Romania	196	-	-	2	-	-	**198**	114
Slovakia	90	-	-	9	-	-	**99**	117
Slovenia	71	-	-	3	-	-	**74**	72
Sweden	16	-	-	27	-	-	**43**	67
Hungary	648	-	-	4	-	-	**652**	674
The United Kingdom	2 157	695	-	12	-	(20)	**2 844**	2 239
Italy	937	-	-	9	-	-	**946**	599
Australia	164	-	-	1	-	-	**165**	-
Bosnia and Hercegovina	32	-	-	2	-	-	**34**	32
Chile	-	20	163	-	(163)	-	**20**	17
China	2 523	96	829	-	(829)	-	**2 619**	2 460
Japan	1	260	665	-	(665)	-	**261**	156
Canada	1	586	1	-	(1)	-	**587**	736
South Korea	-	118	112	-	(112)	-	**118**	87
Russia	-	-	-	42	-	(1)	**41**	24
The United States of America	420	540	45	6	(45)	(1)	**965**	961
Switzerland	688	-	-	4	-	-	**692**	534
Turkey	247	-	-	3	-	-	**250**	332
Singapore	9	-	-	-	-	-	**9**	158
Philippines	13	163	-	-	-	-	**176**	-
Brazil	-	51	29	-	(29)	-	**51**	4
Taiwan	48	-	-	-	-	-	**48**	-
Thailand	80	-	-	-	-	-	**80**	-
Other countries	44	-	16	49	(16)	-	**93**	113
TOTAL	**17 683**	**3 084**	**2 002**	**7 448**	**(2 002)**	**(5 492)**	**22 723**	20 526

*55% of the Group's share in revenues of Sierra Gorda S.C.M.

Note 2.6 Main customers

In the period from 1 January 2019 to 31 December 2019 and in the comparable period the revenues from no single customer exceeded 10% of the sales revenue of the Group.

Note 2.7 Non-current assets – geographical breakdown

Property, plant and equipment, intangible assets and investment properties

	As at 31 December 2019	As at 31 December 2018
Poland	21 349	19 652
Canada	1 368	1 151
The United States of America	1 418	1 118
Chile	388	335
Other countries	16	-
TOTAL	**24 539**	**22 256**

The following were also recognised in non-current assets: joint ventures accounted for using the equity method, derivatives, other instruments measured at fair value, other financial and non-financial assets and deferred tax assets.

Part 3 – Impairment of assets

Note 3.1. Impairment of assets as at 31 December 2019

ASSESSMENT OF THE RISK OF IMPAIRMENT OF ASSETS IN TERMS OF MARKET CAPITALISATION OF KGHM Polska Miedź S.A.

Due to the periodic maintenance in 2019 of the Parent Entity's market capitalisation below the carrying amount of net assets, in accordance with IAS 36 the Management Board of KGHM Polska Miedź S.A. conducted an analysis to determine which areas of the Company's activities may be impaired. As the result of the conducted analysis, it was determined that impairment testing of non-current assets of the KGHM INTERNATIONAL LTD. Group was necessary (held by Future 1 Sp. z o.o., a subsidiary of KGHM Polska Miedź S.A.). A description of the adopted assumptions and results of the test conducted on non-current assets of the KGHM INTERNATIONAL LTD. Group is presented below. The Management Board of KGHM Polska Miedź S.A. also analysed whether the Polish production assets of KGHM Polska Miedź S.A. were impaired. In the assessment in particular the following were analysed: past financial results of the Parent Entity, forecasts of the copper price adopted for subsequent years of KGHM Polska Miedź S.A.'s operations, USD/PLN exchange rate fluctuations and their impact on the level of results achieved by the Parent Entity, ore deposit availability, production technology, production costs, levels of market interest rates, level of debt and the share price of KGHM Polska Miedź S.A. versus other parameters such as the main stock exchange indices in Poland, and copper price and one-off events that did not have any connection with the fundamentals of the Parent Entity's operations in Poland. As a result of the assessment, it was judged that there was no relation between the fall in the share price of KGHM Polska Miedź S.A. with the Polish activities of the Parent Entity, and as a result, it was decided that there was no risk of impairment of the Polish production assets of KGHM Polska Miedź S.A.

TEST FOR THE IMPAIRMENT OF ASSETS OF THE KGHM INTERNATIONAL LTD. GROUP

In the current period, as a result of the identification of indications of a possible change in the recoverable amounts of the international mining assets of the KGHM INTERNATIONAL LTD. Group, the Parent Entity's Management Board performed impairment testing of these assets and took into account the results of these tests in the calculation of expected credit losses on loans granted to Sierra Gorda S.C.M. (these loans are not part of the net investment in the joint venture Sierra Gorda S.C.M., and an allowance for the impairment of loans measured at amortised cost is set pursuant to principles presented in note 6.2). The key indications to perform impairment testing were:

- a significant change to the market paths of commodities prices forecasts,
- a change in the assessed risk of individual projects and risk free rates which are the basis used to determine discount rates for testing purposes, and
- a change in the technical and economic parameters of the mining assets of the KGHM INTERNATIONAL LTD. Group and Sierra Gorda S.C.M. (a joint venture in the KGHM INTERNATIONAL LTD. Group) as respects production volumes, assumed operating costs and the level of capital expenditures during a mine's life.

The key indications that the recoverable amount may be higher than the carrying amount, and therefore it may be justifiable to reverse previously recognised impairment losses were:

- a change in risk free rates,
- a change in price paths for gold, palladium, silver and nickel,
- the assumed level operating costs of the CGU Sierra Gorda,
- risk evaluation of the CGU Robinson, and
- extension of the Life of Mine of the CGU Robinson.

The key indications that the recoverable amount may be lower than the carrying amount, and therefore it may be necessary to recognise an additional impairment loss, were:

- a change in copper price paths,
- the level of capital expenditures during the life of mine of Sierra Gorda,
- the volume of production of the CGU Sierra Gorda,
- risk evaluation of the CGU Sierra Gorda – Oxide project.

The following CGUs have been selected for the purpose of assessment of the recoverable amount of the assets of the KGHM INTERNATIONAL LTD. Group:

- the Robinson mine,
- the Sudbury Basin, comprising the Morrison mine, the McCreedy mine and the pre-operational Victoria project,

- the Franke mine,
- the Carlota mine,
- involvement in the joint venture Sierra Gorda S.C.M., including loans granted, and
- the Ajax project.

To determine the recoverable amount of assets during the testing, their fair value (decreased by costs to sell) was calculated using the DCF method, i.e. the method of discounted cash flows for the CGU Sudbury and involvement in the joint venture Sierra Gorda S.C.M. and the value in use for the following CGUs: Franke, Robinson and Carlota. As for the recoverable amount of the CGU KGHM Ajax, due to a lack of indications of changes in the recoverable amount, it was set at its carrying amount.

The fair value of the CGU Sudbury and the CGU Sierra Gorda S.C.M. were classified to level 3 of the fair value hierarchy.

Basic macroeconomic assumptions adopted in the impairment testing – metal prices

Price paths were adopted on the basis of long-term forecasts available from financial and analytical institutions. A detailed forecast is being prepared for the period 2020-2024, while for the period 2025-2029 a technical adjustment of prices was applied between the last year of the detailed forecast, and 2030, from which a long-term metal price forecast is used, as follows:

- for copper – 6 614 USD/t (3.00 USD/lb);
- for gold – 1 500 USD/oz;
- for nickel – 8.00 USD/lb.

Assumptions adopted for testing of mineral reserves and resources

In its annual budgeting process, in order to determine its Reserves and Resources, the Group uses block models based on the price paths current at the moment of commencing work. Moreover, it takes into account information obtained, from the moment of preparation of the previous budget to the day the work commenced on the new budget, as a result of supplementary drilling (quality information, e.g. % Cu) and metallurgical drilling (e.g. Cu recovery). Moreover, geotechnical and hydrogeological information is used.

The Victoria project's deposit has copper-nickel ore with a significant percentage of precious metals. The identified mineralisation zone of the Victoria project was classified as "Inferred". Exploration work commenced in 2008. Moreover, in the years 2015 – 2016 exploration work was performed on the deep part of the deposit, under the so-called Deep Drilling Program. In 2019, exploration work took place, aimed at deepening the knowledge on the project's reserves and resources.

The Pampa Lina's mineralisation potential (CGU Sierra Gorda S.C.M.'s deposit) was estimated based on the executed scope of exploration work, in particular on the basis of drilling performed, geophysical analyses and geological hypotheses.

The estimation of Pampa Lina's mineralisation potential is based on the work of specialist external companies and work executed by the company itself. Sierra Gorda S.C.M. has rights to the mineralisation of Pampa Lina.

Other key assumptions used for recoverable amount estimation of assets of CGUs

Assumption	Sierra Gorda	Sudbury	Robinson	Franke	Carlota
Mine life / forecast period	24	18**	9	5	3
Level of copper production during mine life [kt]	4 241	276	435	94	12
Level of nickel production during mine life (kt)	-	249	-	-	-
Level of gold production during mine life (koz t)	1 100	7	324	-	-
Average operating margin during mine life*	40.2%	58%	38%	23%	1%
Capital expenditures to be incurred during mine life [USD million]	2 110	1 619	563	75	4
Applied discount rate after taxation for assets in the operational phase*	8%	7.5%	7.5%	10.5%	9.5%
Applied discount rate after taxation for assets in the pre-operational phase	9%	10.5%	-	-	-
Costs to sell	USD 9 million	2%			
Level of fair value hierarchy to which the measurement at fair value was classified	Level 3				

* In order to maintain data cohesion between individual CGUs, the presented data is post-taxation despite the model of measuring the value in use for the CGU Robinson, CGU Franke and CGU Carlota. The use of pre-taxation data does not significantly impact the recoverable amount.

** In total for all assets of the CGU, i.e. McCreedy, Morrison and Victoria.

Key factors responsible for modification of technical and economic assumptions	
Sierra Gorda	Increase in average operating margin due to a decrease in operating costs for the processing plant and mine.
Sudbury	Increase in the ore resource base of copper and precious metals of the McCreedy mine thanks to drilling carried out in 2019. In addition, the commencement of mining of nickel ore from the McCreedy deposit was deferred from the year 2020 to 2021.
Robinson	The inclusion in the mining plans of the Liberty pit, at which mining has been suspended since 2013. This was thanks to additional drilling, geotechnical and metallurgical tests in the years 2018 and 2019 as well as to technical and feasibility analyses of the Liberty deposit prepared on their basis. Another factor is the introduction of changes in gold recovery calculations, due to the higher-than-assumed historical execution of forecasts in this regard.
Franke	Documentation of additional oxide ore resources and the update of mining plans, which enabled the extension of mine life by an additional production year.
Carlota	Increase in the resource base for the Eder deposit and the delay in commencement of operations there. In addition, recovery calculations for copper leaching using SSL (sub-surface leaching) technology were updated.

Results of the test performed as at 31 December 2019 are presented in the following table:

CGU	Segment (Part 2)	Carrying amount		Recoverable amount		Reversal of impairment loss	
		USD mn	PLN mn	USD mn	PLN mn	USD mn	PLN mn
Sierra Gorda S.C.M.**	Sierra Gorda S.C.M.	1 471	5 588	1 499	5 694	28	106
Sudbury*	KGHM INTERNATIONAL LTD.	227.4	864	272	1 033	44.6	169
Robinson*		267	1 114	267	1 114	-	-
Franke*		(12)	(46)	(12)	(46)	-	-
Carlota*		(37)	(141)	(37)	(141)	-	-

* the carrying amount of fixed assets decreased by the provision for future decommissioning costs of mines, which in the case of the CGU Franke and the CGU Carlota was higher than the carrying amount of the tested assets,

**the carrying amount of CGU Sierra Gorda S.C.M. consists only of the amount of the loan granted to Sierra Gorda S.C.M., because the carrying amount of the Group's investment in Sierra Gorda S.C.M. equals 0 (Part 6. Involvement in joint ventures).

The following took place as a result of the conducted test:

- for the CGU Sudbury, a reversal of an impairment loss, which was recognised in the following items: "Other operating income" in the amount of PLN 150 million and "Cost of sales" in the amount of PLN 19 million,
- for the CGU Sierra Gorda S.C.M., a reversal of an allowance for impairment, which was recognised in the consolidated statement of profit or loss, in the item "gains due to reversal of allowances for impairment of loans granted to joint ventures". On the basis of estimates on the repayment of loans granted, an increase in the recoverable amount of receivable due to loans was determined, which was the basis to partially reverse an allowance for impairment recognised at the moment of initial recognition of a loan (POCI). The conducted test showed a recoverable amount for the investment in Sierra Gorda S.C.M. of 0.

The results of tests performed as at 31 December 2019 for the CGUs Robinson, Franke and Carlota confirmed that their recoverable amounts are equal to their carrying amounts.

Sensitivity analysis of the fair value of CGU Sierra Gorda S.C.M. USD million	Recoverable amounts per price paths adopted for testing as at 31 December 2019	Recoverable amounts per price paths adopted for testing as at 31 December 2018
Discount rate (8%, for Oxide – 9%) – adopted for testing	**1 499**	1 758
Discount rate (8.5%, for Oxide – 9.5%) – increase in the rate by 0.5 percentage points	1 398	1 656

Sensitivity analysis of the fair value of CGU Sudbury	Recoverable amount
Discount rate for assets at the operational phase 8%, at the pre-operational phase 11%	888
Discount rate for assets at the operational phase 7.5%, at the pre-operational phase 10.5% (test)	**1 033**
Discount rate for assets at the operational phase 7%, at the pre-operational phase 10%	1 188

Sensitivity analysis of the recoverable amount of the CGU Franke and CGU Carlota due to the low carrying amounts is immaterial.

TEST FOR IMPAIRMENT ON PROPERTY, PLANT AND EQUIPMENT OF ENERGETYKA SP. Z O.O. – Segment – Other segments
In the current period, due to indications of the possibility of changes in the recoverable amount of the property, plant and equipment and intangible assets of the company Energetyka sp. z o.o., the Management Board of the Parent Entity performed impairment testing on these assets. The key indication to perform impairment testing in the current reporting period was a negative change in forecasted operating cash flows of Energetyka Sp. z o.o. The carrying amount of property, plant and equipment and intangible assets of Energetyka sp. z o.o. as at 31 December 2019 amounted to PLN 563 million. For the purpose of estimating the recoverable amount, in the conducted test the value in use of the cash generating unit, comprised of the property plant and equipment and intangible assets of the company, was measured using the DCF (discounted cash flows) method.

Basic assumptions adopted for impairment testing	
Assumption	**Level adopted in testing**
Forecast period	2020-2029
Average operating margin during the forecast period	1.15%
Capital expenditures during the forecast period	PLN 282 million
Discount rate	5.60% (nominal rate after taxation)
Growth rate following the forecast period	0%

As a result of the impairment testing conducted on the property, plant and equipment and intangible assets, the recoverable amount of assets was determined to be at the level of PLN 373 million, which was lower than the carrying amount of the tested assets, which was the basis for recognising an impairment loss in the amount of PLN 190 million. The impairment loss was recognised in the consolidated statement of profit or loss in the item "Cost of sales".

The measurement of non-current assets and intangible assets of the company indicated a significant sensitivity to the adopted discount rates. The following table presents the impact of changes to this parameter on the measurement of the assets.

Sensitivity analysis of the recoverable amount of property, plant and equipment and intangible assets of Energetyka Sp. z o.o.			
	Discount rate 4.6%	**Discount rate 5.6% (test)**	**Discount rate 6.6%**
Recoverable amount	539	**373**	287

In order to monitor the risk of impairment of operating assets in subsequent reporting periods, it was determined that the recoverable amount would be equal to the carrying amount of the assets if the discount rate were to fall to 4.5%.

TEST FOR IMPAIRMENT OF PROPERTY, PLANT AND EQUIPMENT OF WPEC w Legnicy S.A. – Segment – Other segments
In the current period, due to indications of the possibility of changes in the recoverable amount of the property, plant and equipment and intangible assets of the company WPEC w Legnicy S.A., the Management Board of the Parent Entity performed impairment testing on these assets. The key indication to perform impairment testing in the current reporting period was a negative change in forecasted operating cash flows of WPEC w Legnicy S.A. The carrying amount of the property, plant and equipment and intangible assets of WPEC w Legnicy S.A. as at 31 December 2019 amounted to PLN 157 million. For the purpose of estimating the recoverable amount, in the conducted test the value in use of the cash generating unit, comprised of the property plant and equipment and intangible assets of the company, was measured using the DCF (discounted cash flows) method.

Basic assumptions adopted for impairment testing	
Assumption	**Level adopted in testing**
Forecast period	2020-2029
Average operating margin during the forecast period	-0.36%
Capital expenditures during the forecast period	PLN 89 million
Discount rate	6.10% (nominal rate after taxation)
Growth rate following the forecast period	0%

As a result of the impairment testing conducted on property, plant and equipment and intangible assets, the recoverable amount of assets was determined to be at the level of PLN 146 million, which was lower than the carrying amount of the tested assets, which was the basis for recognising an impairment loss in the amount of PLN 12 million. Moreover, an impairment loss on goodwill was recognised in the amount of PLN 9 million due to the acquisition of shares of WPEC w Legnicy S.A. These impairment losses were recognised in the consolidated statement of profit or loss in the item "Cost of sales".

The measurement of non-current assets and intangible assets of the company indicated a significant sensitivity to the adopted discount rates. The following table presents the impact of changes to this parameter on the measurement of the assets.

Sensitivity analysis of the recoverable amount of property, plant and equipment and intangible assets of WPEC w Legnicy S.A.			
	Discount rate 5.10%	**Discount rate 6.10% (test)**	**Discount rate 7.10%**
Recoverable amount	212	**146**	108

In order to monitor the risk of impairment of the operating assets in subsequent reporting periods, it was determined that the recoverable amount would be equal to the carrying amount of assets if the discount rate were to fall to 5.87%.

EVALUATION OF RISK OF IMPAIRMENT OF ASSETS OF THE COMPANY INTERFERIE S.A. IN THE CONTEXT OF MARKET CAPITALISATION – Segment – Other segments
The market capitalisation of the subsidiary Interferie S.A. in 2019 was below the carrying amount of the company's net assets, which in accordance with the adopted accounting policy was recognised by the company to be an indication to perform impairment testing of the company's assets (the carrying amount of the tested assets was PLN 106 million). In order to assess the impairment, the Company identified the following CGUs: INTERFERIE in Ustronie Morskie – Leisure and Sanatorium Cechsztyn, INTERFERIE in Kołobrzeg Leisure and Sanatorium Chalkozyn, INTERFERIE in Dąbki Sanatorium Argentyt, INTERFERIE in Świeradów Zdrój – Hotel Malachit, INTERFERIE Hotel in Głogów and INTERFERIE Hotel Bornit in Szklarska Poręba. In order to assess the impairment, the fair value of the assets was estimated on the basis of the sum of future cash flows of individual CGUs discounted by the rate estimated on the basis of ratios used by the hotel industry, with the exception of CGU INTERFERIE Hotel in Głogów and CGU INTERFERIE Hotel Bornit in Szklarska Poręba, for which the fair value was determined on the basis of valuation reports. The fair value was classified to level 3 of the fair value hierarchy.

Basic assumptions adopted for impairment testing	
Assumption	**Level adopted in testing**
Discount rate	7.5% 8.5% for objects with planned significant investments
Costs to sell	3%

As a result of the impairment testing conducted on the company's assets, the estimated fair value of the assets was determined to be higher than the carrying amount of the assets, which did not provide a basis to recognise an impairment loss.

The measurement indicated a significant sensitivity of fair value to adopted discount rates and volatility of operating profit in the forecasted period of the following CGUs:

Sensitivity analysis of fair value					
CGU	Carrying amount	Discount rate		Operating profit	
		+6%	-6%	+6%	-6%
INTERFERIE in Ustronie Morskie - Leisure and Sanatorium Cechsztyn	10	11	13	12	11
INTERFERIE in Kołobrzeg Leisure and Sanatorium Chalkozyn	19	59	72	70	60
INTERFERIE in Dąbki Sanatorium Argentyt	27	49	60	58	50
INTERFERIE in Świeradów Zdrój – Hotel Malachit	23	23	27	26	23

The fair values of the CGU INTERFERIE Hotel in Głogów and the CGU INTERFERIE Hotel Bornit in Szklarska Poręba demonstrated low sensitivity to changes in key parameters.

Level of change in assumptions implicating an impairment loss		
CGU	Increase in discount rate by one percent	% decrease in operating profit
INTERFERIE in Ustronie Morskie - Leisure and Sanatorium Cechsztyn	1.4	18.9
INTERFERIE in Kołobrzeg Leisure and Sanatorium Chalkozyn	8.6	61.1
INTERFERIE in Dąbki Sanatorium Argentyt	4.9	40.4
INTERFERIE in Świeradów Zdrój – Hotel Malachit	0.5	8.8

TEST FOR IMPAIRMENT OF PROPERTY, PLANT AND EQUIPEMENT OF POL MIEDŹ TRANS Sp. z o.o. – Segment – Other segments

In the current period, due to indications of the possibility of changes in the recoverable amount of the property, plant and equipment and intangible assets of the company POL MIEDŹ TRANS Sp. z o.o., the Management Board of the Parent Entity performed impairment testing on these assets. The key indication to perform impairment testing in the current reporting period was a loss for the period incurred by POL MIEDŹ TRANS Sp. z o.o. The carrying amount of property, plant and equipment and intangible assets of POL MIEDŹ TRANS Sp. z o.o. as at 31 December 2019 amounted to PLN 238 million. For the purpose of estimating the recoverable amount, in the conducted test the value in use of property plant and equipment and intangible assets of the company was measured using the DCF (discounted cash flows) method.

Basic assumptions adopted for impairment testing	
Assumption	**Level adopted in testing**
Forecast period	2020-2024
Average operating margin during the forecast period	1.49%
Capital expenditures during the forecast period	PLN 260 million
Discount rate	5.99% (nominal rate after taxation)
Growth rate following the forecast period	0%

As a result of the impairment testing conducted on property, plant and equipment and intangible assets, the recoverable amount of assets was determined to be higher than the carrying amount of the tested assets, which did not give a basis to recognise an impairment loss.

The recoverable amount of the non-current assets and intangible assets of the company indicates a sensitivity to the adopted discount rate. The following table presents the impact of changes to this parameter on the measurement of the assets.

Sensitivity analysis of the recoverable amount of property, plant and equipment and intangible assets of POL-MIEDŹ TRANS Sp. z o.o.			
	Discount rate 4.99%	**Discount rate 5.99% (test)**	**Discount rate 6.99%**
Recoverable amount	378	**272**	212

In order to monitor the risk of impairment of property, plant and equipment and intangible assets in subsequent reporting periods, it was determined that the recoverable amount would be equal to the carrying amount of assets if the discount rate were to increase to 6.48%.

EVALUATION OF IMPAIRMENT OF WATER RIGHTS
In the Group, water rights in Chile are annually subjected to impairment testing by comparing their carrying amount to the recoverable amount, which is set as fair value decreased by costs to sell. The fair value of water rights is classified under level 2 of the fair value hierarchy, in which fair value measurements are based on significant observable input data, other than market prices. For the year ended on 31 December 2019, the Group assessed the factors impacting the recoverable amount of the asset and concluded that there are no grounds for recognising an impairment loss, as the water price and the estimated amount of water available for extraction did not change compared to the level of these factors adopted for measurement as at 31 December 2018. The carrying amount of water rights amounted to PLN 65 million as at 31 December 2019 (as at 31 December 2018: PLN 65 million).

It was determined that there are no indications of impairment of the other non-current assets of the Group.

Note 3.2. Results of impairment testing of the Group's assets as at 31 December 2018

TEST FOR IMPAIRMENT OF PROPERTY, PLANT AND EQUIPMENT OF THE KGHM INTERNATIONAL LTD. GROUP
As at 31 December 2018, as a result of the identification of indications of possible change in the recoverable amounts of international assets of the KGHM INTERNATIONAL LTD. Group, such as: the Sudbury Basin, the Franke mine, and involvement in the joint venture Sierra Gorda S.C.M., the Management Board of the Parent Entity tested these assets for impairment, identifying each of them as separate cash generating units (CGUs). The key indication to perform impairment testing on the assets was the significant change in the technical and economic parameters of the mining assets, such as mine lives, production volume, reserves and resources, assumed operating costs and the level of capital expenditures during a mine's life. To determine the recoverable amount of assets during the testing, the following were measured at fair value (decreased by costs to sell) using the DCF (discounted cash flows) method: the CGU Sudbury and involvement in Sierra Gorda S.C.M. and at the value in use of the CGU Franke. The fair value was classified to level 3 of the fair value hierarchy. The approach applied by the Group in 2018 with respect to the measurement of loans pursuant to IFRS 9 was consistent with the approach in 2019. Detailed description in Part 3. Test for the impairment of assets of the KGHM INTERNATIONAL LTD. Group as at 31 December 2019

Basic macroeconomic assumptions adopted in the impairment testing	
Assumption	**Level adopted for testing**
Copper price	The price path for copper was set based on internal macroeconomic assumptions developed with the use of long-term forecasts available from financial and analytical institutions. A detailed forecast is being prepared for the period 2019-2023, while for the period 2024-2028 a technical adjustment of prices was applied between the last year of the detailed forecast, and 2029, from which a long-term metal price forecast of 6 614 USD/t (3.00 USD/lb) is used. The long-term forecasted copper price has not changed as compared to the long-term price adopted for conducting testing as at 31 December 2017.

Other key assumptions used for recoverable amount estimation of assets of CGUs			
Assumption	**Sierra Gorda**	**Sudbury**	**Franke**
Mine life / forecast period	25	18	2
Level of copper production during mine life [kt]	4 372	276	37
Average operating margin during mine life*	35%	57%	7%
Capital expenditures to be incurred during mine life [USD million]	2 219	1 630	4
Applied discount rate after taxation for assets in the operational phase*	8%	8%	11%
Applied discount rate after taxation for assets in the pre-operational phase		11%	
Costs to sell	USD 9 million	2%	

** In order to maintain data cohesion between individual CGUs, the presented data is post-taxation despite the model of measuring the value in use for the CGU Franke. The use of pre-taxation data does not significantly impact the recoverable amount.*

Key factors responsible for modification of the technical and economic assumptions	
Sierra Gorda	Postponement to subsequent years of capital expenditures from 2017-2018 related to the debottlenecking program and from the oxide ore processing project. In the previous test, expenditures on the aforementioned projects were included in the period not covered by current assumptions. The update of the multi-year mine plan resulted in the prolongation of the mine's life by 3 years.
Sudbury	On-going optimisation of the multi-year plan of KGHM's operating activities in the Sudbury Basin. Among others, as a result of the activities undertaken, the extraction of ore from the Morrison deposit is planned to be halted in the first quarter of 2019 along with a recommencement of production by the McCreedy West mine. The update of the multi-year plans resulted in an increase in capital expenditures, a change in the production volumes of individual metals and an extension of the production period by one year. The assumptions adopted for the Victoria project have not changed significantly as compared to the testing conducted as at 31 December 2017.
Franke	Identification of additional deposits of oxide ore and an update of the mining plans, which allows for a prolongation of the mine's life by an additional production year.

The test carried out indicated justification to reverse a part of the allowance for impairment, recognised in prior years, on loans granted to the joint venture Sierra Gorda S.C.M.

CGU	Segment (Part 2)	Carrying amount		Recoverable amount		Reversal of allowance for impairment	
		USD mn	PLN mn	USD mn	PLN mn	USD mn	PLN mn
Sierra Gorda S.C.M.	Sierra Gorda S.C.M.	1 188	4 466	1 383	5 199	195	733

Reversal of an allowance for impairment was recognised in the consolidated statement of profit or loss, in the item "gains due to reversal of allowances for impairment of loans granted to joint ventures".

The results of tests performed as at 31 December 2018 for CGU Sudbury and CGU Franke confirmed that their fair value is equal to their carrying amounts.

EVALUATION OF IMPAIRMENT OF WATER RIGHTS
In the Group, water rights in Chile are annually subjected to impairment testing by comparing their carrying amount to the recoverable amount, which is set as fair value decreased by costs to sell. The fair value of water rights is classified under level 2 of the fair value hierarchy, in which fair value measurements are based on significant observable input data, other than market prices. For the year ended on 31 December 2018, the Group assessed the financial factors and came to the conclusion that there is no need to recognise an impairment loss, as the estimated amount of water available for extraction did not change compared to the amount estimated as at 31 December 2017.

