LOTOS Group
Consolidated financial statements for 2020

prepared in accordance with
International Financial Reporting Standards
as endorsed by the European Union
together with the independent auditor's report

(This is a translation of a document originally issued in Polish)

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CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

		2020	2019
Revenue	8.1	20,908.6	29,493.3
Cost of sales	9.1	(19,441.7)	(25,649.1)
Gross profit		**1,466.9**	**3,844.2**
Selling expenses	9.1	(1,412.9)	(1,425.6)
Administrative expenses	9.1	(521.0)	(490.8)
Other income	9.3	80.3	134.6
Other expenses	9.4	(1,005.4)	(56.4)
(Impairment losses)/reversal of impairment losses on financial instruments	9.7	(4.7)	(36.3)
Operating profit/(loss)		**(1,396.8)**	**1,969.7**
Finance income	9.5	125.8	70.1
Finance costs	9.6	(370.5)	(351.8)
(Impairment losses)/reversal of impairment losses on financial instruments	9.7	(9.4)	-
Share in net profit/(loss) of equity-accounted joint ventures	14	(1.9)	4.2
Profit/(loss) before tax		**(1,652.8)**	**1,692.2**
Corporate income tax	10.1	506.6	(539.3)
Net profit/(loss)		**(1,146.2)**	**1,152.9**
Other comprehensive income/(loss)			
Items that may be reclassified to profit or loss:		**195.9**	**91.2**
Exchange differences on translating foreign operations		16.7	6.6
Cash flow hedges	20	221.2	104.5
Corporate income tax on cash flow hedges	10.1	(42.0)	(19.9)
Items that will not be reclassified to profit or loss:		**(6.4)**	**(8.9)**
Actuarial gains/(losses) on post-employment benefits	24.2	(7.8)	(10.9)
Corporate income tax relating to actuarial gain/(loss) on post-employment benefits	10.1	1.4	2.0
Other comprehensive income/(loss), net		**189.5**	**82.3**
Total comprehensive income/(loss)		**(956.7)**	**1,235.2**
Net profit/(loss) attributable to:			
Owners of the Parent	11	(1,146.2)	1,152.9
Total comprehensive income/(loss) attributable to:			
Owners of the Parent		(956.7)	1,235.2
Net profit/(loss) attributable to owners of the Parent per share (PLN)			
Weighted average number of shares (million)	11	184.9	184.9
- basic	11	(6.20)	6.24
- diluted	11	(6.20)	6.24

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

	Note	Dec 31 2020	Dec 31 2019
ASSETS			
Non-current assets			
Property, plant and equipment of the refining and marketing segment	13	9,466.9	9,638.4
Intangible assets of the refining and marketing segment	13	161.0	160.0
Property, plant and equipment of the exploration and production segment	13	2,923.1	3,632.4
Intangible assets of the exploration and production segment	13	313.8	330.5
Equity-accounted joint ventures	14	26.1	142.2
Deferred tax assets	10.3	384.2	174.5
Derivative financial instruments	23	1.2	0.1
Shares	15	309.8	9.8
Loans	15	195.9	-
Other non-current assets	15	178.1	148.3
Total non-current assets		**13,960.1**	**14,236.2**
Current assets			
Inventories	16	3,495.7	4,854.3
- including emergency stocks		2,135.1	3,023.8
Trade receivables	15	1,639.9	2,609.1
Current tax assets		180.9	96.7
Derivative financial instruments	23	65.9	25.1
Other current assets	15	314.3	334.1
Cash and cash equivalents	17	2,145.6	1,516.6
Total current assets		**7,896.3**	**9,435.9**
Total assets		**21,856.4**	**23,672.1**
EQUITY AND LIABILITIES			
Equity			
Share capital	18	184.9	184.9
Share premium	19	2,228.3	2,228.3
Cash flow hedging reserve	20	(24.4)	(203.6)
Retained earnings		9,078.0	10,415.5
Translation reserve		106.9	90.2
Equity attributable to owners of the Parent		**11,573.7**	**12,715.3**
Non-controlling interests		0.1	0.1
Total equity		**11,573.8**	**12,715.4**
Non-current liabilities			
Bank and non-bank borrowings, notes and lease liabilities	22	2,717.7	3,142.6
Derivative financial instruments	23	1.0	6.6
Deferred tax liabilities	10.3	144.5	475.2
Employee benefit obligations	24	230.2	207.5
Other liabilities and provisions	25	1,420.5	1,266.0
Total non-current liabilities		**4,513.9**	**5,097.9**
Current liabilities			
Bank and non-bank borrowings, notes and lease liabilities	22	1,355.8	1,273.8
Derivative financial instruments	23	18.5	15.3
Trade payables	25	1,636.0	1,940.8
Current tax liabilities		134.2	217.1
Employee benefit obligations	24	196.1	174.3
Other liabilities and provisions	25	2,428.1	2,237.5
Total current liabilities		**5,768.7**	**5,858.8**
Total liabilities		**10,282.6**	**10,956.7**
Total equity and liabilities		**21,856.4**	**23,672.1**

CONSOLIDATED STATEMENT OF CASH FLOWS

(indirect method)