Part 4 - Explanatory notes to the statement of profit or loss

Note 4.1 Expenses by nature

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Note 9.3	Depreciation of property, plant and equipment and amortisation of intangible assets	2 013	1 903
Note 11.1	Employee benefits expenses	5 594	5 202
	Materials and energy	7 945	7 097
	External services	2 655	2 404
Note 5.2	Minerals extraction tax	1 520	1 671
	Other taxes and charges	521	535
Note 4.4	Reversal of impairment losses on property, plant and equipment and intangible assets	(19)	(26)
Note 4.4	Reversal of write-down of inventories	(38)	(30)
	Advertising costs and representation expenses	71	62
	Property and personal insurance	59	54
Note 4.4	Impairment losses on property, plant and equipment and intangible assets	217	35
	Write-down of inventories	38	28
	Other costs	78	105
	Total expenses by nature	**20 654**	**19 040**
	Cost of merchandise and materials sold (+)	681	653
	Change in inventories of finished goods and work in progress (+/-)	337	(375)
	Cost of products for internal use of the Group (-) *	(1 404)	(1 383)
	Total costs of sales, selling costs and administrative expenses, of which:	**20 268**	**17 935**
	Cost of sales	18 767	16 555
	Selling costs	432	374
	Administrative expenses	1 069	1 006

*The amount is mainly comprised of cost of manufacturing fixed assets by the Group

Note 4.2 Other operating income and (costs)

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Note 7.1	Measurement and realisation of derivatives	199	216
	Interest income calculated using the effective interest rate method	9	8
Note 7.1	Exchange differences on measurement and realisation of assets and liabilities other than borrowings	171	593
Note 3.1	Reversal of impairment losses on intangible assets not yet available for use	150	-
	Release of provisions	85	51
	Other	195	166
	Total other operating income	**809**	**1 034**
Note 7.1	Measurement and realisation of derivatives	(278)	(305)
Note 4.4	Impairment losses on financial instruments	(17)	(24)
Note 4.4	Impairment losses on fixed assets under construction and intangible assets not yet available for use	(3)	(60)
	Provisions recognised	(148)	(183)
	Other	(177)	(154)
	Total other operating costs	**(623)**	**(726)**
	Other operating income and (costs)	**186**	**308**

Note 4.3 Finance income and (costs)

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Note 7.1	Measurement and realisation of derivatives	37	11
	Other	1	-
	Total income	**38**	**11**
Note 7.1	Interest on borrowings including:	(190)	(93)
	leases	(23)	(1)
	Unwinding of the discount of provisions effect	(48)	(50)
	Bank fees and charges on borrowings not included in the measurement at amortised cost	(48)	(15)
Note 7.1	Measurement and realisation of derivatives	(59)	-
Note 7.1	Exchange differences on measurement and realisation of borrowings	(208)	(593)
	Other	(13)	(21)
	Total costs	**(566)**	**(772)**
	Finance income and (costs)	**(528)**	**(761)**

Note 4.4 Reversal and recognition of impairment losses on assets recognised in the statement of profit or loss

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
	Reversal of impairment losses on assets recognised in:		
	cost of sales, of which:	**57**	**56**
Note 4.1	reversal of impairment loss on property, plant and equipment and intangible assets	19	26
	reversal of write-down of inventories	38	30
Note 6.2	**gains due to reversal of allowances for impairment of loans granted to joint ventures**	**106**	**733**
	other operating income, of which:	**160**	**15**
	reversal of impairment losses on fixed assets under construction and intangible assets not yet available for use	150	-
	reversal of an allowance for impairment of trade receivables	1	11
	reversal of an allowance for impairment of other financial receivables	7	2
	reversal of an allowance for impairment of other non-financial receivables	2	2
	Reversal of impairment losses, total	**323**	**804**
	Impairment losses on assets, recognised in:		
	cost of sales, of which:	**255**	**63**
Note 4.1	impairment loss on property, plant and equipment and intangible assets	217	35
	write-down of inventories	38	28
	other operating income, of which:	**20**	**84**
Note 4.2	impairment losses on fixed assets under construction and intangible assets not yet available for use	3	60
Note 4.2	allowance for impairment of trade receivables	-	19
Note 4.2	allowance for impairment of other financial receivables	17	5
	Impairment losses, total	**275**	**147**

Part 5 - Taxation

Note 5.1 Income tax in the consolidated statement of profit or loss

Accounting policies
Income tax recognised in profit or loss comprises current income tax and deferred income tax. Current income tax is calculated in accordance with current tax laws.

Income tax

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
	Current income tax	693	642
Note 5.1.1	Deferred income tax	168	165
	Tax adjustments for prior periods	(160)	1
	Income tax	**701**	**808**

Current tax adjustments for prior periods concern CIT adjustments for 2016 – 2018, prepared and settled with the tax office. The tax adjustment was prepared because, among others, the Parent entity recognised the following expenses as tax deductible costs:

- costs incurred due to changes introduced to plans of land conversion, on which an investment is being advanced – these are expenses related, among others, to excluding land from agricultural and forestry production, and one-off compensations for premature forestry logging,
- costs incurred to obtain a concession for exploration, evaluation and mining of minerals,
- costs incurred on components and major overhauls,
- costs incurred on exploration and evaluation of mineral deposits.

These expenses were recognised in the Parent Entity's adjustment of the annual tax return as tax deductible costs after receiving positive judgments of the Administrative Court issued due to the Parent Entity's complaints on negative interpretations of the Director of the National Tax and Customs Information Office.
In 2019, Group entities paid income tax in the amount of PLN 410 million (in 2018: PLN 802 million) to the appropriate tax office. The difference between the tax paid by the Group in 2019 as compared to the tax paid in 2018 is mainly due to a change in the manner of payment of tax advances in 2019 as compared to 2018.
In 2018, tax advances were determined on a simplified basis, monthly in fixed amounts, on the basis of income achieved in 2016.
In 2019, due to the change in composition of companies comprising the KGHM's Tax Group, and therefore the creation of a new taxpayer commencing its activities, the Group changed the method of determining tax advances to one based on actually achieved quarterly income, which resulted in a decrease in advances paid in 2019, because the advance for the fourth quarter of 2019 will be paid in 2020.

The table below presents differences between income tax from profit before tax for the Group and the income tax which could be achieved if the Parent Entity's tax rate was applied:

Reconciliation of effective tax rate

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Profit before income tax	**2 122**	**2 466**
Tax calculated using the Parent Entity's rate (2019: 19%, 2018: 19%)	403	469
Effect of applying other tax rates abroad	(43)	(217)
Tax effect of non-taxable income	(93)	(288)
Tax effect of expenses not deductible for tax purposes, including:	478	515
minerals extraction tax, which is not deductible for corporate income tax purposes	289	317
Deductible temporary differences on which tax assets were not recognised	101	345
Utilisation in the period of previously-unrecognised tax losses	(2)	(30)
Adjustments of current income tax for prior periods	(160)	1
Tax losses and tax credits in the period from which there was no recognition of deferred tax assets	112	13
Deferred tax on eliminated interest on intra-Group loans	(100)	-
Other	5	-
Income tax in profit or loss [effective tax rate amounted to 33.9% of profit before income tax (in 2018: 32.8% of profit before income tax)]	**701**	**808**

In Poland, tax bodies are empowered to audit tax declarations for a period of five years, although during this period companies may offset tax assets with tax liabilities being the income of the State Treasury (including due to current income tax). In Canada, tax declarations may be audited for a period of three years without the right to offset assets with liabilities due to current income tax.

Note 5.1.1 Deferred income tax

Accounting policies	Significant estimates and assumptions
Deferred income tax is determined using tax rates and tax laws that are expected to be applicable when the asset is realised or the liability is settled based on tax rates and tax laws that have been enacted or substantively enacted at the end of the reporting period. Deferred tax liabilities and deferred tax assets are recognised for temporary differences between the tax bases of assets and liabilities and their carrying amounts in the financial statements, with the exception of temporary differences arising from initial recognition of assets or liabilities in transactions other than business combinations. Deferred tax assets are recognised if it is probable that taxable profit will be available against which the deductible temporary differences and unused tax losses can be utilised. Deferred tax assets and deferred tax liabilities are offset if the company has a legally enforceable right to set off current tax assets and current tax liabilities, and if the deferred tax assets and deferred tax liabilities relate to income taxes levied on a given entity by the same tax authority.	The probability of realising the deferred tax assets with future tax income is based on the budgets of the companies of the Group. Companies of the Group recognised deferred tax assets in their accounting books to the extent that it is probable that taxable profit will be available against which the deductible temporary differences can be utilised. Companies of the Group which historically have generated losses, and whose financial projections do not foresee the achievement of taxable profit enabling the deduction of deductible temporary differences, do not recognise deferred tax assets in their accounting books.

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Deferred net income tax at the beginning of the period, of which:	**(189)**	**42**
Deferred tax assets	309	389
Deferred tax liabilities	(498)	(347)
Change in accounting policies		
application of IFRS 9 of which:	**-**	**(19)**
Deferred tax assets	-	(83)
Deferred tax liabilities	-	64
Deferred tax after change in policies, of which:	**(189)**	**23**
Deferred tax assets	373	389
Deferred tax liabilities	(562)	(366)
Deferred income tax during the period:	**(99)**	**(212)**
Recognised in profit or loss	(168)	(165)
Recognised in correspondence with current tax assets*	(34)	(64)
Recognised in other comprehensive income	102	25
Exchange differences from translation of foreign operations statements with a functional currency other than PLN	1	(8)
Deferred net income tax at the end of the period, of which:	**(288)**	**(189)**
Deferred tax assets	157	309
Deferred tax liabilities	(445)	(498)

**The amounts: PLN (34) million in 2019 and PLN (64) million in 2018 concern the tax credit used by the KGHM INTERNATIONAL LTD. Group as a result of a tax reform in the USA (a decrease in deferred tax assets in correspondence with current income tax assets).*

Maturities of deferred tax assets and deferred tax liabilities were as follows:

	Deferred tax assets		Deferred tax liabilities	
	As at 31 December 2019	As at 31 December 2018	As at 31 December 2019	As at 31 December 2018
Maturity over the 12 months from the end of the reporting period	72	254	(736)	(479)
Maturity of up to 12 months from the end of the reporting period	85	55	291	(19)
Total	**157**	**309**	**(445)**	**(498)**

Expiry dates of unused tax losses and tax credits, for which deferred tax assets were not recognised in individual countries are presented in the following table:

	As at 31 December 2019				As at 31 December 2018			
	Unused tax losses	Expiry date	Unused tax credits	Expiry date	Unused tax losses	Expiry date	Unused tax credits	Expiry date
Luxembourg	2 467	indefinite	-	-	3 176	indefinite	-	-
	873	2034-2036	-	-	307	2034	-	-
Chile	894	indefinite	-	-	939	indefinite	-	-
Canada	992	2026-2039	61	2020-2038	818	2026-2038	59	2020-2038
Other	148	2034-2037	-	-	256	-	-	-
Total	**5 374**		**61**		**5 496**		**59**	

As at 31 December 2019, the amount of deductible temporary differences, on which the Group did not recognise a deferred tax asset, amounted to PLN 3 610 million (as at 31 December 2018: PLN 3 295 million).

As at 31 December 2019, at the level of the consolidated financial statements, there was no recognition of deferred tax liabilities on taxable temporary differences in the amount of PLN 958 million (as at 31 December 2018: PLN 965 million) related to investments in subsidiaries and shares in joint ventures, as the conditions stipulated in IAS 12.39 were met.

The following tables present deferred income tax assets and liabilities before their compensation at the level of individual companies of the Group.

Deferred tax assets (deferred tax assets prior to offsetting with deferred tax liabilities at the level of individual Companies of the Group)	As at 31 December 2017	Change in accounting policies – application of IFRS 9 and IFRS 15	As at 1 January 2018	Credited/(Charged)			As at 31 December 2018	Change in accounting policies – application of IFRS 16	As at 1 January 2019	Credited/(Charged)			As at 31 December 2019
				profit or loss	other comprehensive income	exchange differences from translation of foreign operations statements with a functional currency other than PLN				profit or loss	Other comprehensive income and current tax assets	exchange differences from translation of foreign operations statements with a functional currency other than PLN	
Provision for decommissioning of mines and other technological facilities	**162**	**-**	**162**	49	-	-	**211**	-	**211**	29	-	-	**240**
Measurement of forward transactions	**84**	**(70)**	**14**	-	-	-	**14**	-	**14**	7	-	-	**21**
Difference between the depreciation rates of property, plant and equipment for accounting and tax purposes	**69**	**-**	**69**	(8)	-	-	**61**	-	**61**	6	-	-	**67**
Future employee benefits	**417**	**-**	**417**	19	61	-	**497**	-	**497**	18	10	-	**525**
Equity instruments measured at fair value	**108**	**(16)**	**92**	-	30	-	**122**	-	**122**	-	18	-	**140**
Lease liabilities	**-**	**3**	**-**	-	-	-	**-**	64	**64**	(1)			**63**
Interest	**51**	**-**	**51**	51	-	4	**106**	-	**106**	51	-	-	**157**
Recognition/reversal of impairment losses on assets	**52**	**-**	**52**	11	-	-	**63**	-	**63**	(32)	-	-	**31**
Short-term accruals for remuneration	**71**	**-**	**71**	(16)	-	-	**55**	-	**55**	17	-	-	**72**
Re-measurement of hedging instruments	**28**	**-**	**28**	-	(3)	-	**25**	-	**25**	-	10	-	**35**
Liabilities related to fixed fee due to setting mining usufruct	**35**	**-**	**35**	2	-	-	**37**	-	**37**	(6)	-	-	**31**
Other	**642**	**-**	**405**	54	(30)*	10	**439**	-	**439**	(153)	(34)*	2	**254**
Total	**1 479**	**(83)**	**1 396**	**162**	**58**	**14**	**1 630**	**64**	**1 694**	**(64)**	**4**	**2**	**1 636**

** The amount includes tax credit used by the KGHM International Ltd. Group as a result of a tax reform in the USA (decrease in deferred tax assets in correspondence with current tax assets) in the amount of PLN (34) million in 2019 and PLN (64) million in 2018.*

Deferred tax liabilities (deferred tax liabilities prior to offsetting with deferred tax assets at the level of individual Companies of the Group)	As at 31 December 2017	Change in accounting policies – application of IFRS 9 and IFRS 15	As at 1 January 2018	(Credited)/Charged			As at 31 December 2018	Change in accounting policies – application of IFRS 16	As at 1 January 2019	(Credited)/Charged			As at 31 December 2019
				profit or loss	other comprehensive income	exchange differences from translation of foreign operations statements with a functional currency other than PLN				profit or loss	other comprehensive income	exchange differences from translation of foreign operations statements with a functional currency other than PLN	
Measurement of forward transactions	**42**	**(27)**	**15**	1	-	-	**16**	-	**16**	1	-	-	**17**
Re-measurement of hedging instruments	**43**	**(42)**	**1**	-	63	-	**64**	-	**64**	-	(64)	-	**-**
Difference between the depreciation rates for accounting and tax purposes	**1 016**	**-**	**1 016**	196	-	16	**1 228**	64	**1 292**	117	-	2	**1 411**
related to amortisation of right-to-use (IFRS 16)	**-**	**-**	**-**	-	-	-	**-**	64	**64**	1	-	-	**65**
Accrued interest	**120**	**-**	**120**	184	-	5	**309**	-	**309**	53	-	(1)	**361**
Other	**216**	**5**	**221**	(54)	34	1	**202**	-	**202**	(67)	-	-	**135**
Total	**1 437**	**(64)**	**1 373**	**327**	**97**	**22**	**1 819**	**64**	**1 883**	**104**	**(64)**	**1**	**1 924**

Note 5.2 Other taxes and charges

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018	Basis for calculating tax	Tax rate	Presentation in the consolidated statement of profit or loss
Minerals extraction tax, of which:	**1 520**	**1 671**			
- copper	1 217	1 373	Amount of copper in produced concentrate, expressed in tonnes	tax rate calculated for every reporting period *	Minerals extraction tax in expenses by nature (note 4.1.)
- silver	303	298	Amount of silver in produced concentrate, expressed in kilograms		

** in accordance with conditions specified by the Act dated 2 March 2012 on the minerals extraction tax and the Act dated 12 April 2019 on changing the Act on the minerals extraction tax, which decreased the tax rate by 15% since 1 July 2019.*

The minerals extraction tax paid by the Parent Entity is calculated from the amount of copper and silver in produced concentrate and depends on the prices of these metals as well as on the USD/PLN exchange rate. The tax is accounted for under manufacturing costs of basic products and is not deductible for corporate income tax purposes.

Other taxes and charges, with a breakdown by geographical location, were as follows:

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Poland	**471**	**484**
Real estate tax	224	202
Royalties	110	108
Excise tax	10	39
Environmental fees	23	19
Other taxes and charges	104	116
Other countries	**63**	**72**
Total	**534**	**556**

Note 5.3 Tax assets and liabilities

Accounting policies

Tax assets comprise current income tax assets and the settlement related to VAT.
Assets not representing financial assets are initially recognised at nominal value and are measured at the end of the reporting period at the amount due.
Tax liabilities comprise the Group's liabilities towards the tax office arising from the corporate income tax, including due to the withholding tax, personal income tax and liabilities due to the minerals extraction tax and the excise tax.
Liabilities not representing financial liabilities are measured at the amount due.

	As at 31 December 2019	As at 31 December 2018
Current corporate income tax assets	78	142
Assets due to taxes, social and health insurance and other benefits	493	275
Tax assets	**571**	**417**

	As at 31 December 2019	As at 31 December 2018
Current corporate income tax liabilities	37	14
Liabilities due to other taxes	396	335
Tax liabilities	**433**	**349**

Part 6 – Involvement in joint ventures

Accounting policies

The item "involvement in joint ventures" comprises investments in joint ventures accounted for using the equity method and loans granted to joint ventures.

The Group classifies as investments accounted for using the equity method interests in joint ventures which are joint contractual arrangements, in which the parties sharing control have the right to the net assets of a given entity. Joint control occurs when decisions on the relevant activities of joint ventures require the unanimous consent of the parties sharing control.

Investments are initially recognised at cost. The Group's share in the profit or loss of entities accounted for using the equity method (assessed while taking into account the impact of measurements to fair value at the investment's acquisition date) from the acquisition date is recognised in profit or loss, while its share in changes of accumulated other comprehensive income from the acquisition date is recognised in the relevant item of accumulated comprehensive income.

Unrealised gains and losses on transactions between the investor and the joint venture are eliminated in an amount proportional to the investor's share in these profits/losses.

If there are any indications of impairment, an investment is tested for impairment by calculating the recoverable amount in accordance with the policy presented in Part 3.

Loans granted to joint ventures do not meet the criteria of recognition as net investments in a joint venture, because the loan's settlement is planned and probable in the foreseeable future.

Significant estimates and assumptions

Joint control

The Group classifies Sierra Gorda S.C.M. as a joint venture under IFRS 11, in which KGHM INTERNATIONAL LTD.'s share equals 55%. Classification of Sierra Gorda S.C.M. as a joint venture, despite the 55% share of the Group, was made based on analysis of the terms of the agreements between the parties and contractual stipulations which indicated joint control. Pursuant to the terms of the agreements, all relevant activities of Sierra Gorda S.C.M. require the unanimous consent of both owners. The Group and other owners have three members each in the appointed Owners Council. The Owners Council makes strategic decisions and is responsible for overseeing their execution. Moreover, it approves the appointment of senior management. In the reporting period, there were no changes to provisions that were the basis of classifying the investment as a joint venture.

Note 6.1 Joint ventures accounted for using the equity method

	2019			2018		
	Sierra Gorda S.C.M.	Other entities	Total	Sierra Gorda S.C.M.	Other entities	Total
As at 1 January	**-**	**4**	**4**	**-**	**8**	**8**
Acquisition of newly-issued shares	439	-	439	666	-	666
Share of losses of joint ventures accounted for using the equity method	(434)	(4)	(438)	(658)	(4)	(662)
Exchange differences from the translation of foreign operation statements with a functional currency other than PLN	(5)	-	(5)	(8)	-	(8)
As at 31 December	**-**	**-**	**-**	**-**	**4**	**4**

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
The Group's share (55%) in net losses, of which:	**(556)**	**(767)**
recognised share of losses of joint ventures	(434)	(658)
unrecognised share of losses of joint ventures	(122)	(109)

As at 31 December 2019, the KGHM Polska Miedź S.A. Group's share in the unsettled accumulated losses of Sierra Gorda S.C.M amounted to PLN 5 098 million (as at 31 December 2018: PLN 4 976 million). The Group stopped recognising its share of losses of Sierra Gorda S.C.M. at the moment the value of this share exceeded the carrying amount of the interest in the investment in Sierra Gorda S.C.M., which is equal to PLN 0. After reducing the share to zero, the Group performed an analysis whether there is a legal or customary obligation to pay on Sierra Gorda's behalf, which would result in an

obligation of the Group to recognise a liability for this reason. Moreover, the Group analysed the terms of guarantees granted to Sierra Gorda S.C.M. to secure the payments due to lease contracts entered into, payment guarantees with respect to working capital facilities which meet the definition of financial guarantees and letters of credit to secure the proper performance of a long-term contract for the supply of electricity, which does not meet the definition of a financial guarantee pursuant to IFRS 9.

On the basis of conducted analyses, the Group does not identify the existence of a legal or customary obligation to pay on Sierra Gorda S.C.M.'s behalf, which is described in IAS 28.39.

Information on entities accounted for using the equity method

	Main place of business	% of share capital held by the Group	% of voting power	Value of the investment in the consolidated statement of financial position	
Jointly controlled entities				**As at 31 December 2019**	**As at 31 December 2018**
Sierra Gorda S.C.M.	Chile	55	50	-	-
Other	Poland	49	50	-	4
Total				**-**	**4**

Condensed financial data of Sierra Gorda S.C.M. is presented in the table below

	As at 31 December 2019	As at 31 December 2018
Non-current assets	**15 459**	**14 649**
Current assets, including:	**1 188**	**1 444**
Cash and cash equivalents	336	364
Non-current liabilities, including:	**19 837**	**19 458**
Borrowings and lease	857	1 128
Liabilities due to loans granted by jointly-controlling entities	17 965	16 583
Current liabilities, including:	**3 438**	**2 979**
Borrowings and lease	2 494	552
Carrying amount of net assets (incorporating the fair value measurement from date of obtaining joint control)	**(6 628)**	**(6 344)**
The Group's share in net assets (55%)	(3 645)	(3 489)
Unrecognised accumulated share of losses of Sierra Gorda S.C.M.	5 098	4 976
Balance of impairment loss on interest in Sierra Gorda S.C.M.	(671)	(671)
Adjustment by the value of unrealised gains	(110)	(110)
Exchange differences from the translation of changes of the investment in Sierra Gorda S.C.M. using exchange rates from prior periods	(672)	(706)
Value of the investment in the consolidated statement of financial position	**-**	**-**
	from 1 January 2019 to 31 December 2019	**from 1 January 2018 to 31 December 2018**
Revenues from contracts with customers	3 640	3 542
Depreciation/amortisation	(949)	(993)
Interest costs	(1 455)	(1 441)
Other incomes/(costs)	(2 533)	(2 393)
Loss before income tax	**(1 297)**	**(1 285)**
Income tax	284	(109)
Loss for the period	**(1 013)**	**(1 394)**
Exchange differences from the translation of Sierra Gorda S.C.M.'s net assets to the PLN presentation currency	**29**	**(262)**
Total comprehensive income	**(984)**	**(1 656)**

Other information on the Group's involvement in the joint venture Sierra Gorda S.C.M.

		As at 31 December 2019	As at 31 December 2018
	Group's share in commitments (investment and operating)	2 582	2 501
	Group's share in the total amount of future minimal payments due to lease agreements for mining equipment	609	709
Note 8.6	Guarantees granted by the Group	2 046	1 815

As stated in the Common Security Agreement and share pledge agreements, as at 31 December 2019 2 215 400 shares in Sierra Gorda S.C.M. held by the KGHM Polska Miedź S.A. Group (carrying amount of shares: PLN 0) were pledged as collateral to banks that granted an investment corporate bank loan to Sierra Gorda S.C.M. for the advancement of the Sierra Gorda project. The collateral will expire when the bank loan is fully repaid, which is expected to take place on 15 June 2021.
As at 31 December 2018, 2 215 400 shares were pledged as collateral (carrying amount: PLN 0).

Note 6.2 Loans granted to joint ventures (Sierra Gorda S.C.M.)

Accounting policies	Significant estimates and assumptions
Loans granted to Sierra Gorda S.C.M. were classified as credit-impaired financial assets due to the high credit risk at the moment of initial recognition (POCI). POCI loans are measured at amortised cost using the effective interest rate, adjusted by the credit risk, reflecting impairment calculated using the model of expected losses.	The terms of repayment of loans granted to finance operations abroad, including planned repayment dates, were set in individual agreements. Pursuant to the schedule, the principal amount and interest are paid on demand, but not later than 15 December 2024. The start of repayment of loans by Sierra Gorda S.C.M. will depend on the company's financial standing. It is assumed in the long-term plans of Sierra Gorda S.C.M. that the loans will be repaid with interest. The Group does not foresee the demand to repay the loan by the end of 2020, and therefore the loan is presented as a non-current receivable. Due to the fact that settling the loan is planned and probable in the foreseeable future, the loan is not a net investment under IAS 21.15. Due to the existing indications, the Group performed impairment testing on international assets in 2019 and reversed allowances for impairment of the loan granted to Sierra Gorda in the amount of PLN 106 million as at 31 December 2019 (the Group presents detailed information on the test in Part 3 of this Report). The Group used a recoverable amount, calculated pursuant to IAS 36 on the basis of the model of discounted cash flows, to calculate the amount of these loans which are expected to be repaid. For these loans, the Group determined that the application of the model of discounted cash flows prepared pursuant to IAS 36 will also address the requirements of IFRS 9, because their fair value reflects the amount that could be gained after the immediate sale of Sierra Gorda at the end of the reporting period.

		2019	2018
	As at 1 January	**5 199**	**3 889**
	Accrued interest	341	257
Note 4.4	Gains due to the reversal of allowances for impairment	106	733
	Exchange differences from the translation of foreign operation statements with a functional currency other than PLN	48	320
	As at 31 December	**5 694**	**5 199**

The loan granted to Sierra Gorda S.C.M. has a fixed interest rate.

As at 31 December 2019, the Group estimated cash flows on repayment of receivables due to loans granted to Sierra Gorda S.C.M. in the amount of PLN 5 694 million, which were higher than the carrying amount of loans (PLN 5 588 million) by the amount of PLN 106 million, as a result of which there was a reversal of an allowance for impairment recognised at the moment of initial recognition of an asset (in the comparable period there was a reversal of an allowance for impairment in the amount of PLN 733 million).

Part 7 – Financial instruments and financial risk management

Note 7.1 Financial Instruments

Financial assets		As at 31 December 2019					As at 31 December 2018				
		At fair value through other comprehensive income	At fair value through profit or loss	At amortised cost	Hedging instruments	Total	At fair value through other comprehensive income	At fair value through profit or loss	At amortised cost	Hedging instruments	Total
	Non-current	431	18	6 350	123	**6 922**	526	27	5 915	308	**6 776**
Note 6.2	Loans granted to joint ventures	-	-	5 694	-	**5 694**	-	-	5 199	-	**5 199**
Note 7.2	Derivatives	-	1	-	123	**124**	-	12	-	308	**320**
Note 7.3	Other financial instruments measured at fair value	431	17	-	-	**448**	526	15	-	-	**541**
Note 7.4	Other financial instruments measured at amortised cost	-	-	656	-	**656**	-	-	716	-	**716**
	Current	-	328	1 660	289	**2 277**	-	328	1 717	285	**2 330**
Note 10.2	Trade receivables	-	300	388	-	**688**	-	304	495	-	**799**
Note 7.2	Derivatives	-	4	-	289	**293**	-	16	-	285	**301**
Note 8.5	Cash and cash equivalents	-	-	1 016	-	**1 016**	-	-	957	-	**957**
Note 12.3	Other financial assets	-	24	256	-	**280**	-	8	265	-	**273**
	Total	**431**	**346**	**8 010**	**412**	**9 199**	**526**	**355**	**7 632**	**593**	**9 106**

	Financial liabilities	As at 31 December 2019				As at 31 December 2018			
		At fair value through profit or loss	At amortised cost	Hedging instruments	Total	At fair value through profit or loss	At amortised cost	Hedging instruments	Total
	Non-current	**65**	**7 736**	**118**	**7 919**	133	7 080	29	**7 242**
Note 8.4.1	Borrowings, lease and debt securities	-	7 525	-	**7 525**	-	6 878	-	**6 878**
Note 7.2	Derivatives	65	-	118	**183**	133	-	29	**162**
	Other financial liabilities	-	211	-	**211**	-	202	-	**202**
	Current	53	3 221	38	**3 312**	37	3 240	6	**3 283**
Note 8.4.1	Borrowings, lease and debt securities	-	348	-	**348**	-	1 071	-	**1 071**
Note 7.2	Derivatives	53	-	38	**91**	37	-	6	**43**
	Trade and similar payables	-	2 766	-	**2 766**	-	2 053	-	**2 053**
	Other financial liabilities	-	107	-	**107**	-	116	-	**116**
	Total	118	10 957	156	**11 231**	**170**	**10 320**	**35**	**10 525**

Gains/(losses) on financial instruments

	from 1 January 2019 to 31 December 2019	Financial assets measured at fair value through other comprehensive income	Financial assets/liabilities measured at fair value through profit or loss	Financial assets measured at amortised cost	Financial liabilities measured at amortised cost	Hedging instruments	Total
	Interest income	-	-	350	-	-	**350**
Note 4.3	Interest costs	-	-	-	(190)	-	**(190)**
Note 4.2	Foreign exchange gains/(losses)	-	11	361	(201)	-	**171**
Note 4.3	Foreign exchange losses	-	-	-	(208)	-	**(208)**
Note 4.4	Impairment losses	-	-	(9)	-	-	**(9)**
Note 7.2	Revenues from contracts with customers	-	-	-	-	245	**245**
Note 4.2	Gains on measurement and realisation of derivatives	-	199	-	-	-	**199**
Note 4.2	Losses on measurement and realisation of derivatives	-	(278)	-	-	-	**(278)**
Note 4.3	Gains on measurement and realisation of derivatives	-	37	-	-	-	**37**
Note 4.3	Losses on measurement and realisation of derivatives	-	(59)	-	-	-	**(59)**
Note 4.3	Fees and charges on bank loans drawn	-	-	-	(48)	-	**(48)**
	Other losses	-	-	(13)	-	-	**(13)**
	Total net gain/(loss)	**-**	**(90)**	**689**	**(647)**	**245**	**197**

	from 1 January 2018 to 31 December 2018	Financial assets measured at fair value through other comprehensive income	Financial assets/liabilities measured at fair value through profit or loss	Financial assets measured at amortised cost	Financial liabilities measured at amortised cost	Hedging instruments	Total
	Dividends income	1	-	-	-	-	**1**
	Interest income	-	-	265	-	-	**265**
Note 6.2	Gains due to the reversal of allowances for impairment of loans granted to joint ventures	-	-	733	-	-	**733**
Note 4.3	Interest costs	-	-	-	(93)	-	**(93)**
Note 4.2	Foreign exchange gains/(losses)	-	93	753	(253)	-	**593**
Note 4.3	Foreign exchange losses	-	-	-	(593)	-	**(593)**
Note 4.4	Impairment losses	-	-	(11)	-	-	**(11)**
Note 7.2	Revenues/(costs) from contracts with customers	-	(17)	-	-	125	**108**
Note 4.2	Gains on measurement and realisation of derivatives	-	216	-	-	-	**216**
Note 4.2	Losses on measurement and realisation of derivatives	-	(305)	-	-	-	**(305)**
Note 4.3	Gains on measurement of derivatives	-	11	-	-	-	**11**
Note 4.3	Fees and charges on bank loans drawn	-	-	-	(15)	-	**(15)**
	Other losses	-	-	(13)	(9)	-	**(22)**
	Total net gain/(loss)	**1**	**(2)**	**1 727**	**(963)**	**125**	**888**

The fair value hierarchy of financial instruments

Classes of financial instruments	As at 31 December 2019		As at 31 December 2018	
	Level 1	Level 2	Level 1	Level 2
Loans granted	-	17	-	15
Listed shares	326	-	427	-
Unquoted shares	-	105	-	99
Trade receivables	-	300	-	304
Other financial assets	-	24	-	8
Derivatives, of which:	-	143	-	416
Assets	-	417	-	621
Liabilities	-	(274)	-	(205)

Methods and measurement techniques used by the Group in determining fair values of each class of financial asset or financial liability.

Level 1

Listed shares
Shares are measured based on quotations from the Warsaw Stock Exchange and the TSX Venture Exchange in Toronto.

Level 2

Unquoted shares

Unquoted shares are measured using the adjusted net assets. Observable Input data other than the ones from the active market were used in the measurement (e.g. transaction prices of real estate similar to the one subjected to measurement, market interest rates of State Treasury bonds and term deposits in financial institutions, and the risk-free discount rate published by the European Insurance and Occupational Pensions Authority).

Trade receivables
Receivables arising from the realisation of sales under contracts which are finally settled using future prices were measured using forward prices, depending on the period/month of contractual quoting. Forward prices are from the Reuters system.
Trade receivables transferred to factoring, due to the short term between the transfer of receivables to the factor and their payment and to the low credit risk of the counterparty (factor), the fair value of these receivables includes an adjustment by the amount of transaction costs, which are the factor's compensation, and therefore corresponds to the amount of trade receivables transferred to the factor (nominal value from the invoice) less interest.

Other financial assets/liabilities
Receivables/payables due to the settlement of derivatives, whose date of payment falls two working days after the end of the reporting period were recognised in this item. These instruments were measured to fair value set per the reference price applied in the settlement of these transactions.

Currency and currency-interest derivatives

In the case of currency derivatives transactions on the currency market and currency-interest transactions (CIRS), the forward prices from the maturity dates of individual transactions were used to determine their fair value. The forward price for currency exchange rates was calculated on the basis of fixing and appropriate interest rates. Interest rates for currencies and the volatility ratios for exchange rates were taken from Reuters. The standard Garman-Kohlhagen model is used to measure European options on currency markets.

Metals derivatives

In the case of derivatives on the commodity market, forward prices from the maturity dates of individual transactions were used to determine their fair value. In the case of copper, official closing prices from the London Metal Exchange were used, and with respect to silver and gold - the fixing price set by the London Bullion Market Association. Volatility ratios and forward prices for measurement of derivatives at the end of the reporting period were obtained from the Reuters system. Levy approximation to the Black-Scholes model was used for Asian options pricing on metals markets.

Level 3

No financial instruments were measured at fair value which were classified to level 3 in either the reporting or the comparable period in the Group.

There was no transfer in the Group of financial instruments between individual levels of the fair value hierarchy, in either the reporting or the comparable periods, nor was there any change in the classification of instruments as a result of a change in the purpose or use of these instruments.

Note 7.2 Derivatives

Accounting policies

Derivatives are classified as financial assets/liabilities held for sale, unless they have not been designated as hedging instruments.

Purchases or sales of derivatives are recognised at the transaction date.

Derivatives not designated as hedges are initially recognised at fair value and at the end of the reporting period are measured at fair value, with recognition of the gains/losses on measurement in profit or loss.

Within the KGHM Polska Miedź S.A. Group, the Parent Entity applies hedge accounting for cash flows. Hedge accounting aims at reducing volatility in the Parent Entity's net result, arising from periodic changes in the measurement of transactions hedging individual types of market risk to which the Parent Entity is exposed. Hedging instruments may be derivatives as well as bank and other loans in foreign currencies.

The designated hedges relate to the future sales transactions forecasted as assumed in the Sales Plan for a given year. These plans are prepared based on the production capacities for a given period. The Parent Entity estimates that the probability that transactions included in the production plan will occur is very high, as from the historical point of view sales were always realised at the levels assumed in Sales Plans. Future cash flows arising from interest on bonds issued in PLN also represent a hedged position.

The Parent Entity may use natural currency risk hedging through the use of hedge accounting for bank and other loans denominated in USD, and designates them as positions hedging foreign currency risk, which relates to future revenues of the Parent Entity from sales of copper, silver and other metals, denominated in USD.

Gains and losses arising from changes in the fair value of the cash flow hedging instrument are recognised in other comprehensive income, to the extent by which the change in fair value represents an effective hedge of the associated hedged item. The portion which is ineffective is recognised in profit or loss as other operating income or costs. Gains or losses arising from the cash flow hedging instrument are recognised in profit or loss as a reclassification adjustment, in the same period or periods in which the hedged item affects profit or loss.

The Parent Entity ceases to account for derivatives as hedging instruments when they expire, are sold, terminated or settled, or when the goal of risk management for a given relation has changed.

The Parent Entity may designate a new hedging relationship for a given derivative, change the intended use of the derivative, or designate it to hedge another type of risk. In such a case, for cash flow hedges, gains or losses which arose in the periods in which the hedge was effective are retained in accumulated other comprehensive income until the hedged item affects profit or loss.

If the hedge of a forecasted transaction ceases to function because it is probable that the forecasted transaction will not occur, then the net gain or loss recognised in other comprehensive income is immediately transferred to profit or loss as a reclassification adjustment.
If a hybrid contract has a basic instrument, which is not a financial asset, the derivative is separated from a basic instrument and is measured pursuant to rules for derivatives only, if (i) economic characteristic and risk of the embedded instrument are not strictly related to the character of the host contract and its risks, (ii) a separate instrument, whose characteristics reflect the traits of the embedded derivative, would fulfil the conditions of the derivatives, and (iii) combined instrument is not classified to financial assets measured at fair value, whose results of revaluation are recognised in other income or other operating costs in the reporting period. If an embedded derivative is separated, the host instrument is measured pursuant to appropriate accounting principles. The Parent Entity separates embedded derivatives in commodities transactions with settlement periods in the future, after the date of recognising a purchase invoice in the books up to the date of final settlement of the transaction.

If a hybrid contract has a basic instrument, which is a financial asset, the criteria for classification of financial assets are applied to the whole contract.

Hedging derivatives – open items as at the end of the reporting period

Type of derivative	As at 31 December 2019					As at 31 December 2018				
	Financial assets		Financial liabilities		Net total	Financial assets		Financial liabilities		Net total
	Non-current	Current	Non-current	Current		Non-current	Current	Non-current	Current	
Derivatives – Commodity contracts - Copper										
Options – collar	14	99	(8)	(30)	75	11	104	-	(1)	114
Options – seagull	14	140	-	(1)	153	245	143	(10)	(1)	377
Derivatives – Commodity contracts - Silver										
Purchased put option	1	5	-	-	6	-	-	-	-	-
Derivatives – Currency contracts										
Options USD – collar	36	38	(10)	(7)	57	52	38	(19)	(4)	67
Options USD – seagull	58	-	(26)	-	32	-	-	-	-	-
Purchased put option	-	7	-	-	7	-	-	-	-	-
Derivatives – Currency-interest rate										
Cross Currency Interest Rate Swap (CIRS)	-	-	(74)	-	(74)	-	-	-	-	-
TOTAL HEDGING INSTRUMENTS	**123**	**289**	**(118)**	**(38)**	**256**	**308**	**285**	**(29)**	**(6)**	**558**

Trade derivatives – open items as at the end of the reporting period

Type of derivative	As at 31 December 2019					As at 31 December 2018				
	Financial assets		Financial liabilities		Net total	Financial assets		Financial liabilities		Net total
	Non-current	Current	Non-current	Current		Non-current	Current	Non-current	Current	
Derivatives – Commodity contracts - Copper										
Options – seagull (sold put options)	-	-	(1)	(3)	(4)	-	-	(39)	(5)	(44)
QP adjustment swap transactions	-	-	-	(8)	(8)	-	4	-	-	4
Derivatives – Commodity contracts - Gold										
QP adjustment swap transactions	-	2	-	(2)	-	-	2	-	(2)	-
Derivatives – Currency contracts										
Collar and forward/swap EUR	1	2	-	-	3	1	1	(1)	(1)	-
Sold put options USD	-	-	(12)	-	(12)	-	-	-	-	-
Derivatives – Interest rate										
Options – purchased CAP	-	-	-	-	**-**	11	9	**-**	-	**20**
Embedded derivatives										
Acid and water supply contracts	-	-	(52)	**(31)**	**(83)**	-	-	(93)	(29)	**(122)**
Purchase contracts for metal-bearing materials	-	-	-	(9)	**(9)**	-	-	-	-	**-**
TOTAL TRADE INSTRUMENTS	1	4	(65)	**(53)**	**(113)**	**12**	**16**	**(133)**	**(37)**	**(142)**

Open hedging derivatives	Notional	Average weighted price /exchange rate/interest rate %	Maturity/ settlement period		Period of profit/loss impact	
Type of derivative	copper [t] silver [mn ounces] currency [USD mn] CIRS [PLN mn]	[USD/t] [USD/oz t] [USD/PLN] [USD/PLN, LIBOR]	from	to	from	to
Copper – *seagulls*	54 000	6 854-8 842	Jan '20	- Dec '20	Feb '20	- Jan '21
Copper – *collars*	135 000	6 053-7 107	Jan '20	- Dec '20	Feb '20	- Jan '21
Silver – purchased put option	3.60	17.00	Jan '20	- Dec '20	Feb '20	- Jan '21
Currency – *seagulls*	540	3.70-4.30	Jan '21	- Dec '21	Jan '21	- Dec '21
Currency – *collars*	1 260	3.66-4.34	Jan '20	- Dec '21	Jan '20	- Dec '21
Currency – purchased put option	120	3.80	Jan '20	- Jun '20	Jan '20	- Jun '20
Currency – interest rate – CIRS	400	3.78 and 3.23%		Jun '24		Jun '24
Currency - interest rate – CIRS	1 600	3.81 and 3.94%		Jun '29	Jun '29	- Jul '29

The impact of derivatives and hedging transactions on the items of the statement of profit or loss and on the statement of comprehensive income is presented below.

	Statement of profit or loss	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
	Revenues from contracts with customers	245	125
	Interest on borrowings	(1)	-
	Other operating and finance income/costs:	(101)	(78)
	on realisation of derivatives	(150)	(141)
	on measurement of derivatives	49	63
	Impact of derivatives and hedging instruments on profit or loss for the period	**143**	**47**
	Statement of comprehensive income		
Note 8.2.2	Impact of measurement of hedging transactions (effective portion)	(303)	318
Note 8.2.2	Reclassification to revenues from contracts with customers due to realisation of a hedged item	(245)	(125)
Note 8.2.2	Reclassification to other operating costs due to realisation of a hedged item (settlement of the hedging cost)	159	156
	Impact of hedging transactions	**(389)**	**349**
	TOTAL COMPREHENSIVE INCOME	**(246)**	**396**

Note 7.3 Other financial instruments measured at fair value

Accounting policies

The item "Other financial instruments measured at fair value" mainly includes shares (listed and unquoted) which were not acquired for trading purposes, for which the option of measurement at fair value through other comprehensive income was selected in order to limit the volatility of the result and loans granted measured at fair value through profit or loss, because they did not pass the SPPI test.

Shares are initially recognised at fair value increased by transaction costs, and at the end of the reporting period they are measured at fair value with recognition of gains/losses from measurement in other comprehensive income. The amounts recognised in other comprehensive income are not transferred later to profit or loss. Accumulated gains/losses on a given equity instrument are transferred within equity to retained earnings at the moment an equity instrument is ceased to be recognised.

Dividends from such investments are recognised in profit or loss.

The fair value of unquoted shares is calculated using the adjusted net assets method. The application of this method is due to the specific nature of assets of companies, whose shares are subject to measurement. Observable Input data other than the ones from the active market were used in the measurement (e.g. transaction prices of real estate similar to the one subjected to measurement, market interest rates of State Treasury bonds and fixed-term deposits in financial institutions, and the risk-free discount rate published by the European Insurance and Occupational Pensions Authority).

The fair value of listed shares is calculated based on the closing price as at the end of the reporting period.

The translation of shares expressed in a foreign currency is performed according to the accounting policies described in Note 1.3.

The fair value of loans is set at the present value of future cash flows, including any change in market risk and credit risk factors during the loans' life.

	As at 31 December 2019	As at 31 December 2018
Shares of listed companies (Warsaw Stock Exchange and TSX Venture Exchange) including:	326	427
TAURON POLSKA ENERGIA S.A.	299	398
GRUPA AZOTY S.A.	23	25
ABACUS MINING & EXPLORATION	1	1
Other shares listed on the TSX Venture Exchange	3	3
Unquoted shares	105	99
Loans granted	17	15
Other financial instruments measured at fair value	**448**	**541**

The measurement of listed shares is classified to level 1 of the fair value hierarchy (i.e. measurement is based on the prices of these shares listed on an active market at the measurement date), while the measurement of unquoted shares is classified to level 2 (i.e. measurement based on non-observable data).

The measurement of loans granted is classified to level 2 of the fair value hierarchy.

Due to investments in listed companies, the Group is exposed to price risk. Changes in the listed share prices of these companies resulting from the current macroeconomic situation may have a significant impact on the level of other comprehensive income and on the accrued amount recognised in equity.

The following table presents the sensitivity analysis of listed companies shares to price changes.

	As at 31 December 2019	Percentage change of share price		As at 31 December 2018	Percentage change of share price	
		56%	-13%		55%	-24%
	Carrying amount	Other comprehensive income	Other comprehensive income	Carrying amount	Other comprehensive income	Other comprehensive income
Listed shares	**326**	182	(44)	**427**	237	(103)

Sensitivity analysis for significant types of market risk to which the Group is exposed presents the estimated impact of potential changes in individual risk factors (at the end of the reporting period) on profit or loss and other comprehensive income.

Potential changes in share prices at the end of the reporting period were determined at the level of maximum deviations in a given year.

Note 7.4 Other financial instruments measured at amortised cost

Accounting policies	Major estimates
The item other financial instruments measured at amortised cost includes financial assets designated to cover the costs of decommissioning mines and restoring tailings storage facilities (accounting policy with respect to the obligation to decommission mines and restore tailings storage facilities is presented in Note 9.4) and other financial assets not classified to other items. Assets included, in accordance with IFRS 9, in the category "measured at amortised cost", are initially recognised at fair value adjusted by transaction costs, which can be directly attributed to the purchase of these assets and measured at amortised cost at the end of the reporting period using the effective interest rate method, reflecting impairment.	Sensitivity analysis of the risk of changes in interest rates of cash accumulated on bank accounts of the Mine Closure Fund and Tailings Storage Facility Restoration Fund and of investments in debt securities is presented in Note 7.5.1.4.

		As at 31 December 2019	As at 31 December 2018
	Non-current financial assets designated for decommissioning mines and restoring tailings storage facilities	**390**	**430**
	Cash held in the Mine Closure Fund and Tailings Storage Facility Restoration Fund	390	364
	Debt securities	-	66
	Other non-current financial receivables, including:	**266**	**286**
	Trade receivables, including:	107	162
	management fee for Sierra Gorda S.C.M.	103	160
	Other loans granted	4	8
Note 7.1	**Total**	**656**	**716**

As at 31 December 2019, non-current financial assets for decommissioning mines and the restoration of tailings storage facilities were presented as cash in the amount of PLN 390 million (2018: PLN 430 million) collected by the Parent Entity and the KGHM INTERNATIONAL LTD. Group based on obligations resulting from law, among others the Law on Geology and Mining and the Waste Act as well as from laws applicable in the United States of America and Canada.

Financial assets designated for decommissioning mines and restoring tailings storage facilities are exposed to the credit risk described in Note 7.5.2.4.

Details regarding revaluation of the provision for the decommissioning costs of mines and other technological facilities are described in Note 9.4.

Note 7.5 Financial risk management

In the course of its business activities the Group is exposed to the following main financial risks:

- market risks:
  - commodity risk,
  - risk of changes in foreign exchange rates,
  - risk of changes in interest rates,
  - price risk related to investments in shares of listed companies (Note 7.3),
- credit risk, and
- liquidity risk (the process of financial liquidity management is described in Note 8).

The Group identifies and measures financial risk on an ongoing basis, and also takes actions aimed at minimising their impact on the financial position.

The Parent Entity manages identified financial risk factors in a conscious and responsible manner, using the adopted Market Risk Management Policy, the Financial Liquidity Management Policy and the Credit Risk Management Policy. The process of financial risk management in the Parent Entity is supported by the work of the Market Risk Committee, the Financial Liquidity Committee and the Credit Risk Committee.

Note 7.5.1 Market risk

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

Note 7.5.1.1 Principles and techniques of market risk management

In market risk management (especially commodity and currency risk) the scale and profile of activities of the Parent Entity and of mining companies of KGHM INTERNATIONAL LTD. is of the greatest significance and impact on the results of the KGHM Polska Miedź S.A. Group.

The Parent Entity actively manages market risk by taking actions and making decisions in this regard within the context of the KGHM Polska Miedź S.A. Group's global exposure as a whole.

In accordance with the adopted policy, the goals of the market risk management process in the Group are as follows:

- limit volatility in the financial result;
- increase the probability of meeting budget targets;
- decrease the probability of losing financial liquidity;
- maintain financial health; and
- support the process of strategic decision making related to investing activities, including financing sources.

The objectives of market risk management should be considered as a whole, and their realisation is determined mainly by the Group's internal situation and market conditions.
The goals of market risk management at the Group level are achieved through their realisation in individual mining companies of the Group, with the coordination of these activities at the Parent Entity's level, in which key tasks related to the process of market risk management in the Group were centralised (such as coordination of the identification of sources of exposure to market risk, proposing hedging strategies, contacting financial institutions in order to sign, confirm and settle derivative transactions, and calculating measurements to fair value).

The primary technique used by the Parent Entity in market risk management is the utilisation of hedging strategies involving derivatives. Natural hedging is also used. Some other domestic companies of the Group make use of derivatives. However, only the Parent Entity applies hedging strategies, as understood by hedge accounting.

Taking into account the potential scope of their impact on the Group's results, market risk factors were divided into the following groups:

	Group	Market risk	Approach to risk management
Note 7.2	Group I – factors having the greatest impact on the Group's total exposure to market risk	Copper price	A strategic approach is applied to this group, aimed at systematically building up a hedging position comprising production and revenues from sales for subsequent periods while taking into account the long-term cyclical nature of various markets. A hedging position may be restructured before it expires.
Note 7.2		Silver price	
Note 7.2		USD/PLN exchange rate	
Note 7.2	Group II – other exposures to market risk	Prices of other metals and merchandise	From the Group's point of view, this group is comprised of less significant risks, although sometimes these risks are significant from individual entities' points of view. Therefore, it is tactically managed - on an ad-hoc basis, taking advantage of favourable market conditions.
Note 7.2		Other exchange rates	
Note 7.2		Interest rates	

In market risk management various approaches are applied for particular, identified exposure groups.
The Parent Entity considers the following factors when selecting hedging strategies or restructuring hedging positions: current and forecasted market conditions, the internal situation of the Entity, the effective level and cost of hedging, and the impact of the minerals extraction tax.

The Parent Entity applies an integrated approach to managing the market risk to which it is exposed. This means a comprehensive approach to market risk, and not to each element individually. An example is the hedging transactions on the currency market, which are closely related to contracts entered into on the metals market. The hedging of metals sales prices determines the probability of achieving specified revenues from sales in USD, which represent a hedged position for the strategy on the currency market.

The Parent Entity only executes those derivatives which it has the ability to evaluate internally, using standard pricing models appropriate for a particular type of derivative, and which can be traded without significant loss of value with a counterparty other than the one with whom the transaction was initially entered into. In evaluating the market value of a given instrument, the Parent Entity uses information obtained from leading information services, banks, and brokers.

The Market Risk Management Policy in the Group permits the use of the following types of instruments:

- swaps;
- forwards and futures;
- options; and
- structures combining the above instruments.

The instruments applied may be, therefore, either of standardised parameters (publicly traded instruments) or non-standardised parameters (over-the-counter instruments). The primary instruments applied are cash flow hedging instruments meeting the requirements for effectiveness as understood by hedge accounting. The effectiveness of the financial hedging instruments applied by the Parent Entity in the reporting period is continually monitored and assessed (details in Note 7.2 Derivatives - accounting policies).

The economic relationship between a hedging instrument and a hedged position is based on the sensitivity of the value of the position to the same market factors (metals prices, exchange rates or interest rates) and on matching appropriate key parameters of the hedging instrument and the hedged position (volume/notional amount, maturity date).

The hedge ratio of the established hedging relationship is set at the amount ensuring the effectiveness of the relationship and is consistent with the actual volume of the hedged position and the hedging instrument. Sources of potential ineffectiveness of the relationship arise from a mismatch of the parameters of the hedging instrument and the hedged position (e.g. the notional amount, maturity, base instrument, impact of credit risk). When structuring a hedging transaction, the Parent Entity aims to ensure a maximal match between these parameters to minimise the sources of ineffectiveness.

The Parent Entity quantifies its market risk exposure using a consistent and comprehensive measure. Market risk management in the Group is supported by simulations (such as scenario analysis, stress-tests, backtests) and calculated risk measures. The risk measures being used are mainly based on mathematical and statistical modelling, which uses historical and current market data concerning risk factors and takes into consideration the current exposure to market risk.

One of the measures used as an auxiliary tool in making decisions in the market risk management process in the Parent Entity is EaR - Earnings at Risk. This measure indicates the lowest possible level of profit for the period for a selected level of confidence (for example, with 95% confidence the profit for a given year will be not lower than…). The EaR methodology enables the calculation of profit for the period incorporating the impact of changes in market prices of copper, silver and foreign exchange rates in the context of budget plans. EBITDA-at-Risk ratio is calculated for both the KGHM INTERNATIONAL LTD. Group and the JV Sierra Gorda S.C.M.

Due to the risk of production cutbacks (for example because of force majeure) or failure to achieve planned foreign currency revenues, as well as purchases of metals contained in purchased materials, limits with respect to commitment in derivatives have been set.

For the Parent Entity limits on metals and currency markets were set at:

- up to 85% of planned, monthly sales volume of copper, silver and gold from own concentrates, while: for copper and silver - up to 50% with respect to instruments which are obligations of the Parent Entity (for financing the hedging strategy), and up to 85% with respect to instruments representing the rights of the Parent Entity,
- up to 85% of planned, monthly revenues from the sale of products from own concentrates in USD or of the monthly, contracted net currency cash flows in the case of other currencies. For purposes of setting the limit, expenses for servicing the debt denominated in USD decrease the nominal amount of exposure to be hedged.

With respect to the risk of changes in interest rates, the Parent Entity has set a limit of commitment in derivatives of up to 100% of the debt's nominal value in every interest period, as stipulated in the signed agreements.

For selected mining companies in the Group, limits were set for commitment in derivatives on the copper and currency markets at the same levels as those functioning in the Parent Entity, while with respect to transactions on the nickel, silver and gold markets the limits were set as up to 60% of planned, monthly sales volume from own concentrates.

These limits are in respect both of hedging transactions as well as of the instruments financing these transactions.

The maximum time horizon within which the Group decides to limit market risk is set in accordance with the technical and economic planning process and amounts to 5 years, whereas in terms of interest rate risk, the time horizon reaches up to the maturity date of the long-term financial liabilities of the Group.

Note 7.5.1.2 Commodity risk

The Parent Entity is exposed to the risk of changes in the prices of the metals it sells: copper, silver, gold and lead. Furthermore, the KGHM INTERNATIONAL LTD. Group is exposed to the risk of changes in the prices of copper, gold, nickel, molybdenum, platinum and palladium.

In the Parent Entity and the KGHM INTERNATIONAL LTD. Group, the price formulas used in physical delivery contracts are mainly based on average monthly quotations from the London Metal Exchange for copper and other common metals and from the London Bullion Market for precious metals. Within the commercial policy, the Parent Entity and KGHM INTERNATIONAL LTD. set the price base for physical delivery contracts as the average price of the appropriate future month.

The permanent and direct link between sales proceeds and metals prices, without similar relationships on the expenditures side, results in a strategic exposure. In turn, operating exposure is a result of possible mismatches in the pricing of physical contracts with respect to the Group's benchmark profile, in particular in terms of the reference prices and the quotation periods.

On the metals market, the Group has a so-called long position, which means it has higher sales than purchases. The analysis of the Group's strategic exposure to market risk should be performed by deducting from the volume of metals sold the amount of metal in purchased materials.

The Group's strategic exposure to the risk of changes in the price of copper and silver in years 2018-2019 is presented in the table below:

	2019			2018		
	Net	Sales	Purchases	Net	Sales	Purchases
Copper [t]	**472 218**	631 584	159 366	**464 795**	592 274	127 479
Silver [t]	**1 378**	1 397	19	**1 216**	1 234	18

The notional amount of copper price hedging strategies settled in 2019 represented approx. 22% (in 2018: 19%) of the total sales of this metal realised by the Parent Entity (it represented approx. 30% of net sales[1] in 2019 and 25% in 2018). In 2018 and 2019 revenues from silver sales were not hedged by derivatives.

With respect to strategic management of market risk in 2019, the Parent Entity implemented copper price hedging transactions with a total notional amount of 153 thousand tonnes and a maturity period from July 2019 to December 2020 (of which: 135 thousand tonnes were in respect of hedging copper price for 2020) and also silver price hedging transactions with a total notional amount of 3.6 million ounces and a maturity period from January 2020 to December 2020. In addition, as part of the management of a net trading position in 2019, QP adjustment swap transactions were entered into on the copper and gold markets with maturities of up to June 2020. As a result, as at 31 December 2019 the Parent Entity held an open derivatives position for 199.5 thousand tonnes of copper (of which: 189 thousand tonnes came from strategic management of market risk, while 10.5 thousand tonnes came from the management of a net trading position) and 3.6 million troy ounces of silver.

The condensed tables of open derivatives transactions held by the Parent Entity on the copper and silver markets as at 31 December 2019, entered into as part of the strategic management of market risk, is presented below (the hedged notional in the presented periods is allocated evenly on a monthly basis).

[1] Copper sales less copper in purchased metal-bearing materials.

Hedging against copper price risk

	Instrument	Notional	Option strike price – Sold put option	Option strike price – Purchased put option	Option strike price – Sold call option	Average weighted premium	Effective hedge price	Hedge limited to	Participation limited to
		[tonnes]	[USD/t]	[USD/t]	[USD/t]	[USD/t]	[USD/t]	[USD/t]	[USD/t]
1st half	Seagull	12 000	5 000	6 900	9 000	-250	6 650	5 000	9 000
1st half	Seagull	2 460	5 000	6 900	8 800	-250	6 650	5 000	8 800
1st half	Seagull	12 540	5 000	6 800	8 700	-220	6 580	5 000	8 700
1st half	Collar	18 000		6 400	7 800	-248	6 152		7 800
1st half	Collar	45 000		6 000	7 000	-243	5 757		7 000
2nd half	Seagull	12 000	5 000	6 900	9 000	-250	6 650	5 000	9 000
2nd half	Seagull	2 460	5 000	6 900	8 800	-250	6 650	5 000	8 800
2nd half	Seagull	12 540	5 000	6 800	8 700	-220	6 580	5 000	8 700
2nd half	Collar	72 000		6 000	7 000	-232	5 768		7 000
	TOTAL 2020	**189 000**							

Hedging against silver price risk

Instrument	Notional	Option strike price – Sold put option	Option strike price – Purchased put option	Option strike price – Sold call option	Average weighted premium	Effective hedge price	Hedge limited to	Participation limited to
	[mn ounces]	[USD/oz t]	[USD/oz t]	[USD/oz t]	[USD/oz t]	[USD/oz t]	[USD/oz t]	[USD/oz t]
Purchased put option	3.60	-	17.00	-	-0.67	16.33	-	-
TOTAL 2020	**3,60**							

In 2019 and in 2018, neither KGHM INTERNATIONAL LTD. nor any of the mining companies implemented any forward transactions on the commodity market. As at 31 December 2019, the risk of changes in metals prices was also related to derivatives embedded in the long-term contracts for supply of sulphuric acid and water.

An analysis of the Group's sensitivity to the risk of changes in copper prices as at 31 December 2019 is presented in the table below

Financial assets and liabilities	Value at risk	Carrying amount 31.12.2019	Copper price change [USD/t] 7 425 (+21%) – Profit or loss	7 425 (+21%) – Other comprehensive income	4 785 (-22%) – Profit or loss	4 785 (-22%) – Other comprehensive income
	[PLN million]	[PLN million]				
Derivatives - copper	216	216	4	(398)	(89)	932
Embedded derivatives	(92)	(92)	(55)	-	49	-
Impact on profit or loss			**(51)**		**(40)**	
Impact on other comprehensive income				**(398)**		**932**

An analysis of the Group's sensitivity to the risk of changes in copper prices as at 31 December 2018 is presented in the table below

Financial assets and liabilities	Value at risk	Carrying amount 31.12.2018	Copper price change [USD/t] 7 352 (+24%) – Profit or loss	7 352 (+24%) – Other comprehensive income	4 573 (-23%) – Profit or loss	4 573 (-23%) – Other comprehensive income
	[PLN million]	[PLN million]				
Derivatives - copper	451	451	35	(456)	(148)	668
Embedded derivatives	(122)	(122)	(45)	-	44	-
Impact on profit or loss			**(10)**		**(104)**	
Impact on other comprehensive income				**(456)**		**668**

An analysis of the Group's sensitivity to the risk of changes in silver prices as at 31 December 2019 is presented in the table below:

Financial assets and liabilities	Value at risk [PLN million]	Carrying amount 31.12.2019 [PLN million]	Silver price change [USD/oz t] 23.00 (+27%)		13.39 (-26%)	
			Profit or loss	Other comprehensive income	Profit or loss	Other comprehensive income
Derivatives – silver	6	6	-	(6)	-	42

As at 31 December 2018, the Group did not hold any open positions in derivatives on the silver market.

In order to determine the potential changes in metals prices for purposes of sensitivity analysis of commodity risk factors (copper), the mean reverting Schwarz model (the geometrical Ornstein-Uhlenbeck process) was used.

Note 7.5.1.3 Risk of changes in foreign exchange rates

Regarding the risk of changes in foreign exchange rates within the KGHM Polska Miedź S.A. Group, the following types of exposures were identified:

- transaction exposure related to the volatility of cash flows in the base currency;
- exposure related to the volatility of selected items of the statement of financial position in the base (functional) currency;
- the exposure to net investments in foreign operations concerning volatility of consolidated equity in the Group's base currency (presentation currency).

The transaction exposure to currency risk derives from cash flow-generating contracts, whose values expressed in the base (functional) currency depend on future levels of exchange rates of the foreign currencies with respect to the base currency. Cash flows exposed to currency risk may possess the following characteristics:

- denomination in the foreign currency – cash flows are settled in foreign currencies other than the functional currency; and
- indexation in the foreign currency – cash flows may be settled in the base currency, but the price (i.e. of a metal) is set in a different foreign currency.

The key source of exposure to currency risk in the Parent Entity's business operations are the proceeds from sales of products (with respect to metals prices, processing and producer margins).

The exposure to currency risk derives also from items in the consolidated statement of financial position denominated in foreign currencies, which under the existing accounting regulations must be translated, upon settlement or periodic valuation, including the translation of foreign operations statements, by applying the current exchange rate of the foreign currencies versus the base (functional) currency. Changes in the carrying amounts of such items between valuation dates result in the volatility of profit or loss for the period or of other comprehensive income.

Items in the consolidated statement of financial position which are exposed to currency risk include in particular:

- trade receivables and trade payables related to purchases and sales denominated in foreign currencies;
- financial receivables due to loans granted in foreign currencies;
- financial liabilities due to borrowings in foreign currencies;
- cash and cash equivalents in foreign currencies; and
- derivatives on metals market.

As for the currency market, the notional amount of settled transactions hedging revenues from metals sales amounted to approx. 21% (in 2018: 32%) of the total revenues from sales of copper and silver realised by the Parent Entity in 2019.

In 2019 the Parent Entity entered into transactions hedging against a change in the USD/PLN exchange rate with a total notional amount of USD 1 560 million and maturity falling from July 2019 to December 2021 (of which: USD 1 380 million related to the hedging of the exchange rate for the years 2020-2021). Put options and collar and seagull options structures (European options) were purchased. Furthermore, in 2019 the Parent Entity entered into *Cross Currency Interest Rate Swap* (CIRS) transactions for the notional amount of PLN 2 billion, hedging against the market risk connected with the issue of bonds in PLN with a variable interest rate[2].

The condensed table of open transactions in derivatives on the currency market as at 31 December 2019 is presented below (the hedged notional in the presented periods is allocated evenly on a monthly basis).

[2] The debt due to bond issue in PLN generates a currency risk because most of the sales revenues of the Company are USD-denominated.

Hedging against USD/PLN currency risk

	Instrument	Notional	Option strike price			Average weighted premium	Effective hedge price	Hedge limited to	Participation limited to
			Sold put option	Purchased put option	Sold call option				
		[USD million]		[USD/PLN]		[PLN for USD 1]	[USD/PLN]	[USD/PLN]	[USD/PLN]
1st half	Collar	360		3.50	4.25	-0.06	3.44		4.25
1st half	Collar	180		3.75	4.40	-0.08	3.67		4.40
1st half	Purchased put option	120		3.80		-0.05	3.75		
2nd half	Collar	180		3.50	4.25	-0.04	3.46		4.25
2nd half	Collar	180		3.75	4.40	-0.08	3.67		4.40
2nd half	Collar	120		3.80	4.40	-0.04	3.76		4.40
	TOTAL 2020	**1 140**							
1st half	Seagull	270	3.20	3.70	4.30	-0.07	3.63	3.20	4.30
1st half	Collar	120		3.80	4.40	-0.05	3.75		4.40
2nd half	Seagull	270	3.20	3.70	4.30	-0.07	3.63	3.20	4.30
2nd half	Collar	120		3.80	4.40	-0.05	3.75		4.40
	TOTAL 2021	**780**							

Hedging against currency-interest rate risk connected with the issue of bonds with a variable interest rate in PLN

	Instrument	Notional	Average exchange rate
		[PLN mn]	[USD/PLN]
VI 2024	CIRS	400	3.78
VI 2029	CIRS	1 600	3.81
	TOTAL	**2 000**	

Some of the Group's Polish companies managed the currency risk related to their core business (among others trade) by opening transactions in derivatives, among others on the USD/PLN and EUR/PLN markets. The table of open transactions as at 31 December 2019 is not presented, due to its immateriality for the Group.

As for managing currency risk, the Parent Entity applies natural hedging by borrowing in the currency in which it has revenues. As at 31 December 2019, following their translation to PLN, the bank loans and the investment loans which were drawn in USD amounted to PLN 4 980 million (as at 31 December 2018: PLN 7 655 million).

The currency structure of financial instruments exposed to currency risk (change in the USD/PLN, EUR/PLN, CAD/PLN and GBP/PLN exchange rates) of the KGHM Polska Miedź S.A. Group is presented in the tables below.

Financial instruments	Value at risk as at 31 December 2019				
	total PLN million	USD million	EUR million	CAD million	GBP million
Shares	**4**	-	-	1	-
Trade receivables	**523**	112	21	3	-
Cash and cash equivalents	**510**	80	25	20	8
Loans granted to joint ventures	**5 694**	1 499	-	-	-
Other financial assets	**369**	70	2	21	6
Derivatives *	**143**	34	-	-	-
Trade payables	**(794)**	(105)	(91)	(6)	2
Borrowings	**(5 113)**	(1 321)	(14)	(13)	-
Other financial liabilities	**(17)**	(2)	(2)	-	(1)

**Transactions on the commodities and interest rate markets which are denominated in USD and translated to PLN at the exchange rate as at the end of the reporting period are presented in the item "derivatives", in the column "USD million", while the column "total PLN million" also includes the fair value of derivatives which are denominated solely in PLN.*

Financial instruments	Value at risk as at 31 December 2018				
	total PLN million	USD million	EUR million	CAD million	GBP million
Shares	**4**	-	-	1	-
Trade receivables	**690**	144	28	10	1
Cash and cash equivalents	**819**	157	24	6	23
Loans granted to joint ventures	**5 199**	1 383	-	-	-
Other financial assets	**429**	92	1	23	3
Derivatives *	**416**	93	-	-	-
Trade payables	**(649)**	(105)	(50)	(13)	(1)
Borrowings	**(7 830)**	(2 037)	(39)	-	-
Other financial liabilities	**(56)**	(6)	(1)	-	(6)

**Transactions on the commodities and interest rate markets which are denominated in USD and translated to PLN at the exchange rate as at the end of the reporting period are presented in the item "derivatives", in the column "USD million", while the column "total PLN million" also includes the fair value of derivatives on the currency market which are denominated solely in PLN.*

The sensitivity analysis of the Group to currency risk as at 31 December of each year is presented in the tables below:

2019	Value at risk	Carrying amount 31.12.2019	Change in the USD/PLN exchange rate				Change in the EUR/PLN exchange rate		Change in the CAD/PLN exchange rate		Change in the GBP/PLN exchange rate	
			4.28 (+13%)		3.33 (-12%)		4.64 (+9%)	3.98 (-6%)	3.31 (+14%)	2.55 (-13%)	5.71 (+14%)	4.42 (-8%)
Financial assets and liabilities	[PLN million]	[PLN million]	profit or loss	other comprehensive income	profit or loss	other comprehensive income	profit or loss	profit or loss	profit or loss	profit or loss	profit or loss	profit or loss
Shares	4	431	-	-	-	-	-	-	-	-	-	-
Trade receivables	523	795	44	-	(43)	-	7	(5)	1	(1)	-	-
Cash and cash equivalents	510	1 016	31	-	(30)	-	8	(6)	6	(6)	5	(4)
Loans granted to joint ventures	5 694	5 694	590	-	(568)	-	-	-	-	-	-	-
Other financial assets	369	847	28	-	(27)	-	1	(1)	7	(6)	3	(3)
Derivatives	143	143	1	(591)	(41)	816	(8)	7	-	-	-	-
Trade payables	(794)	(2 940)	(41)	-	40	-	(28)	20	(2)	2	1	(1)
Borrowings	(5 113)	(7 873)	(520)	-	501	-	(4)	3	(4)	4	-	-
Other financial liabilities	(17)	(144)	(1)	-	1	-	(1)	-	-	-	-	-
		Impact on profit or loss	**132**		**(167)**		**(25)**	**18**	**8**	**(7)**	**9**	**(8)**
		Impact on other comprehensive income		**(591)**		**816**						

2018	Value at risk	Carrying amount 31.12.2018	Change in the USD/PLN exchange rate				Change in the EUR/PLN exchange rate		Change in the CAD/PLN exchange rate		Change in the GBP/PLN exchange rate	
			4.27 (+13%)		3.24 (-14%)		4.68 (+9%)	3.99 (-7%)	3.15 (+14%)	2.42 (-12%)	5.47 (+14%)	4.23 (-12%)
Financial assets and liabilities	[PLN million]	[PLN million]	profit or loss	other comprehensive income	profit or loss	other comprehensive income	profit or loss	profit or loss	profit or loss	profit or loss	profit or loss	profit or loss
Shares	4	526	-	-	-	-	-	-	-	-	-	-
Trade receivables	690	961	59		(61)	-	9	(7)	3	(3)	-	-
Cash and cash equivalents	819	957	64	-	(67)	-	7	(6)	2	(2)	13	(10)
Loans granted to joint ventures	5 199	5 199	567	-	(589)	-	-	-	-	-	-	-
Other financial assets	429	1 004	38	-	(39)	-	-	-	7	(6)	2	(2)
Derivatives	416	416	(19)	(156)	7	327	(8)	7	-	-	-	-
Trade payables	(649)	(2 224)	(43)	-	44	-	(16)	13	(4)	4	(1)	1
Borrowings	(7 830)	(7 949)	(835)	-	864	-	(12)	10	-	-	-	-
Other financial liabilities	(56)	(147)	(3)	-	3	-	-	-	-	-	(3)	3
		Impact on profit or loss	**(172)**		**162**		**(20)**	**17**	**8**	**(7)**	**11**	**(8)**
		Impact on other comprehensive income		**(156)**		**327**						

In order to determine the potential changes in the USD/PLN, EUR/PLN, CAD/PLN and GBP/PLN exchange rates for sensitivity analysis purposes, the Black-Scholes model (the geometrical Brownian motion) was used.

Note 7.5.1.4 Interest rate risk

In 2019 the Group was exposed to the risk of changes in interest rates due to loans granted to joint ventures, investing cash, the reverse factoring program and using borrowings.

Positions with variable interest rates expose the Group to the risk of changes in cash flow from a given position as a result of changes in interest rates (i.e. it has an impact on the interest costs or income recognised in profit or loss). Positions with fixed interest rates expose the Group to the risk of fair value changes of a given position, excluding positions measured at amortised cost, for which the change in fair value does not affect their measurement and profit or loss.

The main items which are exposed to interest rate risk are presented below:

		As at 31 December 2019			As at 31 December 2018		
		Cash flow risk	Fair value risk	Total	Cash flow risk	Fair value risk	Total
	Cash and cash equivalents	1 373*		**1 373**	1 315*	-	**1 315**
	Loans granted	-	17	**17**	-	15	**15**
Note 7.1	Borrowings	(3 873)	(4 000)	**(7 873)**	(5 112)**	(2 810)	**(7 922)**
	Similar payables	(596)***	-	**(596)**	-	-	**-**

* *Presented amounts include cash accumulated in special purpose funds: Mine Closure Fund and Tailings Storage Facility Restoration Fund*

** *Presented amounts include the preparation fee paid which decreases financial liabilities due to bank loans.*

*** *In order to improve financial liquidity of the Parent Entity and provide suppliers with an additional source of financing, the Parent Entity implemented reverse factoring in the period ended on 31 December 2019. Due to the above, for a part of the portfolio of trade payables, extension of payment dates were agreed upon in exchange for additional consideration in the form of interest. Interest is calculated with a variable rate, based on a fixed margin increased by a specified reference rate determined for individual currencies. Details on reverse factoring may be found in note 10.3 and 10.4.*

In 2019 the Parent Entity entered into *Cross Currency Interest Rate Swap* (CIRS) transactions for the notional amount of PLN 2 billion, hedging against the market risk connected with the issue of bonds in PLN with a variable interest rate.

	Instrument	Notional [PLN million]	Average interest rate [LIBOR]
VI 2024	CIRS	400	3.23%
VI 2029	CIRS	1 600	3.94%
	TOTAL	**2 000**	

Moreover, as at 31 December 2019, the Parent Entity held open derivatives CAP transactions on the interest rate market for 2020 (the maturity dates of options fall on the end of the subsequent quarters), presented in the table below.

Instrument	Notional [USD million]	Option strike price [LIBOR 3M]	Average weighted premium [USD for USD 1 million hedged]	Average weighted premium [%]	Effective hedge level [LIBOR 3M]
Purchase of interest rate cap options QUARTERLY IN 2020	1 000	2.50%	381	0.15%	2.65%

The table below presents an analysis of the sensitivity of the Group to interest rate risk with respect to positions with variable interest rates.

	2019				2018	
	+1.00%		-0.5%		+1.25%	-0.5%
	profit or loss	other comprehensive income	profit or loss	other comprehensive income	profit or loss	profit or loss
Cash	10	-	(5)	-	14	(5)
Borrowings	(39)	-	19	-	(77)	26
Derivatives – interest rate	17	131	-	(72)	95	(19)
Impact on profit/loss	**(12)**		**14**		**(32)**	**2**
Impact on other comprehensive income		**131**		**(72)**		

Due to the immateriality of the amount of interest on reverse factoring for 2019, no sensitivity analysis of this position to changes in interest rates was presented.

An expert method including recommendations of the ARMA model was used to determine the volatility of interest rates.

Note 7.5.1.5 Impact of hedge accounting on the financial statements

The following table contains information on changes in the fair value of derivatives and of loans designated as hedging instruments under hedge accounting, as well as corresponding changes in the fair value of hedged positions during the reporting period, being the basis for recognising the effective and ineffective portions of changes in the fair value of hedging instruments in the years 2018-2019.

The hedge's inefficiency recognised in the statements of profit or loss in the reporting periods 2018-2019 was immaterial.

	As at 31 December 2019		from 1 January 2019 to 31 December 2019	from 1 January 2019 to 31 December 2019	As at 31 December 2018		from 1 January 2018 to 31 December 2018	from 1 January 2018 to 31 December 2018
	Balance of other comprehensive income due to cash flow hedging for relations:				Balance of other comprehensive income due to cash flow hedging for relations			
relation type *risk type* *instrument type – hedged item*	remaining in hedge accounting	for which hedge accounting was ceased	Change in the value of hedged item	Change in the value of hedging instrument	remaining in hedge accounting	for which hedge accounting was ceased	Change in the value of hedged item	Change in the value of hedging instrument
Cash flow hedging								
Commodity risk (copper)								
Options – Sales revenue	40	-	(124)	115	322	-	(411)	411
Commodity risk (silver)								
Options – Sales revenue	(4)	-	(4)	4	-	-	-	-
Currency risk (USD)								
Options – Sales revenue	(33)	-	(39)	39	13	-	53	(53)
Loans – Sales revenue	-	(113)	-	-	-	(129)	-	-
Currency-interest rate risk								
Options – Sales revenue	(39)	-	(44)	39	-	-	-	-
Options – Finance income/costs	(34)	-	(43)	34	-	-	-	-
Total	**(70)**	**(113)**	**(254)**	**231**	**335**	**(129)**	**(358)**	**358**

The table below presents information on the impact of hedge accounting on profit or loss and other comprehensive income.

relation type *risk type* *instrument type*	from 1 January 2019 to 31 December 2019		from 1 January 2018 to 31 December 2018		Item of the statement of profit or loss which includes a reclassification adjustment
	Profit or (loss) due to hedging recognised in other comprehensive income	**Amount reclassified from other comprehensive income to profit or loss as a reclassification adjustment, due to realisation of a hedged item in the period**	**Profit or (loss) due to hedging recognised in other comprehensive income**	**Amount reclassified from other comprehensive income to profit or loss as a reclassification adjustment, due to realisation of a hedged item in the period**	
Cash flow hedging					
Commodity risk (copper)					
Options	(140)	141	488	(78)	- revenues from contracts with customers - other operating income and (costs)
Commodity risk (silver)					
Options	(4)	-	-	-	- revenues from contracts with customers - other operating income and (costs)
Currency risk (USD)					
Options	(80)	(34)	(170)	63	- revenues from contracts with customers - other operating income and (costs)
Loans	-	(16)	-	(16)	- revenues from contracts with customers
Currency-interest rate risk					
CIRS	(79)	(5)	-	-	- revenues from contracts with customers - other finance income and (costs)
Total	**(303)**	**86**	**318**	**(31)**	

The following table contains information on changes in other comprehensive income in the period in connection with the application of hedge accounting in 2019.

	Other comprehensive income due to cash flow hedging		
	Effective value	Cost of hedging	Total
	Effective portions of changes in the fair value of hedging instruments due to hedged risk - intrinsic value of option	time value of option	
Other comprehensive income – transactions hedging against commodity and currency risk – as at 1 January 2019	**278**	**(72)**	**206**
Impact of measurement of hedging transactions (effective part)	(65)	(238)	(303)
Reclassification to profit or loss due to realisation of hedged item	(245)	159	(86)
Other comprehensive income – transactions hedging against commodity and currency risk – as at 31 December 2019	**(32)**	**(151)**	**(183)**

The following table contains information on changes in other comprehensive income in the period in connection with the application of hedge accounting in 2018.

	Other comprehensive income due to cash flow hedging		
	Effective value	Cost of hedging	Total
	Effective portions of changes in the fair value of hedging instruments due to hedged risk - intrinsic value of option	time value of option	
Other comprehensive income – transactions hedging against commodity and currency risk – as at 1 January 2018	**81**	**(224)**	**(143)**
Impact of measurement of hedging transactions (effective part)	322	(4)	318
Reclassification to profit or loss due to realisation of hedged item	(125)	156	31
Other comprehensive income – transactions hedging against commodity and currency risk – as at 31 December 2018	**278**	**(72)**	**206**

Note 7.5.2 Credit risk

Credit risk is defined as the risk that the Group's counterparties will not be able to meet their contractual liabilities and involves three main areas:

- the creditworthiness of the customers with whom physical sale transactions are undertaken;
- the creditworthiness of the financial institutions (banks/brokers) with whom, or through whom, hedging transactions are undertaken, as well as those in which free cash and cash equivalents are deposited; and
- the financial standing of subsidiaries - borrowers.

In particular, the sources of exposure to credit risk are:

- cash and cash equivalents and bank deposits;
- derivatives;
- trade receivables;
- loans granted (Note 6.2);
- guarantees granted (Note 8.6); and
- other financial assets.

Accounting policies

The Group recognises impairment loss on expected credit losses on financial assets measured at amortised cost. Expected credit losses are credit losses weighed by the default probability. The Group applies the following models for designating impairment losses:
- the simplified model– for trade receivables,
- the general (basic) model – for other financial assets.

Under the general model the Group monitors changes in the level of credit risk related to a given financial asset and classifies financial assets to one of three stages of determining impairment losses – based on observations of changes in the level of credit risk compared to an instrument's initial recognition. In particular, the following are monitored: the credit rating and the financial condition of the customer and the payment delay period. Depending on which stage it is classified to, an impairment loss is estimated for a 12-month period (stage 1) or in the horizon of lifetime (stage 2 and stage 3). The absolute indicator of default is an overdue period of more than 90 days.

Under the simplified model the Group does not monitor changes in the level of credit risk during the instrument's life and estimates the expected credit loss over the time horizon of maturity of the instrument based on historical data respecting the repayments of receivables.

Note 7.5.2.1 Credit risk related to cash, cash equivalents and bank deposits

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.

As at 31 December 2019, the total amount of free and restricted cash and cash equivalents of PLN 1 014 million was held in bank accounts and in short-term deposits.

All entities with which deposit transactions are entered into by the Group, operate in the financial sector. Analysis of exposure to this type of risk indicated that these are solely banks with the highest, medium-high and medium ratings, and which have an appropriate level of equity and a strong, stable market position. The credit risk in this regard is monitored through the on-going review of the financial standing and by maintaining an appropriately low concentration levels in individual financial institutions.

The following table presents the level of concentration of cash and deposits, with the assessed creditworthiness of the financial institutions*.

Rating level		As at 31 December 2019	As at 31 December 2018
Highest	AAA to AA- according to S&P and Fitch, and from Aaa to Aa3 according to Moody's	16%	15%
Medium-high	from A+ to A- according to S&P and Fitch, and from A1 to A3 according to Moody's	81%	77%
Medium	from BBB+ to BBB- according to S&P and Fitch, and from Baa1 to Baa3 according to Moody's	3%	8%

** Weighed by amount of deposits.*

As at 31 December 2019 the maximum single entity share of the amount exposed to credit risk arising from cash and bank deposits amounted to 19%, or PLN 189 million (as at 31 December 2018: 24%, or PLN 227 million).

	As at 31 December 2019	As at 31 December 2018
Counterparty 1	189	83
Counterparty 2	183	66
Counterparty 3	178	227
Counterparty 4	82	6
Counterparty 5	82	93
Other	300	480
Total	**1 014**	**955**

Impairment losses on cash and cash equivalents were determined individually for each balance of a given financial institution. External bank ratings were used to measure credit risk. The analysis determined that these assets have a low credit risk at the reporting date. The Group used a simplification permitted by the standard and the impairment loss was determined on the basis of 12-month credit losses. The calculation of impairment determined that the amount of impairment loss is insignificant.

Note 7.5.2.2 Credit risk related to derivative transactions

All entities with which derivative transactions (excluding embedded derivatives) are entered into by the Group operate in the financial sector.

The Group's credit exposure related to open and unsettled derivatives by main counterparties is presented in the table below[3].

	As at 31 December 2019				As at 31 December 2018			
	Financial receivables	Financial liabilities	Fair value	Exposure to credit risk	Financial receivables	Financial liabilities	Fair value	Exposure to credit risk
Counterparty 1	69	(20)	49	**49**	109	(13)	96	**96**
Counterparty 2	60	(13)	47	**47**	97	(11)	86	**86**
Counterparty 3	61	(36)	25	**47**	141	(20)	121	**121**
Counterparty 4	54	(19)	35	**44**	80	(10)	70	**70**
Other	197	(101)	96	**138**	201	(28)	173	**173**
Total	**441**	**(189)**	**252**	**325**	**628**	**(82)**	**546**	
open derivatives	417	(182)	235		620	(82)	538	
unsettles derivatives	24	(7)	17		8		8	

Taking into consideration the fair value of open derivative transactions entered into by the Group and the fair value of unsettled derivatives, as at 31 December 2019 the maximum single entity share of the amount exposed to credit risk arising from these transactions amounted to 15%, i.e. PLN 49 million (as at 31 December 2018: 22%, i.e. PLN 121 million).

In order to reduce cash flows and at the same time to limit credit risk, the Parent Entity carries out net settlements (based on framework agreements entered into with its customers) to the level of the positive balance of fair value measurement of transactions in derivatives with a given counterparty. Moreover, the resulting credit risk is continuously monitored by the review of the credit ratings and is limited by striving to diversify the portfolio while implementing hedging strategies.

Despite the concentration of credit risk associated with derivatives' transactions, the Parent Entity has determined that, due to its cooperation only with renowned financial institutions, as well as continuous monitoring of their ratings, it is not materially exposed to credit risk as a result of transactions concluded with them.

[3] Net positive fair value (financial receivables – financial liabilities) of open and unsettled derivatives is taken into account, including a breakdown by hedged market risk factors.

The following table presents the structure of ratings of the financial institutions with whom the Group had derivatives transactions, representing exposure to credit risk.

Rating level		As at 31 December 2019	As at 31 December 2018
Highest	from AAA to AA- according to S&P and Fitch, and from Aaa to Aa3 according to Moody's	2%	-
Medium-high	from A+ to A- according to S&P and Fitch, and from A1 to A3 according to Moody's	90%	99%
Medium	from BBB+ to BBB- according to S&P and Fitch, and from Baa1 to Baa3 according to Moody's	8%	1%

Note 7.5.2.3 Credit risk related to trade receivables

The following Group companies have significant trade receivables: the KGHM INTERNATIONAL LTD. Group PLN 360 million, KGHM Polska Miedź S.A. PLN 201 million, CENTROZŁOM WROCŁAW S.A. PLN 85 million, NITROERG S.A. PLN 31 million, WPEC w Legnicy S.A. PLN 27 million, and „MCZ" S.A. PLN 20 million.

The Parent Entity limits its exposure to credit risk related to trade receivables by evaluating and monitoring the financial condition of its customers, setting credit limits and requiring collateral, and non-recourse factoring. The terms of factoring agreements entered into meet the criteria of removing receivables from the books at the moment of their purchase by the factor. As at 31 December 2019, the amount of receivables transferred to factoring, for which the payment from factors was not received, amounted to PLN 22 million (as at 31 December 2018: PLN 21 million). Information on the amount of revenues from sales subjected to factoring in the financial period is presented in note 2.4.

An inseparable element of the credit risk management process performed by the Parent Entity is the continuous monitoring of receivables and the internal reporting system.

Buyer's credit is only provided to proven, long-term customers. In the case of new customers, an effort is made to ensure that sales are based on prepayments or trade financing instruments which wholly transfer the credit risk to financial institutions.

The Parent Entity makes use of the following forms of collateral:

- registered pledges, bank guarantees, promissory notes, notarial enforcement declarations, corporate guarantees, cessation of receivables, mortgages and documentary collection;
- ownership rights to goods to be transferred to the buyer only after payment is received;
- 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 above forms of collateral and the credit limits received from the insurance company, as at 31 December 2019 the Parent Entity had secured 64% of its trade receivables (as at 31 December 2018, 75%).

Moreover, the Parent Entity enters into net settlement framework agreements, when it recognises both receivables and liabilities with the same client.

Although KGHM INTERNATIONAL LTD. does not use collateral, credit risk connected with trade receivables is subject to monitoring, and the majority of sales are to proven, long-term customers conducting international activities.

Assessment of concentration of credit risk in the Group:

Sector concentration	While KGHM Polska Miedź S.A. and KGHM INTERNATIONAL LTD. operate in the same sector, these two companies are different both in terms of their portfolios of products as well as in terms of the geographic location and nature of their customers, and consequently this sector concentration of credit risk is considered to be acceptable. Other companies of the Group operate in various economic sectors, such as transport, construction, commerce, industrial production and energy. As a consequence, in the case of most Group companies, in terms of sectors, there is no concentration of credit risk.
Clients concentration	As at 31 December 2019 the balance of receivables from the 7 largest clients represented 29% of trade receivables (2018: 28%). Despite the concentration of this type of risk, it is believed that due to the availability of historical data and the many years of experience cooperating with its clients, as well as to the securing used, the level of credit risk is low.
Geographical concentration	Companies of the Group have been cooperating for many years with a large number of customers, which affects the geographical diversification of trade receivables. Geographical concentration of credit risk for trade receivables is presented in the table below:

Trade receivables (net)	**As at 31 December 2019**	**As at 31 December 2018**
Poland	40%	35%
European Union (excluding Poland)	17%	9%
Asia	4%	13%
Other countries	39%	43%

Accounting policies

The Group applies the simplified model of calculating the allowance for impairment of trade receivables (regardless of their maturity). The expected credit loss on trade receivables is calculated at the closest ending date of the reporting period after the moment of recognition of a receivable in the statement of financial position and is updated at every subsequent reporting period ending date, depending on the number of days a given receivable is overdue. For the purpose of estimating the expected credit loss on trade receivables, the Group applies a provision matrix, estimated based on historical levels of a customer's payments of receivables. The Group takes into account segmentation of counterparties due to the level of credit risk by estimating and applying different provision matrices for individual Group companies. The Group defines default as being a failure by a customer to meet its liabilities after a period of 90 days from due date. The Group takes into account forward-looking information in the applied parameters of the model for estimating expected losses, by adjusting the base coefficients of default probability.

Important estimates and assumptions

Time frame	Percent of allowance for impairment*	Gross amount of receivables	Allowance for impairment in individual time frames**
Not overdue	0.1-9.6	456	(6)
<1,30)	0.2-19.7	33	(1)
<30,60)	5.99-59.24	5	(1)
<60,90)	25.64-85.32	2	-
Default	100	52	(45)
Total		**548**	**(53)**

**Probability of default is represented in thresholds, calculated individually by Group companies on the basis of real historical data on number of days of delay, pursuant to the model for calculating expected credit losses adopted by the Group for trade receivables.*

***The amount of allowance for impairment includes the recovery due to collateral.*

The following table presents a change in trade receivables measured at amortised cost.

		Gross amount
	Gross amount as at 1 January 2019	**714**
	Change in the balance of receivables	(163)
	Utilisation of a loss allowance in the period	(3)
Note 10.2	**Gross amount as at 31 December 2019**	**548**

The following table presents the change in the estimation of expected credit losses on trade receivables measured at amortised cost.

		Amount of allowance
	Loss allowance for expected credit losses as at 1 January 2019	**57**
	Change in allowance in the period recognised in profit or loss	(1)
	Utilisation of a loss allowance in the period	(3)
Note 10.2	**Loss allowance for expected credit losses as at 31 December 2019**	**53**

Note 7.5.2.4 Credit risk related to loans granted to the joint venture Sierra Gorda S.C.M. (POCI)

Credit risk related to loans granted depends on risk related to the realisation of the joint mining venture in Chile (Sierra Gorda S.C.M.). These loans are measured at amortised cost in subsequent reporting periods, due to the recognised impairment at the moment of initial recognition, were classified as POCI.

The basis for accruing interest on POCI loans is the gross value less any allowance for impairment at the moment of initial recognition.

The loan granted does not have collaterals limiting the exposure to credit risk, therefore the amount exposed to potential loss due to credit risk is the gross amount of the loan.

The following table presents the change in the period in the gross value of POCI loans.

	2019	2018
Gross amount as at 1 January	**5 199**	**3 889**
Interest accrued	341	257
Gains on reversal of allowances for impairment	106	733
Exchange differences from the translation of statements of operations with a functional currency other than PLN	48	320
Gross amount as at 31 December	**5 694**	**5 199**

In any of the presented reporting periods, there was no expected impairment of loans with impairment recognised at the moment of initial recognition.

Note 7.5.2.5 Credit risk related to other financial assets

As at 31 December 2019, the most significant item in other financial assets was cash accumulated on bank deposits in the special purpose funds: Mine Closure Fund and Tailings Storage Facility Restoration Fund in the amount of PLN 389 million.

All special purpose deposits of the Group, which are dedicated to collection of cash for future decommissioning costs of mines and other technological facilities and restoration of tailing storage facilities, are carried out by banks with the highest or medium-high ratings confirming the security of the deposited cash.

The tables below presents the level of cash concentration within special purpose funds dedicated to the collection of cash by the Group for future decommissioning costs of mines and other technological facilities and restoration of tailing storage facilities, according to the credit ratings of financial institutions holding special purpose deposits and according to institutions in which this cash is held.

Rating level		As at 31 December 2019	As at 31 December 2018
Highest	AAA to AA- according to S&P and Fitch, and from Aaa to Aa3 according to Moody's	13%	13%
Medium-high	from A+ to A- according to S&P and Fitch, and from A1 to A3 according to Moody's	87%	87%

	As at 31 December 2019	As at 31 December 2018
Counterparty 1	339	314
Counterparty 2	50	49
Total	**389**	**363**

Impairment losses on cash accumulated on bank accounts of special purpose funds: the Mine Closure Fund and Tailings Storage Facility Restoration Fund, were determined individually for each balance of a given financial institution. External bank ratings were used to measure credit risk. The analysis determined that these assets have a low credit risk at the reporting date. The Group used a simplification permitted by the standard and the impairment loss was determined on the basis of 12-month credit losses. The calculation of impairment determined that the amount of impairment loss is insignificant.

Part 8 - Borrowings and the management of liquidity and capital

Note 8.1 Capital management policy

Capital management in the Group is aimed at securing funds for business development and maintaining the appropriate level of liquidity.
In accordance with market practice, the Group monitors its capital, among others on the basis of ratios presented in the table below:

Ratios	Calculations	31.12.2019	31.12.2019	31.12.2018
Net Debt/EBITDA	relation of net debt to EBITDA	**1.5**	**1.4***	**1.6**
Net Debt*	borrowings, debt securities and lease liabilities less free cash and its equivalents	6 891	6 265***	7 000
EBITDA**	profit on sales plus depreciation/amortisation recognised in profit or loss and impairment losses on non-current assets	4 569	4 569	4 339
Equity ratio	relation of equity less intangible assets to total assets	**0.5**	**0.5**	**0.5**
Equity	assets of the Group after deducting all of its liabilities	20 202	20 202	19 225
Intangible assets	identifiable non-cash items of assets without a physical form	2 121	2 121	1 881
Equity less intangible assets		18 081	18 081	17 344
Total assets	sum of non-current and current assets	39 409	39 409	37 237

**Net debt does not include reverse factoring liabilities*
*** Adjusted EBITDA for the period of 12 months ended on the last day of the reporting period and does not include the EBITDA of the joint venture Sierra Gorda S.C.M. Data as at 31 December 2018 and 31 December 2019 is not comparable because it does not include the results of implementation of IFRS 16 in EBITDA achieved in 2018. Details on the calculation of EBITDA were presented in Note 2.2.*
**** Presented data do not include lease liabilities as at 31 December 2019 in the amount of PLN 627 million, arising from the implementation of IFRS 16.*

In the management of liquidity and capital, the Group also pays attention to adjusted operating profit, which is the basis for calculating the financial covenants and which is comprised of the following items:

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Profit on sales	2 455	2 591
Interest income on loans granted to joint ventures	341	257
Other operating income and (costs)	186	308
Adjusted operating profit*	**2 982**	**3 156**

** presented amount does not include the reversal of allowances for impairment of loans granted to joint ventures*

As at the balance sheet date, in the financial period and after the balance sheet date, up to the date of publication of these consolidated financial statements, the values of financial covenants resulting in the obligation to report as at 30 June 2019 and 31 December 2019, met the conditions stipulated in the credit agreements.

In order to maintain financial liquidity and the creditworthiness to acquire external financing at an optimum cost, over the long term the Group's goal is for the equity ratio to be not less than 0.5, and the ratio of Net Debt/EBITDA not more than 2.0.

Note 8.2 Equity

Accounting policies
Share capital is recognised at nominal value. Other reserves from the measurement of financial instruments arise from the measurement of cash flow hedging instruments (Note 7.2, accounting policies) and the measurement of financial assets at fair value through other comprehensive income (Note 7.3, accounting policies) less any deferred tax effects. Accumulated other comprehensive income consists of exchange differences from the translation of foreign operations statements with a functional currency other than PLN (Note 1.2) and actuarial gains/losses on post-employment benefits less any deferred tax effect (note 11, accounting policies). Retained earnings are the sum of profit for the current financial year and accumulated profits from previous years, which have not been paid out as dividends, but were transferred to the reserve capital or were not distributed.

Note 8.2.1 Share capital

As at 31 December 2019 and at the date of signing of these financial statements, the Parent Entity's share capital, in accordance with the entry in the National Court Register, amounted to PLN 2 000 million and was divided into 200 000 000 shares, series A, fully paid, each having a face value of PLN 10. All of the shares are bearer shares. The Parent Entity has not issued preference shares. Each share grants the right to one vote at the general meeting. The Parent Entity does not have treasury shares. Subsidiaries and joint ventures do not have shares of KGHM Polska Miedź S.A.

In the years ended 31 December 2019 and 31 December 2018 there were no changes in either registered share capital or in the number of issued shares.

In the same period, there were changes in the ownership of significant blocks of shares of KGHM Polska Miedź S.A. As far as the Parent Entity is aware, as at 31 December 2018, the Parent Entity's shareholder structure was as follows:

shareholder	number of shares/votes	total nominal value of shares (PLN)	percentage held in share capital/total number of votes
State Treasury	63 589 900	635 899 000	31.79%
Nationale-Nederlanden Otwarty Fundusz Emerytalny	10 104 354	101 043 540	5.05%
Otwarty Fundusz Emerytalny PZU „Złota Jesień"	10 099 003	100 990 030	5.05%
Aviva Otwarty Fundusz Emerytalny Aviva Santander	10 039 684	100 396 840	5.02%
Other shareholders	106 167 059	1 061 670 590	53.09%
Total	200 000 000	2 000 000 000	100.00%

On 18 February 2019, the Parent Entity was notified that the share of Otwarty Fundusz Emerytalny PZU "Złota Jesień"" decreased below the 5% threshold in the total number of votes at the General Meeting of KGHM Polska Miedź S.A.

The Parent Entity's shareholder structure as at 31 December 2019 and as at the date of signing of these financial statements was as follows:

shareholder	number of shares/votes	total nominal value of shares (PLN)	percentage held in share capital/total number of votes
State Treasury	63 589 900	635 899 000	31.79%
Nationale-Nederlanden Otwarty Fundusz Emerytalny	10 104 354	101 043 540	5.05%
Aviva Otwarty Fundusz Emerytalny Aviva Santander	10 039 684	100 396 840	5.02%
Other shareholders	116 266 062	1 162 660 620	58.14%
Total	200 000 000	2 000 000 000	100.00%

Note 8.2.2 Changes of other equity items

	Other reserves from measurement of financial instruments					
	Investments in equity instruments measured at fair value through other comprehensive income	Other reserves from measurement of future cash flow hedging financial instruments	Other reserves from measurement of financial instruments, total	Actuarial gains /(losses) on post-employment benefits	Exchange differences from the translation of foreign operations statements with a functional currency other than PLN	Retained earnings
As at 31 December 2017	**93**	**65**	**158**	**(391)**	**2 818**	**13 915**
Change in accounting principles – application of IFRS, IFRS 15	(545)	(181)	(726)	-	-	-
As at 1 January 2018	**(452)**	**(116)**	**(568)**	**(391)**	**2 818**	**13 915**
Profit for the period	-	-	-	-	-	1 657
Changes due to the settlement of financial assets measured at fair value through other comprehensive income	(189)	-	(189)	-	-	-
Impact of effective cash flow hedging transactions entered into	-	318	318	-	-	-
Amount transferred to profit or loss - due to the settlement of hedging instruments	-	31	31	-	-	-
Actuarial losses on post-employment benefits	-	-	-	(321)	-	-
Exchange differences from the translation of foreign operations statements with a functional currency other than PLN	-	-	-	-	(162)	-
Deferred income tax	30	(66)	(36)	61	-	-
Other comprehensive income	(159)	283	124	(260)	(162)	-
Total comprehensive income	(159)	283	124	(260)	(162)	1 657
As at 31 December 2018	**(611)**	**167**	**(444)**	**(651)**	**2 656**	**15 572**
Profit for the period	-	-	-	-	-	1 421
Fair value losses on financial assets measured at fair value through other comprehensive income	(96)	-	(96)	-	-	-
Impact of effective cash flow hedging transactions entered into	-	(303)	(303)	-	-	-
Amount transferred to profit or loss	-	(86)	(86)	-	-	-
Actuarial losses on post-employment benefits	-	-	-	(56)	-	-
Exchange differences from the translation of foreign operations statements with a functional currency other than PLN	-	-	-	-	(6)	-
Deferred income tax	18	74	92	11	-	-
Other comprehensive income	(78)	(315)	(393)	(45)	(6)	-
Total comprehensive income	(78)	(315)	(393)	(45)	(6)	1 421
Reclassification of measurement of equity instruments measured at fair value through other comprehensive income	99	-	99	-	-	(99)
As at 31 December 2019	**(590)**	**(148)**	**(738)**	**(697)**	**2 651**	**16 894**

Based on the Act of 15 September 2000, the Commercial Partnerships and Companies Code, the Parent Entity is required to create reserve capital for any potential (future) or existing losses, to which no less than 8% of a given financial year's profit is transferred until the reserve capital has been built up to no less than one-third of the registered share capital. The reserve capital created in this manner may not be employed otherwise than in covering the loss reported in the financial statements.
As at 31 December 2019 the statutory reserve capital in the Group's entities amounts to PLN 778 million, of which PLN 660 million relates to the Parent Entity, and is recognised in retained earnings.

Information related to dividends paid may be found in Note 12.2.

Note 8.3 Liquidity management policy

The Management Board of the Parent Entity is responsible for financial liquidity management in the Group and compliance with adopted policy. The Financial Liquidity Committee is a body supporting the Management Board in this regard.
The management of financial liquidity in the Group is performed in accordance with the Financial Liquidity Management Policy in the KGHM Group. This document comprehensively describes processes of managing the financial liquidity in the Group, which are realised by Group companies, while organisation, coordination and supervision over the realisation is performed by the Parent Entity by using appropriate procedures and instruments. The basic principles resulting from this document are:

- assuring the stable and effective financing of the Group's activities,
- continuous monitoring of the Group's debt level,
- effective management of working capital, and
- coordination, by the Parent Entity, of processes of financial liquidity management in the Group companies.

Under the liquidity management process, the Group utilises instruments which enhance its effectiveness. One of the instruments used by the Group is cash pooling – local in PLN, USD and EUR and international - in USD and CAD. The cash pooling service is aimed at optimising the management of cash resources, limiting interest costs, the effective financing of current working capital needs and the support of short-term financial liquidity in the Group.
In 2019, the Group continued actions aimed at ensuring long-term financial stability by basing the financial structure on diversified and long term financing sources. The following significant events within the Parent Entity had an impact on the financial structure:

- Conclusion of an unsecured, revolving syndicated credit facility agreement in the amount of USD 1 500 million (PLN 5 696 million) with a 5 year tenor and an option to extend it by further 2 years (5+1+1). The credit facility replaced the revolving, syndicated credit facility in the amount of USD 2 500 million (PLN 9 494 million) dated 11 July 2014;
- Opening of a revolving credit facility of the renewable credit line in the amount of USD 450 million (PLN 1 709 million) within the agreement signed with Bank Gospodarstwa Krajowego for a period of 7 years;
- Loan instalments drawn from the EIB in the amount of USD 65 million (PLN 247 million) and in the amount of USD 90 million (PLN 342 million) with maturity falling in 2031;
- The issue of bonds, Series A, in the amount of PLN 400 million with a 5-year maturity and Series B in the amount of PLN 1 600 million with a 10-year maturity;
- Implementation of a Reverse Factoring Program, which is aimed at efficiently managing working capital.

Note 8.3.1 Contractual maturities for financial liabilities

Financial liabilities – as at 31 December 2019

	Contractual maturities from the end of the reporting period				Total (without discounting)	Carrying amount
	up to 3 months	from 3 months to 12 months	1-3 years	over 3 years		
Borrowings	108	305	928	4 599	**5 940**	**5 180**
Debt securities liabilities	-	67	134	2 377	**2 578**	**2 001**
Lease liabilities	32	64	159	1 429	**1 684**	**692**
Trade payables	2 148	22	29	350	**2 549**	**2 344**
Similar payables – reverse factoring	183	413	-	-	**596**	**596**
Derivatives – currency contracts*	-	-	-	-	**-**	**55**
Derivatives – commodity contracts – metals*	-	-	-	-	**-**	**53**
Derivatives – interest rates	-	8	33	63	**104**	**74**
Embedded derivatives	18	27	55	-	**100**	**92**
Other financial liabilities	92	15	20	18	**145**	**144**
Total	**2 581**	**921**	**1 358**	**8 836**	**13 696**	**11 231**

Financial liabilities – as at 31 December 2018

	Contractual maturities from the end of the reporting period				Total (without discounting)	Carrying amount
	up to 3 months	from 3 months to 12 months	1-3 years	over 3 years		
Borrowings	802	260	4 742	2 400	**8 204**	**7 922**
Lease liabilities	2	7	13	5	**27**	**27**
Trade payables	2 037	16	27	357	**2 437**	**2 224**
Derivatives – currency contracts*	-	1	1	-	**2**	**25**
Derivatives – commodity contracts – metals*	-	-	-	-	**-**	**58**
Embedded derivatives	8	26	74	30	**138**	**122**
Other financial liabilities	107	9	15	18	**149**	**147**
Total	**2 956**	**319**	**4 872**	**2 810**	**10 957**	**10 525**

**Financial liabilities arising from derivatives are calculated at their intrinsic values excluding the discount effect.*

Details on financial guarantees and their maturity dates were described in Note 8.6.

Note 8.3.2 Overdue liabilities

Financial liabilities – as at 31 December 2019

	Overdue period				
	up to 1 month	from 1 month to 3 months	from 3 months to 12 months	more than 1 year	Total
Trade payables	26	10	8	2	46

Financial liabilities – as at 31 December 2018

	Overdue period				
	up to 1 month	from 1 month to 3 months	from 3 months to 12 months	more than 1 year	Total
Trade payables	10	9	11	-	19

Note 8.4 Borrowings

Accounting policies
Liabilities arising from borrowings are initially recognised at fair value less (in the case of payment) or plus (in the case of accrual) transaction costs, and are measured at amortised cost at the reporting date. Accrued interest is recognised in finance costs, unless it is capitalised through property, plant and equipment or intangible assets.

Note 8.4.1 Net debt

		As at 31 December 2019	As at 31 December 2018
	Bank loans *	2 337	4 766
	Loans	2 575	2 094
	Debt securities	2 000	-
	Leases	613	18
Note 7.1	**Non-current liabilities due to borrowings**	**7 525**	**6 878**
	Bank loans **	49	910
	Loans	219	152
	Debt securities	1	-
	Leases	79	9
Note 7.1	**Current liabilities due to borrowings**	**348**	**1 071**
	Total borrowings	**7 873**	**7 949**
Note 8.5	Free cash and cash equivalents	982	949
	Net debt	**6 891**	**7 000**

** Presented amounts include the preparation fee paid in the amount of PLN 3 million which decreases financial liabilities due to bank loans in 2019 (in 2018: PLN 15 million).*
*** Presented amounts include the preparation fee paid in 2019 in the amount of PLN 18 million which increases financial liabilities due to bank loans.*

Liabilities due to borrowings, debt securities and leases by currency (translated into PLN) and by type of interest rate

	As at 31 December 2019	As at 31 December 2018
PLN/WIBOR	2 095	108
EUR/EURIBOR	45	169
EUR/fixed	12	
USD/USD LIBOR*	1 762	4 879
PLN/fixed	665	28
USD/fixed	3 256	2 780
CAD/fixed	22	-
Other	16	-
Total	**7 873**	**7 964**

** Presented amounts do not include the preparation fee paid in the amount of PLN 15 million which decreases financial liabilities due to bank loans in 2018*

As at 31 December 2019, the Group's liabilities due to borrowing, debt securities issued and leases amounted to PLN 7 873 million, or USD 1 321 million, PLN 2 744 million, EUR 14 million, CAD 12 million and in other currencies in the amount of PLN 16 million (as at 31 December 2018 liabilities amounted to PLN 7 964 million, or USD 2 037 million, PLN 119 million and EUR 39 million).

As at 31 December 2019, the balance of trade payables transferred to reverse factoring by the Parent Entity amounted to PLN 596 million.

Trade payables transferred to reverse factoring are presented in the statement of financial position as "Trade and similar payables" (these payables are in the category of "similar"), as due to the significant judgment of the Management Board of the Parent Entity presented in note 10.4 of these Consolidated financial statements, such a presentation more accurately presents the nature of these transactions.

The structure of debt changed, as there was an increase in non-current liabilities, pursuant to the strategy adopted by the Group, aimed at ensuring long term financial stability by basing the financial structure on diversified and long term financing sources.

Note 8.4.2 Net debt changes

Liabilities due to borrowing	As at 31 December 2018	Change in accounting policies – implementation of IFRS 16	As at 1 January 2019	Cash flows	Accrued interest	Exchange differences	Other changes*	As at 31 December 2019
Bank loans	5 676	-	5 676	(3 759)	246	217	6	2 386
Loans	2 246	-	2 246	450	78	(4)	24	2 794
Debt securities	-	-	-	1 966	35	-	-	2 001
Leases	27	637	664	(86)	35	-	79	692
Total debt	**7 949**	**637**	**8 586**	**(1 429)**	**394**	**213**	**109**	**7 873**
Free cash and cash equivalents	949	-	949	33	-	-	-	982
Net debt	**7 000**	**637**	**7 637**	**(1 462)**	**394**	**213**	**109**	**6 891**

Liabilities due to borrowing	As at 31 December 2017	Cash flows	Accrued interest	Exchange differences	Other changes*	As at 31 December 2018
Bank loans	5 179	(172)	217	452	-	5 676
Loans	1 967	69	65	145	-	2 246
Leases	10	(11)	1	-	27	27
Total debt	**7 156**	**(114)**	**283**	**597**	**27**	**7 949**
Free cash and cash equivalents	579	370	-	-	-	949
Net debt	**6 577**	**(484)**	**283**	**597**	**27**	**7 000**

** Other changes are in particular comprised of lease assets recognised in the reporting period in the amount of PLN 78 million (in 2018: PLN 25 million).*

Reconciliation of cash flows recognised in net debt change to the statement of cash flows

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Financing activities		
Proceeds from borrowings	4 730	2 276
Proceeds from the issue of debt financial instruments	2 000	-
Repayments of borrowings	(7 746)	(2 101)
Repayment of lease liabilities	(52)	(10)
Repayment of interest on borrowings and debt securities	(215)	(118)
Repayment of interest on leases	(23)	(1)
Investing activities		
Paid capitalised interest on borrowings	(123)	(160)
TOTAL	**(1 429)**	**(114)**

Currency risk and interest rate risk are related to borrowings. A description of exposures to financial risks may be found in Note 7.5.

Note 8.4.3 Detailed information concerning the main sources of borrowings

As at 31 December 2019, the Group had open credit lines, loans and debt securities with a total balance of available financing in the amount of PLN 14 567 million, out of which PLN 7 181 million had been drawn (as at 31 December 2018 the Group had open credit lines and investment loans with a total balance of available financing in the amount of PLN 16 023 million, out of which PLN 7 937 million had been drawn).

The structure of financing sources is presented below.

Unsecured, revolving syndicated credit facility

A credit facility in the amount of USD 1 500 million (PLN 5 696 million), obtained on the basis of a financing agreement concluded by the Parent Entity with a syndicate of banks in 2019 with a maturity of 19 December 2024 and an option to extend it by further 2 years (5+1+1). The credit facility replaced the previous unsecured, syndicated credit facility in the amount of USD 2 500 million (PLN 9 494 million) obtained by the Parent Entity in 2014. The funds acquired through this credit facility are used to finance general corporate purposes. Interest on the credit facility is based on LIBOR plus a bank margin, depending on the net debt/EBITDA ratio.

The credit facility agreement obliges the Group to comply with the financial covenant and non-financial covenants. Financing parameters meet the standard conditions of these types of transactions. Pursuant to contractual terms and conditions, the Parent Entity is obliged to report the level of financial covenant for the reporting periods, i.e. as at 30 June and as at 31 December. The Parent Entity continuously monitors the risk of exceeding the levels of the financial covenant stipulated in the credit facility agreement. As at the reporting date, during the financial year and up to the publication of these Consolidated financial statements, the value of the financial covenant resulting in the obligation to report as at 30 June and as at 31 December, complied with the provisions of the agreement.

	2019	2019	2018
	Amount granted	Amount of the liability	Amount of the liability
	5 696	-	-
Syndicated credit facility entered into in 2014 (agreement ended on 27 December 2019)		-	4 136
Preparatory fee		18	(15)
Carrying amount of liabilities due to bank loans		**18**	**4 121**

Investment loans

Loans, including loans granted to the Parent Entity by the European Investment Bank in the total amount of PLN 2 900 million.

1. Investment loan in the amount of PLN 2 000 million, with three instalments drawn and the payback periods expiring on 30 October 2026, 30 August 2028 and 23 May 2029 and utilised to the maximum available amount. The funds acquired through this loan were used to finance Parent Entity's investment projects related to modernisation of metallurgy and development of the Żelazny Most tailings storage facility. The loan's instalments have a fixed interest rate.
2. Investment loan in the amount of PLN 900 million granted in December 2017 with a financing period of 12 years, and the availability of instalments for a period of 34 months from the date of signing of the agreement. To date, the Parent Entity has drawn three instalments under this loan with the payback periods expiring on 28 June 2030, 23 April 2031 and 11 September 2031. As at 31 December 2019, the remaining available limit amounted to PLN 62 million. The funds acquired through this loan are used to finance the Parent Entity's projects related to development and replacement at various stages of the production process. The loan's instalments have a fixed interest rate.

The loan agreements oblige the Group to comply with the financial covenant and non-financial covenants commonly stipulated in such types of agreements. Pursuant to contractual terms and conditions, the Parent Entity is obliged to report the level of the financial covenant for the reporting periods, i.e. as at 30 June and as at 31 December. The Parent Entity continuously monitors the risk of exceeding the levels of the financial covenant stipulated in the loan agreements. As at the reporting date, during the financial year and up to the publication of these Consolidated financial statements, the value of the financial covenant resulting in the obligation to report as at 30 June and as at 31 December, complied with the provisions of the loan agreements.

2019	2019	2018
Amount granted	Amount of the liability	Amount of the liability
2 984	2 794	2 246

Other bank loans

Bilateral bank loans in the total amount of PLN 3 887 million, used for financing working capital and are a supporting tool in the management of financial liquidity and support financing of advanced investment undertakings. The Group holds lines of credit in the form of short-term and long-term credit agreements. The funds under open lines of credit are available in PLN, USD and EUR, with interest based on a fixed interest rate or variable WIBOR, LIBOR and EURIBOR plus a margin.

	2019	2019	2018
	Amount granted	Amount of the liability	Amount of the liability
	3 887	2 371	1 555
Preparatory fee		(3)	-
Carrying amount of liabilities due to bank loans		**2 368**	**1 555**

Debt securities

The Parent Entity's bond issue program was established on the Polish market by an issue agreement on 27 May 2019.
The first issue with a nominal value of PLN 2 000 million took place on 27 June 2019, under which bonds were issued with a maturity of 5 years in the amount of PLN 400 million and a redemption date of 27 June 2024 as well as bonds with a maturity of 10 years in the amount of PLN 1 600 million and a redemption date of 27 June 2029.
The nominal value of one bond is PLN 1 000, and the issue price is equal to the nominal value. The bonds' interest rate is based on variable WIBOR plus a margin.
The funds from the issue of the bonds are used to finance general corporate purposes.

	2019	2019	2018
	Nominal value of the issue	Amount of the liability	Amount of the liability
	2 000	2 001	-

Total bank and other loans, debt securities	**14 567**	**7 166**	**7 937**
Preparation fee which decreases liabilities due to bank loans		(3)	(15)
Preparation fee which increases liabilities due to bank loans		18	-
Carrying amount of liabilities due to bank and other loans, debt securities		**7 181**	**7 922**

The aforementioned sources ensure the availability of external financing in the amount of PLN 14 567 million. The funds available for use from these sources fully cover the liquidity needs of the Group.

The syndicated credit in the amount of USD 1 500 million (PLN 5 696 million), the investment loans in the amount of PLN 2 900 million, and bilateral bank loans granted to the Parent Entity in the amount of PLN 3 769 million, are unsecured.

Repayment of a part of the liabilities of other Group companies due to bilateral bank loans and other loans are secured amongst others by statements on submitting to an enforcement regime, contractual mortgages, registered pledges or the assignment of receivables. The carrying amount of guarantees of repayment of external financing as at 31 December 2019 amounted to PLN 1 085 million (as at 31 December 2018: PLN 944 million).

Note 8.5 Cash and cash equivalents

Accounting policies

Cash and cash equivalents include mainly cash in bank accounts and deposits with maturities of up to three months from the date of their placement (the same applies to the statement of cash flows). Cash is measured at its nominal amount plus interest, including a loss allowance for expected credit losses.

	as at 31 December 2019	as at 31 December 2018
Cash in bank accounts	630	626
Other financial assets with a maturity of up to 3 months from the date of acquisition - deposits	384	329
Other cash	2	2
Total cash and cash equivalents	**1 016**	**957**
Restricted cash	34	8
Free cash and cash equivalents	**982**	**949**

As at 31 December 2019, the Group had cash in bank deposits in the amount of PLN 85 million (as at 31 December 2018 PLN 10 million), which are funds in separate VAT accounts, designated for servicing split payments. These funds are gradually used, mainly to pay the VAT payables to suppliers and other payments mandated by law.

Note 8.6 Liabilities due to guarantees granted

Guarantees and letters of credit are an essential financial liquidity management tool of the Group.

Accounting policies

The Group issued guarantees which meet the definition of contingent liabilities pursuant to IAS 37 and recognises them in contingent liabilities and guarantees, which meet the definition of financial guarantees under IFRS 9. Therefore they are recognised pursuant to IFRS 9.

The financial guarantee agreement is an agreement obliging its Issuer to make certain payments compensating the Holder of the guarantee for the loss they will incur due to a Debtor's failure to pay on the due date, pursuant to the initial or amended terms of a debt instrument. The Group recognised financial guarantee agreements as financial instruments falling under IFRS 9.

The liability due to the financial guarantee granted as at the end of the reporting period is recognised at the higher of two amounts: the initial value of the issued guarantee less the amount recognised in profit or loss on guarantees, or the ECL amount – set pursuant to the principles of the general model.

Important estimates and assumptions

For the calculation of expected credit losses (ECL), the Group adopts estimates for the rating, PD (probability of default), LGD (loss given default). Calculation of the expected credit losses takes place in the horizon remaining to the end of the guarantee, while the rating of the entity used for the purposes of calculating the PD parameter is a rating of an entity whose credit risk effectively burdens the guarantee, and therefore the rating of the Parent Entity.

For guarantees issued by the Parent Entity, the following parameters were adopted in order to estimate ECL: the rating at the level of A3 issued on the basis of the internal methodology of the Parent Entity, based on Moody's methodology, LGD at the level of 75% (based on estimations from Moody's Annual Default Study: Corporate Default and Recovery Rates, 1920 – 2016), and the parameter of probability of default used to calculate the expected PD credit losses, in the range between 0.29% - 13.8% (depending on the maturity dates of the guarantees).

As at 31 December 2019, the Group held liabilities due to guarantees and letters of credit granted in the total amount of PLN 2 470 million and due to promissory note liabilities in the amount of PLN 144 million.
The most significant items are liabilities of the Parent Entity aimed at securing the following obligations:

Sierra Gorda S.C.M. – securing the performance of concluded agreements in the amount of PLN 2 046 million:

- a letter of credit of PLN 522 million (USD 138 million) granted as security for the proper performance of a long-term contract for the off-take of electricity (as at 31 December 2018 in the amount of PLN 517 million, or USD 138 million),
- PLN 60 million (USD 16 million) as corporate guarantees (finance) set as security on the payment of concluded lease agreements (as at 31 December 2018 in the amount of PLN 125 million, or USD 33 million), guarantee validity period of up to 5 years, the amount of calculated ECL credit risk (Stage 2) amounts to PLN 4.5 million *
- PLN 803 million (USD 211 million) as corporate guarantees (finance) securing repayment of short-term working capital facilities (as at 31 December 2018 in the amount of PLN 496 million, or USD 132 million), guarantee validity period of up to 2 years, the amount of calculated ECL credit risk (Stage 2) amounts to PLN 4.7 million *
- PLN 627 million (USD 165 million) as 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 credit drawn by the joint venture Sierra Gorda S.C.M. (as at 31 December 2018 in the amount of PLN 677 million, or USD 180 million).
- PLN 34 million (USD 9 million) as a corporate guarantee securing claims arising from the obligation to restore post-mining terrain, following the conclusion of mining operations,

other entities, including the Parent Entity:

- PLN 190 million (USD 50 million) securing the proper execution by DMC Mining Services (UK) Ltd. and DMC Mining Services Ltd. of the contract for shaft sinking under the project conducted in the United Kingdom (as at 31 December 2018 in the amount of PLN 188 million, or USD 50 million)
- PLN 179 million to secure the proper execution by the Parent Entity of future environmental obligations related to the obligation to restore terrain, following the conclusion of operations of the Żelazny Most tailings storage facility (as at 31 December 2018 in the amount of PLN 160 million),
- PLN 23 million (PLN 5 million, USD 3 million and CAD 2 million) securing the obligations related to proper execution of agreements concluded (as at 31 December 2018 in the amount of PLN 32 million, or PLN 3 million, USD 3 million and CAD 6 million).

** In analysing the impact of IFRS 9 on the financial statements, the Group determined that, with respect to the financial guarantees granted to Sierra Gorda S.C.M., it is necessary to recognise these guarantees pursuant to par. 4.2.1. point c of IFRS 9.*

Based on the knowledge held, at the end of the reporting period the Group assessed the probability of payments resulting from contingent liabilities related to:
- Sierra Gorda S.C.M. as moderately low,
- other entities of the Group as low.

Part 9 – Non-current assets and related liabilities

Note 9.1 Mining and metallurgical property, plant and equipment and intangible assets

Accounting policies – property, plant and equipment

The most important property, plant and equipment of the Group is property, plant and equipment related to the mining and metallurgical operations, comprised of land, buildings, water and civil engineering structures, such as: primary mine tunnels (including, in underground mines: shafts, wells, galleries, drifts, primary chambers), backfilling, drainage and firefighting pipelines, piezometric holes and electricity, signal and optical fiber cables. Pre-stripping costs in open pit mines and machines, technical equipment, motor vehicles and other movable fixed assets, as well as right-to-use assets recognised in accordance with IFRS 16 Leases, including perpetual usufruct rights to land, are also included in mining and metallurgical property, plant and equipment.

Property, plant and equipment, excluding usufruct rights, are recognised at cost less accumulated depreciation and accumulated impairment losses.

In the initial cost of items of property, plant and equipment the Group includes discounted decommissioning costs of fixed assets related to underground and surface mining and other facilities which, in accordance with binding laws, will be incurred following the conclusion of activities. Principles of recognition and measurement of decommissioning costs are presented in note 9.4.

Costs are increased by borrowing costs (i.e. interest and exchange differences representing an adjustment to interest cost) that were incurred for the purchase or construction of a qualifying item of property, plant and equipment.

Right-to-use assets are initially measured at cost, which comprises the initial lease liability and all lease payments paid on the date the lease began and before that date, less any lease incentives received, any initial direct costs incurred by the lessee and an estimate of costs which will be incurred by the lessee due to the disassembly or removal of a base asset or renovation of the site in which it was placed.

The perpetual usufruct right to land is measured at the amount of the liability on the perpetual usufruct right to land measured using the perpetual rent method and all lease payments paid on the date the lease began or before that date (including payments for acquisition of this right on the market).

After the initial recognition, a right-to-use asset, excluding the perpetual usufruct right to land measured using the perpetual rent method, is measured at cost decreased by accumulated depreciation/amortisation and accumulated impairment losses, adjusted by the updated measurement of lease liabilities.

Items of property, plant and equipment (excluding land and perpetual usufruct rights to land) **are depreciated** by the Group, pursuant to the model of consuming the economic benefits from the given item of property, plant and equipment:

- using the **straight-line method,** for items which are used in production at an equal level throughout the period of their usage,
- using the **units of production method,** for items in respect of which the consumption of economic benefits is directly related to the quantity of ore extracted from the deposit or quantity of units produced, and this extraction or production is not spread evenly through the period of their usage. In particular it relates to buildings and structures of the mines machines and mining equipment, except for the items of property, plant and equipment used in metallurgical plants, where their usage results from the useful economic life of the given item of property, plant and equipment.

The useful lives, and therefore the depreciation rates of fixed assets used in the production of copper, are adapted to the plans for the closure of operations, and in the case of right-to-use to the earlier of these two dates – either to the useful life end date or to the lease end date, unless the ownership of an asset is transferred to the Company before the end of the lease, in which case depreciation rates are adjusted to the estimated useful life end date.

For individual groups of fixed assets, the following useful lives have been adopted, estimated based on the anticipated useful lives of mines with respect to deposit content and metallurgical plants:

For own fixed assets:

Group	Fixed assets type	Total useful lives
Buildings and land	Land	Not subject to depreciation
	Buildings: – Buildings in mines and metallurgical plants,	90-100 years

Group	Type	Useful life
	– sheds, reservoirs, container switchgears	20-30 years
	Primary mine tunnels	22-90 years
	Pipelines: – backfilling to transfer sand with water, – technological, drainage, gas and firefighting	 6-9 years 22-90 years
	Electricity, signal and optical fiber cables	10-70 years
Technical equipment, machines, motor vehicles and other fixed assets	Technical equipment, machines: – mining vehicles, mining roof support – conveyor belts, belt weigher – switchboards, switchgears	 4-10 years 10-66 years 4-50 years
	Motor vehicles: – underground electric locomotives, – mining vehicles, railway vehicles, tankers, transportation platforms – trolleys, forklift, battery-electric truck – cars, trucks, special vehicles – underground diesel locomotives	 20-50 years 7-35 years 7-22 years 5-22 years 10-20 years
	Other fixed assets, including tools and equipment	5-25 years
Pre-stripping costs	Total useful life depends on the expected individual mine life: Robinson Carlota	 7 years 2 years

For right-to-use fixed assets:

Group	Type of right-to-use	Total period of use
Buildings and land	Perpetual usufruct right to land measured using the perpetual rent method	Not subject to depreciation
	Transmission easements	6-54 years (period of depreciation depends on the period of depreciation of an asset in respect of which a transmission easement was established)
	Land	5-30 years
	Buildings – warehouses	22 years
	Other buildings	3-5 years
	Structures	3 years
	Computer sets	3 years
Technical equipment, machines, motor vehicles and other fixed assets	Machines and technical equipment	3-4 years
	Motor vehicles	3 years
	Equipment and other	5 years

The individual significant parts of a fixed asset (significant components), whose useful lives are different from the useful life of the given fixed asset as a whole are depreciated separately, applying a depreciation rate which reflects its anticipated useful life.

Accounting policies – intangible assets

Mining and metallurgical intangible assets are mainly comprised of exploration and evaluation assets, and water rights in Chile.

Exploration and evaluation assets

The following expenditures are classified as exploration and evaluation assets:

- geological projects;
- obtaining environmental decisions;
- obtaining concessions and mining usufruct for geological exploration;
- work related to drilling (drilling; geophysical and hydrogeological research; geological, analytical and geotechnical services; etc.);
- the purchase of geological information;
- the preparation of geological documentation and its approval;
- the preparation of economic and technical assessments of resources for the purpose of making decisions regarding applying for mine operating concessions; and
- equipment usage costs (property, plant and equipment) used in exploratory work.

Exploration and evaluation assets are measured at cost less accumulated impairment losses.

The Group is required to test an individual entity (project) for impairment when:

- the technical feasibility and commercial viability of extracting mineral resources is demonstrable; and
- the facts and circumstances indicate that the carrying amount of exploration and evaluation assets may exceed their recoverable amount.

Any potential impairment losses are recognised prior to reclassification resulting from the demonstration of the technical and economic feasibility of extracting the mineral resources.

Significant estimates and assumptions

Significant estimates and assumptions relating to impairment of mining and metallurgical property, plant and equipment and intangible assets are presented in Note 3.

The net value of mining and metallurgical property, plant and equipment which is subject to depreciation using the natural method as at 31 December 2019 amounted to PLN 1 188 million (as at 31 December 2018, PLN 859 million).

Mining and metallurgical property, plant and equipment and intangible assets

		Property, plant and equipment			Intangible assets			
		Buildings and land	Technical equipment, machines, motor vehicles and other fixed assets	Fixed assets under construction	Water rights	Exploration and evaluation assets	Other	Total
	As at 1 January 2018							
	Gross carrying amount	15 711	13 014	3 824	50	2 574	700	**35 873**
	Accumulated depreciation/amortisation	(7 452)	(6 090)	-	-	-	(232)	**(13 774)**
	Impairment losses	(2 131)	(574)	(6)	(20)	(1 603)	(22)	**(4 356)**
	Net carrying amount	**6 128**	**6 350**	**3 818**	**30**	**971**	**446**	**17 743**
	Changes in 2018 net							
	Settlement of fixed assets under construction	512	1 226	(1 738)	(2)	-	2	**-**
	Purchases	-	-	1 300	2	45	29	**1 376**
	Stripping cost in surface mines	298	-	-	-	-	-	**298**
	Self-constructed	-	-	882	-	12	-	**894**
Note 9.4	Change in provisions for decommissioning costs	173	-	-	-	-	-	**173**
Note 4.1	Depreciation/amortisation	(657)	(940)	-	-	-	(16)	**(1 613)**
Note 4.4	(Recognition)/reversal of impairment losses	(22)	13	(7)	(37)	(12)	(5)	**(70)**
	Exchange differences from the translation of foreign operations statements with a functional currency other than PLN	50	21	10	-	-	2	**83**
	Other changes	15	28	47	72	74	44	**280**
	As at 31 December 2018							
	Gross carrying amount	17 186	14 041	4 318	237	2 736	785	**39 303**
	Accumulated depreciation/amortisation	(8 284)	(6 700)	-	-	-	(259)	**(15 243)**
	Impairment losses	(2 405)	(643)	(6)	(172)	(1 646)	(24)	**(4 896)**
	Net carrying amount	**6 497**	**6 698**	**4 312**	**65**	**1 090**	**502**	**19 164**

		Property, plant and equipment			Intangible assets		
		Buildings and land	Technical equipment, machines, motor vehicles and other fixed assets	Fixed assets under construction	Water rights	Exploration and evaluation assets	Other	Total
	As at 31 December 2018							
	Gross carrying amount	17 186	14 041	4 318	237	2 736	785	**39 303**
	Accumulated depreciation/amortisation	(8 284)	(6 700)	-	-	-	(259)	**(15 243)**
	Impairment losses	(2 405)	(643)	(6)	(172)	(1 646)	(24)	**(4 896)**
	Net carrying amount	**6 497**	**6 698**	**4 312**	**65**	**1 090**	**502**	**19 164**
	Change in accounting policies – application of IFRS 16							
	Gross carrying amount	451	54	-	-	-	(1)	**504**
	As at 1 January 2019							
	Gross carrying amount	17 637	14 095	4 318	237	2 736	784	**39 807**
	Accumulated depreciation/amortisation	(8 284)	(6 700)	-	-	-	(259)	**(15 243)**
	Impairment losses	(2 405)	(643)	(6)	(172)	(1 646)	(24)	**(4 896)**
	Net carrying amount	**6 948**	**6 752**	**4 312**	**65**	**1 090**	**501**	**19 668**
	Changes in 2019 net							
	Settlement of fixed assets under construction	626	1 230	(1 856)	(6)	-	6	**-**
	Purchases	-	-	1 506	6	34	44	**1 590**
	Leases – new contracts, modification of existing contracts	24	40	-	-	-	-	**64**
	Stripping cost in surface mines	376	-	-	-	-	-	**376**
	Self-constructed	-	-	888	-	21	-	**909**
Note 9.4	Change in provisions for decommissioning costs	166	-	-	-	-	-	**166**
Note 4.1	Depreciation/amortisation, of which:	**(549)**	**(1 069)**	**-**	**-**	**-**	**(31)**	**(1 649)**
	own fixed assets and intangible assets	(526)	(1 043)	-	-	-	(31)	**(1 600)**
	right-to-use (leased fixed assets)	(23)	(26)	-	-	-	-	**(49)**
Note 4.4	(Recognition)/reversal of impairment losses	(1)	13	(2)	-	150	(1)	**159**
	Exchange differences from the translation of foreign operations statements with a functional currency other than PLN	5	3	2	-	9	-	**19**
	Other changes	(15)	36	63	-	32	46	**162**
	As at 31 December 2019							
	Gross carrying amount	18 857	14 954	4 918	239	2 876	879	**42 723**
	Accumulated depreciation/amortisation	(8 835)	(7 307)	-	-	-	(290)	**(16 432)**
	Impairment losses	(2 442)	(642)	(5)	(174)	(1 540)	(24)	**(4 827)**
	Net carrying amount, of which:	**7 580**	**7 005**	**4 913**	**65**	**1 336**	**565**	**21 464**
	own fixed assets and intangible assets	7 128	6 930	4 913	65	1 336	565	**20 937**
	right-to-use (leased fixed assets)	452	75	-	-	-	-	**527**

Note 9.1.1 Mining and metallurgical property, plant and equipment– major fixed assets under construction

	As at 31 December 2019	As at 31 December 2018
Deposit Access Program - Deep Głogów (Głogów Głęboki – Przemysłowy)	2 049	1 650
Investment activity related to development and operation of the Żelazny Most Tailings Storage Facility	856	498
Construction of the SW-4 shaft	595	582
Investments related to infrastructural development in the mines	159	206
Change in the L-VI shaft's function to a material-transport shaft	34	203
Metallurgy Development Program	24	373

Note 9.1.2 Exploration and evaluation assets

Significant expenditures on exploration and evaluation assets are presented in the table below.

Operating segment	Description	As at 31 December 2019		As at 31 December 2018	
		Gross carrying amount	Impairment losses	Gross carrying amount	Impairment losses
KGHM INTERNATIONAL LTD.	Expenditures related to exploratory work, mainly within the Victoria project located in the Sudbury Basin in Canada	1 649	868	1 611	860
KGHM INTERNATIONAL LTD.	Expenditures related to exploratory work within the Ajax project	604	604	569	569

Note 9.1.3 Expenses related to mining and metallurgical assets

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Purchases	(1 590)	(1 376)
Self-constructed fixed assets	(909)	(894)
Stripping costs of surface mines	(376)	(298)
Costs of external financing	(141)	(170)
Change in liabilities due to purchases	76	84
Other	68	45
Total*	**(2 872)**	**(2 609)**

** Including expenses on exploration and evaluation assets in the amount of PLN 53 million (in 2018: PLN 62 million).*

Note 9.2 Other property, plant and equipment and intangible assets

Accounting policies

Other property, plant and equipment are recognised at cost less accumulated depreciation and accumulated impairment losses. Depreciation is done using the straight-line method.
For individual groups of fixed assets, the following useful lives have been adopted:

The Group	Total useful lives
Buildings	25-60 years
Technical equipment and machines	4-15 years
Motor vehicles	3-14 years
Other fixed assets	5-10 years

Intangible assets presented as "other intangible assets" include in particular: acquired property rights not related to mining operations and software. These assets are measured at cost less any accumulated amortisation and impairment losses.

Intangible assets are amortised using the straight-line method over their anticipated useful lives. The useful lives of the main groups of intangible assets are as follows:

Group	Total useful lives
Acquired property rights not related to mining activities	5-50 years
Software	2-5 years
Other intangible assets	40-50 years

Other property, plant and equipment and intangible assets

		Property, plant and equipment				
		Buildings and land	Technical equipment, machines, motor vehicles and other fixed assets	Fixed assets under construction	Intangible assets	Total
	As at 1 January 2018					
	Gross carrying amount	2 292	2 287	141	522	**5 242**
	Accumulated depreciation/amortisation	(608)	(1 260)	-	(189)	**(2 057)**
	Impairment losses	(163)	(11)	1	(124)	**(297)**
	Net carrying amount	**1 521**	**1 016**	**142**	**209**	**2 888**
	Changes in 2018 net					
	Settlement of fixed assets under construction	159	176	(335)	-	**-**
	Purchases	-	-	172	36	**208**
	Self-constructed	-	-	112	-	**112**
Note 4.1	Depreciation/amortisation	(83)	(187)	-	(20)	**(290)**
Note 4.4	(Recognition)/reversal of impairment losses	9	(8)	-	-	**1**
	Other changes	(23)	14	104	(1)	**94**
	As at 31 December 2018					
	Gross carrying amount	2 440	2 331	194	555	**5 520**
	Accumulated depreciation/amortisation	(696)	(1 301)	-	(207)	**(2 204)**
	Impairment losses	(161)	(19)	1	(124)	**(303)**
	Net carrying amount	**1 583**	**1 011**	**195**	**224**	**3 013**

		Property, plant and equipment				
		Buildings and land	Technical equipment, machines, motor vehicles and other fixed assets	Fixed assets under construction	Intangible assets	Total
	As at 31 December 2018					
	Gross carrying amount	2 440	2 331	194	555	**5 520**
	Accumulated depreciation/amortisation	(696)	(1 301)	-	(207)	**(2 204)**
	Impairment losses	(161)	(19)	1	(124)	**(303)**
	Net carrying amount	**1 583**	**1 011**	**195**	**224**	**3 013**
	Change in accounting policies – application of IFRS 16					
	Gross carrying amount	187	24	-	(117)	**94**
	Accumulated depreciation/amortisation	-	-	-	35	**35**
	Impairment losses	-	-	-	4	**4**
	As at 1 January 2019					
	Gross carrying amount	2 627	2 355	194	438	**5 614**
	Accumulated depreciation/amortisation	(696)	(1 301)	-	(172)	**(2 169)**
	Impairment losses	(161)	(19)	1	(120)	**(299)**
	Net carrying amount	**1 770**	**1 035**	**195**	**146**	**3 146**
	Changes in 2019 net					
	Settlement of fixed assets under construction	103	281	(384)	5	**5**
	Purchases	-	-	281	30	**311**
	Self-constructed	-	-	32	2	**34**
Note 4.1	Depreciation/amortisation, of which:	**(126)**	**(213)**	**-**	**(25)**	**(364)**
	own fixed assets and intangible assets	(125)	(200)	-	(25)	**(350)**
	right-to-use (leased fixed assets)	(1)	(13)	-	-	**(14)**
Note 4.4	(Recognition)/reversal of impairment losses	(84)	(117)	(1)	(9)	**(211)**
	Other changes	(30)	37	50	6	**63**
	As at 31 December 2019					
	Gross carrying amount	2 708	2 600	173	479	**5 960**
	Accumulated depreciation/amortisation	(831)	(1 441)	-	(195)	**(2 467)**
	Impairment losses	(244)	(136)	-	(129)	**(509)**
	Net carrying amount	**1 633**	**1 023**	**173**	**155**	**2 984**
	own fixed assets and intangible assets	1 452	972	173	155	**2 752**
	right-to-use (leased fixed assets)	181	51	-	-	**232**

Note 9.3 Depreciation/amortisation

		Property, plant and equipment		Intangible assets	
		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Note 4.1	**Total**	**1 957**	**1 867**	**56**	**36**
	settled in profit or loss	1 867	1 762	53	34
	cost of manufacturing products	1 802	1 726	42	29
	administrative expenses	53	26	11	5
	selling costs	12	10	-	-
	being part of the manufacturing cost of assets	90	105	3	2

Note 9.4 Provision for decommissioning costs of mines and other facilities

Accounting policies

The provision for future decommissioning costs of mines and other technological facilities is recognised based on the estimated expected costs of decommissioning of such facilities and of restoring the sites to their original condition following the end of operations, which are made on the basis of ore extraction forecasts (for mining facilities), and technical-economic studies prepared either by specialist firms or by the Parent Entity.

In the case of surface mines, certain actions and costs may influence the scope of restoration work, such as costs of hauling barren rock, incurred during mine life and due to its operations, are recognised as operating costs being an integral part of the production process and are therefore excluded from costs that are a basis of calculating the provisions for mine decommissioning.

A change in the discount rate or in the estimated decommissioning cost adjusts the value of the relevant item of a fixed asset, unless it exceeds the carrying amount of the item of a fixed asset, and any surplus above this amount is recognised in other operating income.

Important estimates and assumptions

These provisions represent the estimated future decommissioning costs of mines and other technological facilities discounted to present value. Revaluation of this provision at the end of the reporting period is affected by the following indicators:

1) in the Parent Entity:

a) the index of changes in prices in the construction-assembly sector published by the Central Statistical Office (GUS),

b) the forecasted discount rate calculated based on the yield on treasury bonds with maturities nearest to the planned financial outflow.

2) in the KGHM INTERNATIONAL LTD. Group:

a) the rate of return on investments in US 10 and 20 year treasury notes of the Federal Reserve of the United States of America, and

b) the rate of return on investments in 5-year government bonds issued by the governments of Canada and Chile.

The yield on treasury bonds and the inflation rate are set separately for future periods, i.e. for the first, second and third years, and jointly for periods from the fourth year.

At the end of the reporting period, applying the current approach, with the historically low level of profitability of 10 year bonds and an increase in inflation as well as the NBP's inflation forecasts, the Group would receive a negative effective discount rate. Due to the uncommon situation, the Group applied a cautious approach and adopted for the measurement of provisions a discount rate of "0" as at 31 December 2019. This is the effective discount rate (that is, decreased by inflation). Due to the non-standard nature of current market conditions, the Group is monitoring the situation and analysing the eventual verification of its current approach.

In the KGHM Polska Miedź S.A Group, in order to estimate provisions for the decommissioning costs of mines and other technological facilities located in individual countries, the following discount rates were applied:

	2019	2018
- in Poland	0.00 %	0.31 %
- in the United States	0.00% - 0.25%	0.69% - 0.87%
- in Canada	0.00%	0.00% - 0.18%

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
	Provisions at the beginning of the reporting period	**1 576**	**1 360**
Note 9.1	Changes in estimates recognised in fixed assets	166	173
	Other	52	43
	Provisions at the end of the reporting period including:	**1 794**	**1 576**
	- non-current provisions	**1 774**	**1 564**
	- current provisions	**20**	**12**

Impact of the change in discount rate on the provision for decommissioning costs of mines and other technological facilities

	As at 31 December 2019	As at 31 December 2018
increase in discount rate by 1 percentage point	-393	-348
decrease in discount rate by 1 percentage point	48	176

Note 9.5 Capitalised borrowing costs

During the period from 1 January 2019 to 31 December 2019, the Group recognised PLN 142 million of borrowing costs in property, plant and equipment and intangible assets.
During the period from 1 January 2018 to 31 December 2018, the Group recognised PLN 177 million of borrowing costs in property, plant and equipment and intangible assets.
The capitalisation rate applied by the Group to determine borrowing costs in 2019 amounted to 3.70%, in 2018: 5.20%.

Note 9.6 Carrying amount of the assets of Group companies representing collateral of repayment of liabilities

	As at 31 December 2019	As at 31 December 2018
Fixed assets under construction	27	1
Buildings	132	134
Motor vehicles	25	38
Technical equipment and machines	27	26
Land	4	-
Total carrying amount of assets representing collateral of repayment of financial liabilities	**215**	**199**

Part 10 – Working capital

Note 10.1 Inventories

Accounting policies	Significant estimates and assumptions
The Group measures inventories at cost, not higher than the sales price less costs of completing production and costs to sell. Inventory disposals are measured at weighted average cost.	In the consolidated financial statements the amount of those inventories of the KGHM INTERNATIONAL LTD. Group which arise from the leaching process, is determined based on the estimated recovery of metal from ore. The nature of the process of leaching copper from ore limits the precision of monitoring the level of inventories arising during this process. In subsequent reporting periods, adjustments are made to the estimated recovery of copper from the leaching of ore in a given reporting period to the level of production achieved in the subsequent period. As at 31 December 2019 the provisionally-set value of inventories amounted to PLN 74 million (as at 31 December 2018, PLN 55 million).

		As at 31 December 2019	As at 31 December 2018
	Materials	844	727
	Half-finished goods and work in progress	2 790	3 239
	Finished products	926	805
	Merchandise	181	212
	Total carrying amount of inventories	**4 741**	**4 983**
Note 4.4	**Write-down of inventories during the reporting period**	**from 1 January 2019 to 31 December 2019**	**from 1 January 2018 to 31 December 2018**
	Write-down recognised in cost of sales	(38)	(28)
	Write-down reversed in cost of sales	38	30
	Maturities of inventories	**As at 31 December 2019**	**As at 31 December 2018**
	Maturity over the 12 months from the end of the reporting period	283	289
	Maturity of up to 12 months from the end of the reporting period	4 458	4 694

Note 10.2 Trade receivables

Accounting policies

Trade receivables are initially recognised at the transaction price. After initial recognition, receivables are measured:

- receivables not transferred to full factoring: at amortised cost while taking into account the loss allowance for expected credit losses (trade receivables with maturity dates of less than 12 months are not discounted),
- receivables transferred to full factoring: at fair value through profit or loss, while because of the short duration between the recognition of receivables and transferral to the factor and due to the low credit risk of the counterparty (factor), the fair value of these receivables include an adjustment of transaction costs representing the factor's compensation and therefore corresponds to the net amount received from the factor (receivables transferred to the factor (nominal value from the invoice) decreased by interest). Receivables transferred to full factoring are obligatorily designated to the category of financial assets measured at fair value through profit or loss, because they were classified to a business model, in which cash flows are realised solely by selling financial assets.
- receivables based on the M+ pricing formula: at fair value through profit or loss, value is set as the nominal value (i.e. at the price in the invoice), adjusted by the impact of market and credit risks. Adjustment due to the market risk is calculated as the difference between the current market price for a given pricing period in the future (the period in which there will be a final determination of the settlement price) and the receivables' price recognised in the accounting books (multiplied by the sales volume). Adjustment due to the credit risk is calculated analogously to the calculation of expected credit losses for trade receivables measured at amortised cost. Receivables based on the M+ pricing formula are obligatorily designated to the category of financial assets measured at fair value through profit or loss, because these receivables do not pass the SPPI (solely payments of principal and interest) test because of the element of variable price after the date of initial recognition of the receivables.

The Group is exposed to the credit risk and currency risk arising from trade receivables. Credit risk management and assessment of the credit quality of receivables is presented in Note 7.5.2.3. Information on currency risk is presented in Note 7.5.1.3.

The following table presents the carrying amounts of trade receivables and the loss allowances for expected credit losses:

	As at 31 December 2019	As at 31 December 2018
Trade receivables measured at amortised cost - gross value	548	714
Loss allowance for expected credit losses	(53)	(57)
Trade receivables measured at amortised cost - net value	495	657
Trade receivables measured at fair value	300	304
Total	**795**	**961**

Note 10.3 Trade and similar payables

Accounting policies

Trade and similar payables are initially recognised at fair value less transaction cost and are measured at amortised cost at the end of the reporting period.

Accrued interest due to repayment of payables at a later date is recognised in profit or loss, in the item "finance income/(costs)".

Important estimates and assumptions

Trade and similar payables presented in the Parent Entity's statement of financial position also contain trade payables transferred to reverse factoring, which are in the category of "similar". The item "similar liabilities" also includes intra-group trade payables transferred by the debtor to the factor, for which the debtor received payment from the factor. At the moment of transfer of the liabilities to reverse factoring, the Parent Entity recognises payables towards the factor, who due to the subrogation of receivables, from the legal point of view, assumes the rights and obligations common for trade payables. Reverse factoring is not directly regulated by IFRS, and as a result of its ambiguous nature it was necessary for the Parent Entity to make an important judgment on the presentation of balances transferred to factoring in the statement of financial position and the presentation of transactions in the statement of cash flows. In the Parent Entity's opinion, in presenting the balance of trade payables transferred to reverse factoring as „Trade and similar payables" (assigned to the category of "similar") together with other trade payables and not as debt liabilities, the following aspects had a crucial impact:

- from the legal point of view, at the moment of subrogation of the reverse factoring there is a transfer of rights and obligations arising from the liabilities, rather than their expiry and the establishment of new rights and obligations in respect of the factor;
- there is no establishment of new guarantees related to the reverse factoring, nor are there any changes in commercial terms related to any breach of the contract terms and annulment of a contract;
- the goal of the program is not only to improve the Parent Entity's liquidity, but also to provide support to suppliers engaged in obtaining favourable financing in order to build long term business relationships,
- the established payment deadlines, as well as payment models (including as regards interest and discounting) do not change in respect of trade payables towards a given supplier which are not subject to reverse factoring. In light of the above, as well as taking into account the established interest rates and discounts and extended repayment periods, cash flows related to the liabilities transferred to reverse factoring do not change more than 10%;
- costs related to reverse factoring are incurred both by the Parent Entity and its suppliers. The Parent Entity incurs interest cost arising from the payment of liabilities over an extended period, while the supplier incurs a discounted cost due to early (that is, before the end of the base term, which is usually 60 days) payment received from the factor;
- the Parent Entity, together with individual suppliers, on the basis of signed contracts, will determine which invoices will be transferred to reverse factoring, and what the deadline for early payment to the supplier through the factor will be.

Moreover, although the Parent Entity identified characteristics which indicate the nature of reverse factoring as liabilities due to financing (liability due to credit granted by the factor), they were judged by the Parent Entity to be insufficient for the purpose of recognising that, at the moment of transfer of trade payables to reverse factoring, there is a complete change in the nature of the relationship from that of a trade to a debt one, which would necessitate presentation in the Statement of financial position as debt financial liabilities and presentation in the Statement of cash flows, in financial activities:

- the factor is a bank, and at the moment of subrogation by the factor there is a change in the party being the debtor,
- in order to obtain more favourable terms, the factoring agreement was negotiated with the factor by the Parent Entity and not directly by the suppliers,
- the actual deadline for the payment of trade payables subject to reverse factoring is longer (and amounts to up to 180 days) than the deadline for the payment of other trade payables, which are not transferred to factoring (which usually amounts to 60 days),
- the main costs of reverse factoring are incurred by the Company, and suppliers are charged only if they receive payment in the first 60 days from the date the invoice was issued (discount for the payment before 60 days)

	As at 31 December 2019	As at 31 December 2018
Non-current trade payables	174	171
Current trade payables	2 170	2 053
Current similar payables – reverse factoring	596	-
Trade and similar payables	**2 940**	**2 224**

The Parent Entity implemented reverse factoring in the period ended on 31 December 2019 in order to make it possible for suppliers to receive repayment of receivables faster, as part of the standard procurement process executed by the Parent Entity, alongside an extension of payment dates of payables by the Group to the factor. The factor's participation limit was set at PLN 750 million. In the present financial year, from the date of implementation of reverse factoring to the end of the reporting period, liabilities in the amount of PLN 596 million were transferred to the factor and this is the value of trade payables covered by reverse factoring as at 31 December 2019; in the financial year there were no payments towards the factor. Interest costs incurred towards the factor amounted to PLN 1 million in 2019 and were recognised in the item "finance costs".

Repayment dates of receivables due to reverse factoring do not exceed 12 months, and consequently all payables transferred to reverse factoring are presented as short-term.

The item trade payables contains payables due to the purchase and construction of fixed and intangible assets which, as at 31 December 2019, amounted to PLN 164 million in the non-current part and PLN 648 million in the current part (as at 31 December 2018, respectively PLN 163 million and PLN 565 million).
The Group is exposed to currency risk arising from trade payables and to liquidity risk. Information on currency risk is presented in Note 7.5.1.3 and on liquidity risk in Note 8.3.1.
The fair value of trade payables approximates their carrying amount.

Note 10.4 Changes in working capital

Accounting policies

Cash flows arising from interest on reverse factoring transactions are presented in cash flows from financing activities. The actually repaid principal amounts of receivables transferred to reverse factoring to a factor are presented in cash flows from operating activities. Moreover, the Parent Entity, as regards changes in working capital in the Statement of cash flows, presented a separate line "Change in trade payables transferred to factoring" for the purposes of clear and transparent presentation.

Important estimates and assumptions

The Parent Entity implemented reverse factoring in the period ended on 31 December 2019 (more information may be found in Note 10.3).

Since market practice with respect to the presentation of reverse factoring transactions in the Statement of cash flows is not uniform, the Management Board had to apply its own judgment in this regard. In the case of these transactions, the Parent Entity had to make a judgment whether expenses related to payments towards the factor should be classified to cash flows from operating activities or to cash flows from financing activities in the statement of cash flows. Pursuant to IAS 7.11, an entity should present cash flows from operating, investing and financing activities in a manner which is most appropriate to its business, because it provides information that allows users of financial statements to assess the impact of those activities on the financial position of the entity and the amount of its cash and cash equivalents.

Due to the above, in the Parent Entity's view:

- presentation of the repayment of the principal amounts of receivables in the reverse factoring in cash flows from operating activities is compliant with the objective of individual transaction elements (more information may be found in Note 10.3). When legal subrogation of receivables is made by the factor, from a legal standpoint he assumes the rights and responsibilities characteristic for trade receivables.
- however, the financial aspect related to the factoring transaction is indicated in presentation of interest in financing activities. This is consistent with recognising this interest in financing costs in the Statement of profit or loss and the accounting policy adopted by the Parent Entity for the presentation of interest cost of reverse factoring in the financial activities.

	Inventories	Trade receivables	Trade payables	Similar payables	Total working capital
As at 1 January 2019	(4 983)	(961)	2 224	-	**(3 720)**
As at 31 December 2019	(4 741)	(795)	2 344	596	**(2 596)**
Change in the statement of financial position	**242**	**166**	**120**	**596**	**1 124**
Exchange differences from translation of foreign operations statements with a functional currency other than PLN	5	7	(2)	-	**10**
Depreciation/amortisation recognised in inventories	58	-	-	-	**58**
Liabilities due to purchase of property, plant and equipment and intangible assets	-	-	(68)	-	**(68)**
Liabilities due to interest on reverse factoring	-	-	-	(1)	**(1)**
Other	-	-	-	-	**-**
Adjustments	**63**	**7**	**(70)**	**(1)**	**(1)**
Change in the statement of cash flows *	**305**	**173**	**50**	**595**	**1 123**

**As at 31 December 2019, the Parent Entity had reverse factoring liabilities in its working capital in the amount of PLN 595 million. The Parent Entity drew the entirety of the liability during 2019 and there were no payments in operating activities due to reverse factoring to the factor.*

	Inventories	Trade receivables	Trade payables	Similar payables	Total working capital
As at 1 January 2018	(4 562)	(1 520)	1 995	-	**(4 087)**
As at 31 December 2018	(4 983)	(961)	2 224	-	**(3 720)**
Change in the statement of financial position	**(421)**	**559**	**229**	**-**	**367**
Exchange differences from translation of foreign operations statements with a functional currency other than PLN	32	27	(13)	-	**46**
Depreciation/amortisation recognised in inventories	95	-	-	-	**95**
Liabilities due to purchase of property, plant and equipment and intangible assets	-	-	(141)	-	**(141)**
Adjustments	**127**	**27**	**(154)**	**-**	**-**
Change in the statement of cash flows	**(294)**	**586**	**75**	**-**	**367**

Part 11 – Employee benefits

Accounting policies

The Group is obliged to pay specified benefits following the period of employment (retirement benefits due to one-off retirement-disability rights, post-mortem benefits and the coal equivalent) and other long-term benefits (jubilee bonuses), in accordance with the Collective Labour Agreement.
The amount of the liabilities due to both of these benefits is estimated at the end of the reporting period by an independent actuary using the projected unit credit method.
The present value of liabilities from these benefits is determined by discounting estimated future cash outflow using the interest rates on treasury bonds expressed in the currency of the future benefits payments, with maturities similar to the date of settlement for liabilities.
Actuarial gains and losses from the measurement of specified benefits following the period of employment are recognised in other comprehensive income in the period in which they arose. Actuarial gains/losses from the measurement of other benefits (benefits due to jubilee bonuses) are recognised in profit or loss.

Significant estimates and assumptions

The carrying amount of the liability due to future employee benefits is equal to the present value of the liabilities due to defined benefits. The amount of the liability depends on many factors, which are used as assumptions in the actuarial method. Any changes to the assumptions may impact the carrying amount of the liability. Interest rates are one of the basic parameters for measuring the liability. At the end of the reporting period, based on the opinion of an independent actuary, an appropriate discount rate for the Group's companies is used for setting the present value of estimated future cash outflow due to these benefits. In setting the discount rate for the reporting period, the actuary extrapolates current interest rates of government bonds along the profitability curve expressed in the currency of the future benefits payments, to obtain a discount rate enabling the discounting of payments with maturities which are longer than the maturities of the bonds.

Other macroeconomic assumptions used to measure liabilities due to future employee benefits, such as the inflation rate or the minimum salary, are based on current market conditions. The assumptions used for measurement as at 31 December 2019 are presented in Note 11.2.

The sensitivity of future employee benefits liabilities to changes in the assumptions was set based on the amounts of the Parent Entity's liabilities (the Parent Entity's liabilities represent 90% of the Group's liabilities; 92% in 2018). In the remaining Group companies, due to the immaterial amounts of liabilities in this regard, the impact of changes of the basic parameters adopted for the calculation of provisions on future employee benefits liabilities in the consolidated financial statements would be immaterial.

Impact of changes in the indicators on the balance of liabilities (Parent Entity)

	As at 31 December 2019	As at 31 December 2018
an increase in the discount rate by 1 percentage point	(340)	(316)
a decrease in the discount rate by 1 percentage point	459	421
an increase in coal price increase rate and an increase in salary increase rate by 1 percentage point	446	411
a decrease in coal price increase rate and a decrease in salary increase rate by 1 percentage point	(336)	(316)

Note 11.1 Employee benefits liabilities

Components of the item: employee benefits liabilities

		As at 31 December 2019	As at 31 December 2018
	Non-current	2 613	2 447
	Current	157	171
Note 11.2	**Total liabilities due to future employee benefits programs**	**2 770**	**2 618**
	Employee remuneration liabilities	281	256
	Tax and social security liabilities	243	236
	Accruals (unused annual leave, bonuses, other)	**469**	381
	Other current employee liabilities	**993**	**873**
	Total employee benefits liabilities	**3 763**	**3 491**

Employee benefits expenses

		from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
	Remuneration	3 979	3 723
	Costs of social security and other benefits	1 375	1 247
	Costs of future benefits	240	232
Note 4.1	**Employee benefits expenses**	**5 594**	**5 202**

Note 11.2 Changes in liabilities related to future employee benefits programs

		Total liabilities	Jubilee awards	Retirement and disability benefits	Coal equivalent	Other benefits
	As at 1 January 2018	**2 204**	**400**	**341**	**1 394**	**69**
Note 11.1	Total costs recognised in profit or loss	**232**	122	31	74	5
	Interest costs	**74**	13	12	47	2
	Current service costs	**80**	31	19	27	3
	Actuarial losses recognised in profit or loss	**78**	78	-	-	-
Note 8.2.2	Actuarial losses recognised in other comprehensive income	**322**	-	59	237	26
	Benefits paid	**(140)**	(54)	(36)	(46)	(4)
	As at 31 December 2018	**2 618**	**468**	**395**	**1 659**	**96**
Note 11.1	Total costs recognised in profit or loss	**240**	121	34	77	8
	Interest costs	**74**	13	11	47	3
	Current service costs	**98**	40	23	30	5
	Actuarial losses recognised in profit or loss	**68**	68	-	-	-
Note 8.2.2	Actuarial losses/(gains) recognised in other comprehensive income	**56**	-	50	(9)	15
	Benefits paid	**(144)**	(58)	(34)	(48)	(4)
	As at 31 December 2019	**2 770**	**531**	**445**	**1 679**	**115**

As at 31 December	2019	2018	2017	2016	2015
Present value of liabilities due to employee benefits	2 770	2 618	2 204	2 007	2 105

Main actuarial assumptions (of the Parent Entity) as at 31 December 2019:

	2020	2021	2022	2023	2024 and beyond
- discount rate	2.00%	2.00%	2.00%	2.00%	2.00%
- coal price increase rate	0.80%	2.50%	2.50%	2.50%	2.50%
- lowest salary increase rate	15.56%	15.38%	4.00%	4.00%	4.00%
- expected inflation	2.80%	2.60%	2.60%	2.60%	2.60%
- future expected increase in salary	6.30%	4.90%	4.00%	4.00%	4.00%

Main actuarial assumptions (of the Parent Entity) as at 31 December 2018:

	2019	2020	2021	2022	2023 and beyond
- discount rate	2.82%	2.82%	2.82%	2.82%	2.82%
- coal price increase rate	8.70%	3.00%	3.00%	3.00%	3.00%
- lowest salary increase rate	7.14%	4.89%	5.08%	4.00%	4.00%
- expected inflation	3.20%	2.90%	2.50%	2.50%	2.50%
- future expected increase in salary	5.60%	5.00%	4.80%	3.90%	3.90%

The change in actuarial gains/losses was caused by a change in the assumptions in respect of the decrease of the discount rate, the increase in coal prices and the increase in the lowest salary.
For purposes of reassessment of the liabilities at the end of the current period, the parameters assumed were based on available forecasts of inflation, analysis of coal prices rates and of the lowest salary rates, and also based on the anticipated profitability of long-term treasury bonds.

Actuarial gains/losses as at 31 December 2019 versus assumptions adopted as at 31 December 2018	
Change in financial assumptions	116
Change in demographic assumptions	(12)
Other changes	20
Total actuarial losses/(gains)	**124**

Actuarial gains/losses as at 31 December 2018 versus assumptions adopted as at 31 December 2017	
Change in financial assumptions	296
Change in demographic assumptions	(57)
Other changes	161
Total actuarial losses	**400**

Maturity profile of employee benefits liabilities

Year of maturity:	Total liabilities	jubilee awards	retirement and disability benefits	coal equivalent	other benefits
2020	**157**	56	43	54	4
2021	**183**	44	74	61	4
2022	**115**	36	15	59	5
2023	**115**	35	18	58	4
2024	**113**	34	18	57	4
Other years	**2 087**	326	277	1 390	94
Total liabilities in the statement of financial position as at 31 December 2019	**2 770**	**531**	**445**	**1 679**	**115**

Year of maturity:	Total liabilities	jubilee awards	retirement and disability benefits	coal equivalent	other benefits
2019	**170**	51	61	53	5
2020	**167**	43	58	63	3
2021	**114**	33	16	61	4
2022	**108**	31	13	60	4
2023	**109**	31	16	58	4
Other years	**1 950**	279	231	1 364	76
Total liabilities in the statement of financial position as at 31 December 2018	**2 618**	**468**	**395**	**1 659**	**96**

Part 12 – Other notes

Note 12.1 Related party transactions

The accounting policies and significant estimates and assumptions presented in Parts 2 and 10 are applicable to transactions entered into with related parties.

The transactions between the Group and related parties include transactions with:

- the joint venture Sierra Gorda S.C.M.,
- entities controlled or jointly controlled by the State Treasury or over which it has significant influence, and
- the management board and the supervisory board (remuneration) – Note 12.11.

Operating income from related entities

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Revenues from sales of products, merchandise and materials to a joint venture	19	16
Interest income on loans granted to joint ventures	341	257
Revenues from other transactions with joint ventures	33	33
Revenues from other transactions with other related parties	22	9
Total	**415**	**315**

Purchases from related entities

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Purchase of services, merchandise and materials from other related parties	25	18
Other purchase transactions from other related parties	2	2
Total	**27**	**20**

Trade and other receivables from related parties

	As at 31 December 2019	As at 31 December 2018
From the joint venture Sierra Gorda S.C.M. (loans)	5 694	5 199
From the joint venture Sierra Gorda S.C.M. (other)	397	447
From other related parties	3	3
Total	**6 094**	**5 649**

Trade and other payables towards related parties

	As at 31 December 2019	As at 31 December 2018
Towards joint ventures	19	24
Towards other related parties	3	2
Total	**22**	**26**

The State Treasury is an entity controlling KGHM Polska Miedź S.A. at the highest level. The Company makes use of the exemption to disclose information on transactions with the Polish Government and entities controlled or jointly controlled by the Polish Government, or over which the Polish Government has significant influence (IAS 24.25).

As at 31 December 2019, the balances of payables due to agreements necessary to conduct principal operating activities of the Parent Entity, distinctive due to their nature, in the amount of PLN 203 million (as at 31 December 2018: PLN 200 million) were comprised of:

- setting mining usufruct – fixed fees and mining usufructs for exploration and evaluation of mineral resources – in the total amount of PLN 174 million (as at 31 December 2018: PLN 170 million),
- setting mining usufruct – variable part (recognised in costs) in the amount of PLN 29 million (as at 31 December 2018: PLN 30 million).

As at 31 December 2019, the Group had reverse factoring payables towards PEKAO FAKTORING SP. Z O.O. – a company related to the State Treasury - in the amount of PLN 596 million.

In 2019, banks related to the State Treasury executed the following transactions and economic operations on the Group's behalf: spot currency exchange, depositing cash, granting bank loans and guarantees, running bank accounts, bond issuance consultancy, the purchase of bonds, the servicing of special purpose funds, entering into options and option structures as well as CIRS hedging transactions, and establishing letters of credit.

State Treasury companies may purchase bonds issued by KGHM Polska Miedź S.A.

The remaining transactions, which were collectively significant, between the Group and the Polish Government and with entities controlled or jointly controlled by the Polish Government, or over which the government has significant influence, were within the scope of normal, daily economic operations, carried out at arm's length. These transactions concerned the following:

- the purchase of goods (energy, fuels and services) to meet the needs of current operating activities. In the period from 1 January to 31 December 2019, the turnover from these transactions amounted to PLN 1 156 million (from 1 January to 31 December 2018: PLN 1 217 million), and, as at 31 December 2019, the unsettled balance of liabilities from these transactions amounted to PLN 187 million (as at 31 December 2018: PLN 158 million),
- sales to Polish State Treasury Companies. In the period from 1 January to 31 December 2019, the turnover from these sales amounted to PLN 104 million (from 1 January to 31 December 2018: PLN 57 million), and, as at 31 December 2019, the unsettled balance of receivables from these transactions amounted to PLN 12 million (as at 31 December 2018: PLN 8 million).

Note 12.2 Dividends paid

In accordance with Resolution No. 7/2019 of the Ordinary General Meeting of KGHM Polska Miedź S.A. dated 7 June 2019 regarding the appropriation of the profit for financial year 2018, the entirety of the profit was transferred to the Parent Entity's reserve capital.

In accordance with Resolution No. 10/2018 of the Ordinary General Meeting of KGHM Polska Miedź S.A. dated 6 July 2018 regarding appropriation of the profit for financial year 2017, the entirety of the profit was transferred to the Parent Entity's reserve capital.

All shares of the Parent Entity are ordinary shares.

Note 12.3 Other assets

Accounting policies
Receivables not constituting financial assets are initially recognised at nominal value, and at the end of the reporting period they are measured in the amount receivable. Accounting policies concerning receivables due to the settlement of derivatives measured at fair value through profit or loss were described in note 7.2

		As at 31 December 2019	As at 31 December 2018
	Other non-current non-financial assets	**142**	**109**
	Investment property	92	78
	Prepayments	8	16
	Other	42	15
	Other current assets, of which:	**431**	**405**
Note 7.1	**Financial assets**	**280**	**273**
	Amounts retained (collateral) due to long-term construction contracts	31	43
	Receivables due to guarantees granted	111	97
	Other	138	133
	Non-financial assets	**151**	**132**
	Non-financial prepayments	47	44
	Other	104	88
	Other non-current and current assets, total	**573**	**514**

Note 12.4 Other liabilities

Accounting policies
Other financial liabilities are initially recognised at fair value less transaction costs, and at the end of the reporting period they are measured at amortised cost.

	As at 31 December 2019	As at 31 December 2018
Liabilities due to Franco Nevada streaming contract – deferred income	263	289
Trade payables	174	171
Other deferred income	103	97
Other liabilities	91	41
Other liabilities – non-current	**631**	**598**
Special funds	363	337
Deferred income	59	116
Accruals, including:	446	355
provision for purchase of property rights related to consumed electricity	53	45
charge for discharging of gases and dusts to the air	90	48
Other accounted costs, proportional to achieved revenues, which are future liabilities estimated on the basis of contracts entered into	156	179
Other financial liabilities	107	116
Other non-financial liabilities	51	110
Other liabilities - current	**1 026**	**1 034**
Total – non-current and current liabilities	**1 657**	**1 632**

Note 12.5 Assets and liabilities not recognised in the statement of financial position

The value of contingent assets and liabilities and other liabilities not recognised in the statement of financial position were determined based on estimates.

		As at 31 December 2019	As at 31 December 2018
	Contingent assets	**630**	**565**
	Guarantees received	356	250
	Promissory notes receivables	120	121
	Other	154	194
	Contingent liabilities	**1 882**	**1 836**
Note 8.6	Guarantees and letters of credit	1 607	1 634
Note 8.6	A promissory note	144	18
	Liabilities due to implementation of projects and inventions	8	17
	Other	123	167
	Other liabilities not recognised in the statement of financial position	**107**	**113**
	Liabilities towards local government entities due to expansion of the tailings storage facility	107	113

Note 12.6 Capital commitments related to property, plant and equipment and intangible assets

Capital commitments incurred in the reporting period, but not yet recognised in the statement of financial position, were as follows (as at 31 December of a given year):

	As at 31 December 2019	As at 31 December 2018
Capital commitments due to the purchase of:		
property, plant and equipment	1 290	2 818
intangible assets	347	45
Total capital commitments	**1 637**	**2 863**

The Group's share in capital commitments of joint ventures accounted for using the equity method (Sierra Gorda S.C.M.) is presented in Note 6.1 Joint ventures accounted for using the equity method.

Note 12.7 The right of perpetual usufruct of land

The Parent Entity and the Group's Polish subsidiaries obtained the right of perpetual usufruct of land mostly free of charge on the basis of laws in force. The land subject to perpetual usufruct is industrial area related to the core business activities, which also includes protective zones in which environmental quality standards have been exceeded as a result of the activities carried out.
Due to the nature of the use of the above-mentioned land, as at 31 December 2018 the Group had not determined fair values for these perpetual usufruct rights.
The table below contains information on future payments due to the right of perpetual usufruct of land as at 31 December 2018. The Group's liabilities due to the right of perpetual usufruct of land for 2018, which were not recognised in the statement of financial position, were estimated on the basis of annual payment rates resulting from recent administrative decisions and the useful life of the land subject to this right.

	As at 31 December 2018
Under one year	16
From one to five years	78
Over five years	909
Total value of future contingent payments due to the right of perpetual usufruct of land	**1 003**

As at 1 January 2019 the Group resolved to implement IFRS 16. Following the adoption of IFRS 16, the Group recognises perpetual usufruct rights to land in the statement of financial position. Details regarding the implementation of IFRS 16 are described in note 1.3, Impact of new and amended standards and interpretations.

Note 12.8 Employment structure

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
White-collar employees	10 559	10 460
Blue-collar employees	22 975	23 147
Total (full-time)	**33 534**	**33 607**

Note 12.9 Other adjustments in the statement of cash flows

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Losses on the sale of property, plant and equipment and intangible assets	7	10
Other	(5)	1
Total	**2**	**11**

Note 12.10 Remuneration of key managers

Remuneration of members of the Management Board (in PLN thousands)	from 1 January 2019 to 31 December 2019			
	Period when function served	Remuneration for the period of service as a member of the Management Board	Benefits due to termination of employment	Total earnings
Members of the Management Board serving in the function as at 31 December 2019				
Marcin Chludziński	01.01-31.12	1 213	-	**1 213**
Radosław Stach	01.01-31.12	1 102	-	**1 102**
Katarzyna Kreczmańska-Gigol	01.01-31.12	1 132	-	**1 132**
Adam Bugajczuk	01.01-31.12	1 006	-	**1 006**
Paweł Gruza	01.01-31.12	984	-	**984**
Members of the Management Board not serving in the function as at 31 December 2019				
Stefan Świątkowski	-	-	6	**6**
Rafał Pawełczak	-	-	6	**6**
TOTAL		**5 437**	**12**	**5 449**

Remuneration of members of the Management Board (in PLN thousands)	from 1 January 2018 to 31 December 2018			
	Period when function served	Remuneration for the period of service as a member of the Management Board	Benefits due to termination of employment	Total earnings
Members of the Management Board serving in the function as at 31 December 2018				
Marcin Chludziński	06.07-31.12	405	-	**405**
Radosław Stach	06.07-31.12	362	-	**362**
Katarzyna Kreczmańska-Gigol	06.07-31.12	380	-	**380**
Adam Bugajczuk	24.08-31.12	263	-	**263**
Paweł Gruza	10.09-31.12	230	-	**230**
Members of the Management Board not serving in the function as at 31 December 2018				
Stefan Świątkowski	01.01-06.07	456	421	**877**
Rafał Pawełczak	01.01-06.07	456	421	**877**
Ryszard Jaśkowski	01.01-06.07	441	101	**542**
Radosław Domagalski - Łabędzki	01.01-10.03	171	427	**598**
Michał Jezioro	01.01-10.03	165	427	**592**
Piotr Walczak	-	-	124	**124**
TOTAL		**3 329**	**1 921**	**5 250**

Remuneration of members of the Supervisory Board (in PLN thousands)	from 1 January 2019 to 31 December 2019			
	Period when function served	Current employee benefits	Current benefits due to serving in the function	Total earnings
Members of the Supervisory Board serving in the function as at 31 December 2019				
Andrzej Kisielewicz	01.01-31.12	-	134	**134**
Leszek Banaszak	01.01-31.12	-	122	**122**
Bogusław Szarek	01.01-31.12	222	123	**345**
Jarosław Janas	01.01-31.12	-	122	**122**
Marek Pietrzak	01.01-31.12	-	122	**122**
Agnieszka Winnik -Kalemba	01.01-31.12	-	122	**122**
Ireneusz Pasis	01.01-31.12	191	122	**313**
Józef Czyczerski	01.01-31.12	174	122	**296**
Bartosz Piechota	01.01-31.12	-	122	**122**
Members of the Supervisory Board not serving in the function as at 31 December 2019				
Janusz Marcin Kowalski	01.01-11.11	-	105	**105**
TOTAL		**587**	**1 216**	**1 803**

Remuneration of members of the Supervisory Board (in PLN thousands)	from 1 January 2018 to 31 December 2018			
	Period when function served	Current employee benefits	Current benefits due to serving in the function	Total earnings
Members of the Supervisory Board serving in the function as at 31 December 2018				
Andrzej Kisielewicz	06.07-31.12		60	**60**
Leszek Banaszak	06.07-31.12	-	55	**55**
Bogusław Szarek	01.01-31.12	221	114	**335**
Jarosław Janas	06.07-31.12	-	55	**55**
Marek Pietrzak	01.01-31.12	-	114	**114**
Agnieszka Winnik -Kalemba	01.01-31.12	-	114	**114**
Ireneusz Pasis	06.07-31.12	122	55	**177**
Józef Czyczerski	01.01-31.12	135	114	**249**
Bartosz Piechota	06.07-31.12	-	55	**55**
Janusz Marcin Kowalski	01.01-31.12	-	114	**114**
Members of the Supervisory Board not serving in the function as at 31 December 2018				
Leszek Hajdacki	01.01-06.07	109	59	**168**
Dominik Hunek	01.01-06.07	-	65	**65**
Michał Czarnik	01.01-06.07	-	59	**59**
Jarosław Witkowski	01.01-06.07	-	59	**59**
Wojciech Andrzej Myślecki	01.01-03.04	-	30	**30**
TOTAL		**587**	**1 122**	**1 709**

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Current employee benefits of other key managers (in PLN thousands)	3 140	3 773

Based on the definition of key management personnel according to IAS 24 and based on an analysis of the rights and scope of responsibilities of members of management bodies of the Group arising from corporate documents and from management contracts, the members of the Board of Directors of KGHM INTERNATIONAL LTD. and the President of the Board of Directors of KGHM INTERNATIONAL LTD. were recognised as other key managers of the Group.

Note 12.11 Remuneration of the entity entitled to audit the financial statements and of entities related to it in PLN thousands

	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Companies of the Deloitte Group	**-**	**4 338**
From the contract for the review and audit of financial statements, of which due to:	-	4 321
audit of annual financial statements	-	3 768
assurance services, of which:	-	553
review of financial statements	-	502
other assurance services	-	51
From other contracts	-	17
Companies of the PricewaterhouseCoopers Group	**3 920**	-
From the contract for the review and audit of financial statements, of which due to:	3 859	-
audit of annual financial statements	3 329	-
assurance services, of which:	530	-
review of financial statements	506	-
other assurance services	24	-
From other contracts	61	-

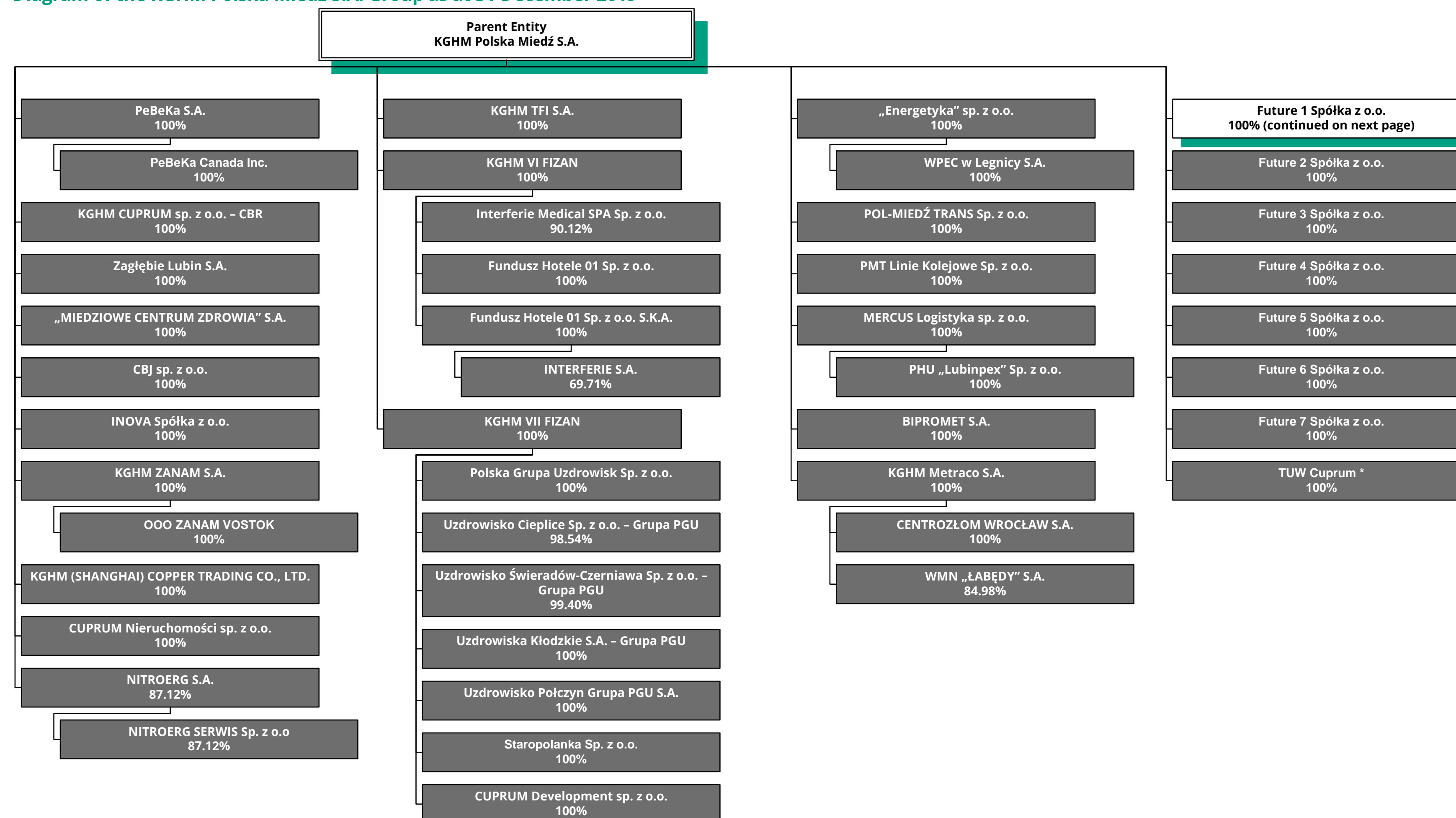
Note 12.12 Composition of the Group

Company	Head office	% of Group's share	
		As at 31 December 2019	As at 31 December 2018
BIPROMET S.A.	Katowice	100	100
CBJ sp. z o.o.	Lubin	100	100
CENTROZŁOM WROCŁAW S.A.	Wrocław	100	100
CUPRUM Nieruchomości sp. z o.o.	Wrocław	100	100
"Energetyka" sp. z o.o.	Lubin	100	100
Fundusz Hotele 01 Sp. z o.o.	Wrocław	100	100
Fundusz Hotele 01 Sp. z o.o. S.K.A.	Wrocław	100	100
INOVA Spółka z o.o.	Lubin	100	100
INTERFERIE S.A.	Legnica	69.71	69.5
Interferie Medical SPA Sp. z o.o.	Legnica	90.12	90.05
KGHM CUPRUM sp. z o.o. - CBR	Wrocław	100	100
CUPRUM DEVELOPMENT sp. z o.o.	Wrocław	100	100
KGHM Kupfer AG	Berlin	100	100
KGHM I FIZAN in liquidation	Wrocław	-	100
KGHM IV FIZAN	Wrocław	-	100
KGHM V FIZAN in liquidation	Wrocław	-	100
KGHM VI FIZAN	Wrocław	100	100
KGHM VII FIZAN	Wrocław	100	100
KGHM Metraco S.A.	Legnica	100	100
KGHM (SHANGHAI) COPPER TRADING CO., LTD.	Shanghai	100	100
KGHM TFI S.A.	Wrocław	100	100
KGHM ZANAM S.A.	Polkowice	100	100
"MIEDZIOWE CENTRUM ZDROWIA" S.A.	Lubin	100	100
NITROERG S.A.	Bieruń	87.12	87.12
NITROERG SERWIS Sp. z o.o.	Wilków	87.12	87.12
PeBeKa S.A.	Lubin	100	100
PeBeKa Canada Inc.	Vancouver	100	100
MERCUS Logistyka sp. z o.o.	Polkowice	100	100
PHU "Lubinpex" Sp. z o.o.	Lubin	100	100
Staropolanka Sp. z o.o.	Polanica Zdrój	100	100
PMT Linie Kolejowe 2 Sp. z o.o.	Owczary	-	100
Future 1 Sp. z o.o.	Lubin	100	100
Future 2 Sp. z o.o.	Lubin	100	100
Future 3 Sp. z o.o.	Lubin	100	100
Future 4 Sp. z o.o.	Lubin	100	100
Future 5 Sp. z o.o.	Lubin	100	100
Future 6 Sp. z o.o.	Lubin	100	100
Future 7 Sp. z o.o.	Lubin	100	100
PMT Linie Kolejowe Sp. z o.o.	Owczary	100	100
POL-MIEDŹ TRANS Sp. z o.o.	Lubin	100	100
Polska Grupa Uzdrowisk Sp. z o.o.	Wrocław	100	100
"Uzdrowisko Cieplice" Sp. z o.o.-Grupa PGU	Jelenia Góra	98.54	98.54
Uzdrowiska Kłodzkie S.A. - Grupa PGU	Polanica Zdrój	100	100
Uzdrowisko Połczyn Grupa PGU S.A.	Połczyn Zdrój	100	100
Uzdrowisko "Świeradów-Czerniawa" Sp. z o.o.-Grupa PGU	Świeradów Zdrój	99.4	99.12
WMN "ŁABĘDY" S.A.	Gliwice	84.98	84.98
WPEC w Legnicy S.A.	Legnica	100	100
Zagłębie Lubin S.A.	Lubin	100	100
OOO ZANAM VOSTOK	Gay (Russia)	100	100
TUW Cuprum*	Lubin	100	100

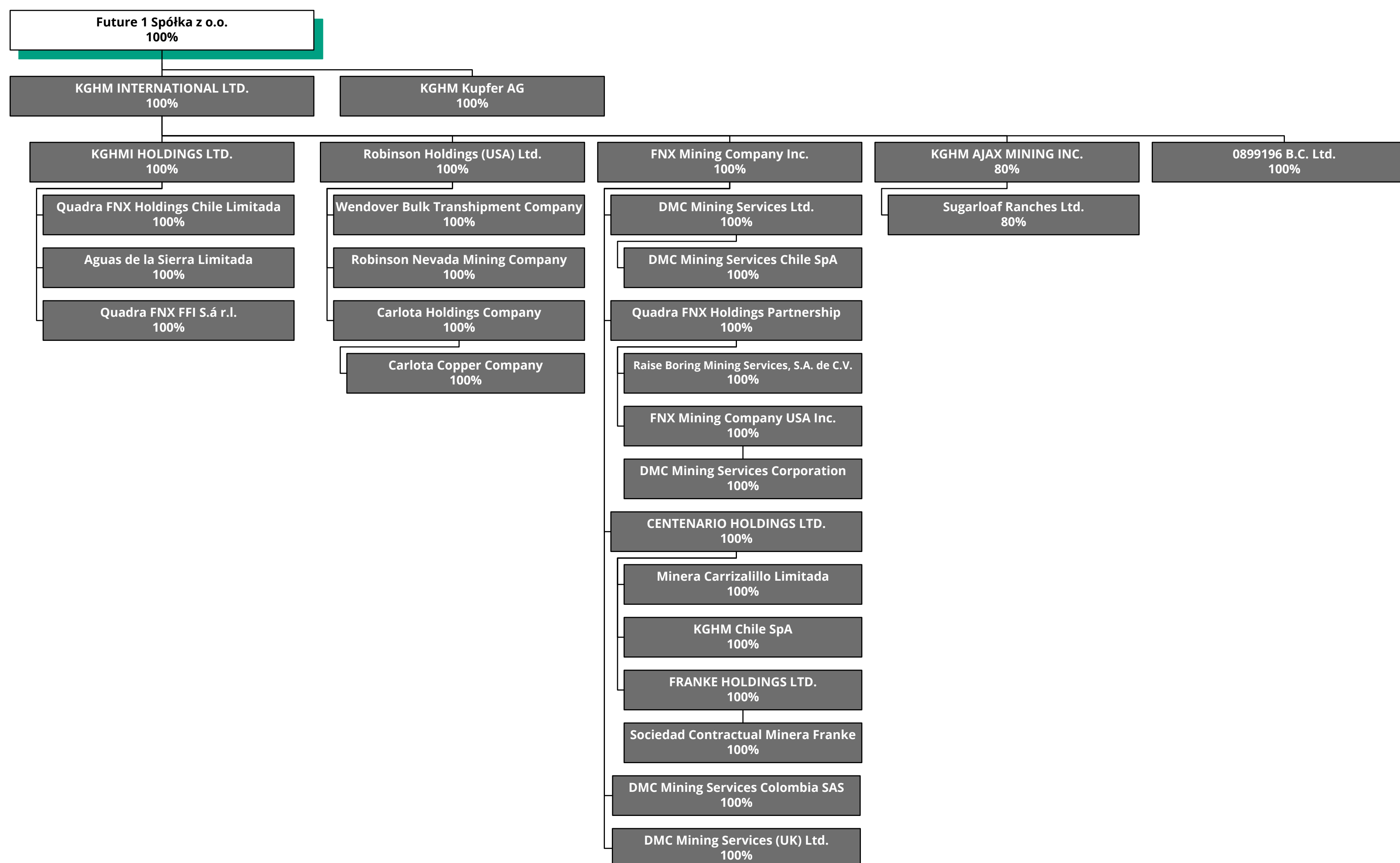
* Excluded from consolidation.

Company	Head office	% of Group's share	
		As at 31 December 2019	As at 31 December 2018
KGHM INTERNATIONAL LTD. Group			
KGHM INTERNATIONAL LTD.	Vancouver, Canada	100	100
KGHM AJAX MINING INC.	Vancouver, Canada	80	80
Sugarloaf Ranches Ltd.	Vancouver, Canada	80	80
KGHMI Holdings LTD.	Vancouver, Canada	100	100
Quadra FNX Holdings Chile Limitada	Chile	100	100
Aguas de la Sierra Limitada	Chile	100	100
Quadra FNX FFI S.à r.l.	Luxembourg	100	100
Robinson Holdings (USA) Ltd.	Nevada, USA	100	100
Wendover Bulk Transhipment Company	Nevada, USA	100	100
Robinson Nevada Mining Company	Nevada, USA	100	100
Carlota Holdings Company	Nevada, USA	100	100
Carlota Copper Company	Nevada, USA	100	100
FNX Mining Company Inc.	Ontario, Canada	100	100
DMC Mining Services Ltd.	Vancouver, Canada	100	100
Quadra FNX Holdings Partnership	Vancouver, Canada	100	100
Raise Boring Mining Services, S.A. de C.V.	Mexico	100	100
FNX Mining Company USA Inc.	Nevada, USA	100	100
DMC Mining Services Corporation	Nevada, USA	100	100
CENTENARIO HOLDINS LTD.	Vancouver, Canada	100	100
Minera Carrizalillo Limitada	Chile	100	100
KGHM Chile SpA	Chile	100	100
FRANKE HOLDINGS LTD.	Vancouver, Canada	100	100
Sociedad Contractual Minera Franke	Chile	100	100
0899196 B.C. Ltd.	Vancouver, Canada	100	100
DMC Mining Services (UK) Ltd.	The United Kingdom	100	100
DMC Mining Services Colombia SAS	Colombia	100	100
DMC Mining Services Chile SpA	Chile	100	-

Diagram of the KGHM Polska Miedź S.A. Group as at 31 December 2019



* Excluded from consolidation.


Future 1 Spółka z o.o.
100%
KGHM INTERNATIONAL LTD.
100%
KGHM Kupfer AG
100%
KGHMI HOLDINGS LTD.
100%
Robinson Holdings (USA) Ltd.
100%
FNX Mining Company Inc.
100%
KGHM AJAX MINING INC.
80%
0899196 B.C. Ltd.
100%
Quadra FNX Holdings Chile Limitada
100%
Aguas de la Sierra Limitada
100%
Quadra FNX FFI S.á r.l.
100%
Wendover Bulk Transhipment Company
100%
Robinson Nevada Mining Company
100%
Carlota Holdings Company
100%
Carlota Copper Company
100%
DMC Mining Services Ltd.
100%
DMC Mining Services Chile SpA
100%
Quadra FNX Holdings Partnership
100%
Raise Boring Mining Services, S.A. de C.V.
100%
FNX Mining Company USA Inc.
100%
DMC Mining Services Corporation
100%
CENTENARIO HOLDINGS LTD.
100%
Minera Carrizalillo Limitada
100%
KGHM Chile SpA
100%
FRANKE HOLDINGS LTD.
100%
Sociedad Contractual Minera Franke
100%
DMC Mining Services Colombia SAS
100%
DMC Mining Services (UK) Ltd.
100%
Sugarloaf Ranches Ltd.
80%

Note 12.13 Subsequent events after the reporting period

Information on the impact of the spread of the (coronavirus) COVID–19 on the KGHM Polska Miedź S.A. Group after the end of the reporting period

Due to the emergence at the end of 2019 in China, and the subsequent global spread of the coronavirus COVID-19, KGHM Polska Miedź S.A. is continuously monitoring the global economic situation and the potential negative impact on the KGHM Polska Miedź S.A. Group.
Concerns related to the further spread of the virus resulted in the first quarter of 2020, among others, in the fall of copper prices and the volatility of exchange rates, as well as the fall of prices of listed shares, including those of the Parent Entity. The closing price from the last day of trading in 2019 amounted to 95.58 PLN/share, while on 13 March 2020 the share price amounted to 52.48 PLN/share, which is a decrease of 45.1%. According to the last official trading day in 2019, the cash settlement price of copper amounted to PLN 6 156 USD/t, while on 13 March 2020 the cash settlement price of copper amounted to 5 460 USD/t, which is a decrease of 11.3%. The impact of the epidemic will be taken into account in 2020 when evaluating the risk of impairment of assets.
The KGHM Polska Miedź S.A. Group is undertaking on-going actions to limit its exposure to risk, especially with respect to employee safety and maintaining the supply chain, and systematically manages the risk of the negative impact of decreases in market copper prices.
Currently, the risk of disruptions due to the coronavirus is judged to be low. Nevertheless, if the epidemic continues to impact the global economy, the situation may result in future negative financial and organisational consequences for the Group.

Annex to agreement on reverse factoring services

On 9 March 2020 the Parent Entity signed an annex to the agreement on reverse factoring services dated 19 September 2019 entered into with Pekao Faktoring Sp. z o.o., increasing the factoring limit by PLN 250 million, i.e. to the amount of PLN 1 billion. The remaining terms of the agreement were unchanged.

Part 13 – Quarterly financial information of the Group

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

		from 1 October 2019 to 31 December 2019	from 1 October 2018 to 31 December 2018	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Note 2.3	Revenues from contracts with customers	5 854	5 739	22 723	20 526
Note 4.1	Cost of sales	(5 190)	(4 753)	(18 767)	(16 555)
	Gross profit	**664**	**986**	**3 956**	**3 971**
Note 4.1	Selling costs and administrative expenses	(437)	(394)	(1 501)	(1 380)
	Profit on sales	**227**	**592**	**2 455**	**2 591**
Note 6.1	Share of losses of joint ventures accounted for using the equity method	(269)	(404)	(438)	(662)
Note 6.2	Gains due to the reversal of allowances for impairment of loans granted to joint ventures	106	733	106	733
Note 6.2	Interest income on loans granted to joint ventures calculated using the effective interest rate method	86	65	341	257
	Profit or loss on involvement in joint ventures	(77)	394	9	328
Note 4.2	Other operating income	272	347	809	1 034
	Other operating costs	(836)	(218)	(623)	(726)
	Finance income	301	(17)	38	11
Note 4.3	Finance costs	(189)	(224)	(566)	(772)
	Profit before income tax	**(302)**	**874**	**2 122**	**2 466**
Note 5.1	Income tax expense	57	(192)	(701)	(808)
	PROFIT/(LOSS) FOR THE PERIOD	**(245)**	**682**	**1 421**	**1 658**
	Profit/(loss) for the period attributable to:				
	Shareholders of the Parent Entity	(243)	684	1 421	1 657
	Non-controlling interest	(2)	(2)	-	1
	Weighted average number of ordinary shares (million)	**200**	**200**	**200**	**200**
	Basic/diluted earnings per share (in PLN)	**(1.22)**	**3.42**	**7.11**	**8.29**

Explanatory notes to the consolidated statement of profit or loss

Note 13.1 Expenses by nature

	from 1 October 2019 to 31 December 2019	from 1 October 2018 to 31 December 2018	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Depreciation of property, plant and equipment and amortisation of intangible assets	571	478	2 013	1 903
Employee benefits expenses	1 444	1 332	5 594	5 202
Materials and energy	1 984	2 007	7 945	7 097
External services	720	683	2 655	2 404
Minerals extraction tax	328	374	1 520	1 671
Other taxes and charges	133	130	521	535
Reversal of impairment losses on property, plant and equipment and intangible assets	(19)	(26)	(19)	(26)
Reversal of write down of inventories	(12)	-	(38)	(30)
Advertising costs and representation expenses	26	24	71	62
Property and personal insurance	15	14	59	54
Impairment losses on property, plant and equipment and intangible assets	217	35	217	35
Write down of inventories	30	-	38	28
Other costs	17	16	78	105
Total expenses by nature	**5 454**	**5 067**	**20 654**	**19 040**
Cost of merchandise and materials sold (+)	126	131	681	653
Change in inventories of finished goods and work in progress (+/-)	476	395	337	(375)
Cost of products for internal use of the Group (-) (mainly stripping costs of surface mines)	(429)	(446)	(1 404)	(1 383)
Total cost of sales, selling costs and administrative expenses, including:	**5 627**	**5 147**	**20 268**	**17 935**
Cost of sales	5 190	4 753	18 767	16 555
Selling costs	121	102	432	374
Administrative expenses	316	292	1 069	1 006

Note 13.2 Other operating income and (costs)

	from 1 October 2019 to 31 December 2019	from 1 October 2018 to 31 December 2018	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Measurement and realisation of derivatives	50	69	199	216
Interest income calculated using the effective interest rate method	2	2	9	8
Exchange differences on assets and liabilities other than borrowings	-	215	171	593
Reversal of impairment losses on intangible assets not yet available for use	150	-	150	-
Release of unused provisions	26	22	85	51
Other	44	39	195	166
Total other operating income	**272**	**347**	**809**	**1 034**
Measurement and realisation of derivatives	(93)	(105)	(278)	(305)
Exchange differences on assets and liabilities other than borrowings	(547)	-	-	-
Impairment losses on financial instruments	(14)	(18)	(17)	(24)
Impairment losses on fixed assets under construction and intangible assets not yet available for use	(3)	(46)	(3)	(60)
Provisions recognised	(121)	(18)	(148)	(183)
Other	(58)	(31)	(177)	(154)
Total other operating costs	**(836)**	**(218)**	**(623)**	**(726)**
Other operating income/(costs)	**(564)**	**129**	**186**	**308**

Note 13.3 Finance income/(costs)

	from 1 October 2019 to 31 December 2019	from 1 October 2018 to 31 December 2018	from 1 January 2019 to 31 December 2019	from 1 January 2018 to 31 December 2018
Exchange differences on borrowings	266	-	-	-
Measurement and realisation of derivatives	35	(17)	37	11
Other	-	-	1	-
Total finance income	**301**	**(17)**	**38**	**11**
Interest on borrowings	(108)	(1)	(190)	(93)
Unwinding of the discount of provisions effect	(48)	(44)	(48)	(50)
Bank fees and charges on borrowings not included in the measurement at amortised cost	(24)	9	(48)	(15)
Measurement and realisation of derivatives	(39)	-	(59)	-
Exchange differences on borrowings	-	(206)	(208)	(593)
Other	30	18	(13)	(21)
Total finance costs	**(189)**	**(224)**	**(566)**	**(772)**
Finance income and (costs)	**112**	**(241)**	**(528)**	**(761)**

SIGNATURES OF ALL MEMBERS OF THE MANAGEMENT BOARD

These financial statements were authorised for issue on 16 March 2020.

President
of the Management Board

Marcin Chludziński

Vice President
of the Management Board

Adam Bugajczuk

Vice President
of the Management Board

Paweł Gruza

Vice President
of the Management Board

Katarzyna Kreczmańska-Gigol

Vice President
of the Management Board

Radosław Stach

SIGNATURE OF PERSON RESPONSIBLE FOR ACCOUNTING

Executive Director
of Accounting Services Center
Chief Accountant

Łukasz Stelmach