	Note	2020	2019
Cash flows from operating activities			
Net profit/(loss)		**(1,146.2)**	**1,152.9**
Adjustments:		**4,338.1**	**1,780.1**
Income tax	10.1	(506.6)	539.3
Share in net profit/(loss) of equity-accounted joint ventures	14	1.9	(4.2)
Depreciation and amortisation	9.1	1,089.9	909.3
Foreign exchange (gains)/losses		182.8	156.3
Interest and dividends		159.4	191.8
(Gains)/losses from investing activities		142.2	47.7
Impairment losses on property, plant and equipment and other intangible assets	9.4; 9.3	904.8	(61.1)
Settlement and measurement of financial instruments	9.5	(65.7)	(15.8)
Decrease/(Increase) in trade receivables		915.2	(728.7)
Decrease in other assets		24.5	48.2
Decrease/(Increase) in inventories		1,358.2	(8.1)
(Decrease)/Increase in trade payables		(304.7)	27.1
Increase in other liabilities and provisions		399.5	634.0
Increase in employee benefit obligations		36.7	44.3
Income tax paid		(322.0)	(802.8)
Net cash from operating activities		**2,869.9**	**2,130.2**
Cash flows from investing activities			
Dividends received		2.4	8.2
Interest received		-	5.1
Sale of property, plant and equipment and other intangible assets		4.5	0.6
Purchase of property, plant and equipment and other intangible assets		(895.4)	(805.0)
Cash contributions – equity-accounted joint ventures	14	(7.0)	(17.3)
Acquisition of shares		(300.0)	-
Loans		(200.0)	-
Security deposits (margins)		1.7	(49.7)
Funds for future costs of decommissioning of oil and gas extraction facilities		(28.7)	394.6
Settlement of derivative financial instruments		34.0	55.6
Net cash from investing activities		**(1,388.5)**	**(407.9)**
Cash flows from financing activities			
Proceeds from bank borrowings	22	74.4	283.4
Grants received		15.0	0.5
Repayment of bank and non-bank borrowings	22	(571.5)	(1,359.2)
Interest paid		(196.8)	(242.3)
Dividends paid	12	(184.9)	(554.6)
Payment of lease liabilities		(214.6)	(194.4)
Settlement of derivative financial instruments		(11.4)	(74.6)
Net cash from financing activities		**(1,089.8**	**(2,141.2)**
Total net cash flow		**391.6**	**(418.9)**
Effect of exchange rate fluctuations on cash held		15.2	(2.8)
Change in net cash		**406.8**	**(421.7)**
Cash at beginning of period		**1,516.6**	**1,938.3**
Cash at end of period	17	**1,923.4**	**1,516.6**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Note	Share capital	Share premium	Cash flow hedging reserve	Retained earnings	Translation reserve	Equity attributable to owners of the Parent	Non-controlling interests	Total equity
Jan 1 2020		**184.9**	**2,228.3**	**(203.6)**	**10,415.5**	**90.2**	**12,715.3**	**0.1**	**12,715.4**
Net profit/(loss)	11	-	-	-	(1,146.2)	-	(1,146.2)	-	(1,146.2)
Other comprehensive income/(loss), net		-	-	179.2	(6.4)	16.7	189.5	-	189.5
Total comprehensive income/(loss)		-	-	179.2	(1,152.6)	16.7	(956.7)	-	(956.7)
Dividend	12	-	-	-	(184.9)	-	(184.9)	-	(184.9)
Dec 31 2020		**184.9**	**2,228.3**	**(24.4)**	**9,078.0**	**106.9**	**11,573.7**	**0.1**	**11,573.8**
Jan 1 2019		**184.9**	**2,228.3**	**(288.2)**	**9,826.1**	**83.6**	**12,034.7**	**0.1**	**12,034.8**
Net profit/(loss)	11	-	-	-	1,152.9	-	1,152.9	-	1,152.9
Other comprehensive income/(loss), net		-	-	84.6	(8.9)	6.6	82.3	-	82.3
Total comprehensive income/(loss)		-	-	84.6	1,144.0	6.6	1,235.2	-	1,235.2
Dividend		-	-	-	(554.6)	-	(554.6)	-	(554.6)
Dec 31 2019		**184.9**	**2,228.3**	**(203.6)**	**10,415.5**	**90.2**	**12,715.3**	**0.1**	**12,715.4**

NOTES TO THE FINANCIAL STATEMENTS

1. General information

Grupa LOTOS Spółka Akcyjna ("Grupa LOTOS S.A.", the "Company", the "Parent"), was established on September 18th 1991. The Company's registered address is: ul. Elbląska 135, 80-718 Gdańsk, Poland. The Company is registered in Poland.

The principal business activity of Grupa LOTOS S.A.'s Group (the "LOTOS Group" or the "Group") consists in the production and processing of refined petroleum products and their wholesale and retail sale. The Group's business also includes acquisition of crude oil and natural gas deposits and oil and gas production. The Group operates mainly in Poland, Norway and Lithuania. Based on the classification applied by the Warsaw Stock Exchange, Grupa LOTOS S.A. is included in the fuel sector.

2. Composition of the Group and its changes

The LOTOS Group comprises: Grupa LOTOS S.A. (the Parent), a number of production, service and trading companies which are direct or indirect subsidiaries of Grupa LOTOS S.A., and the foundation.

Information on the registered addresses and business activities of the aforementioned entities, as well as on the Group's ownership interests in those entities, is presented below.

Name	Registered office	Principal business	Group's ownership interest	
			Dec 31 2020	Dec 31 2019
Parent				
Refining and marketing segment				
• Grupa LOTOS S.A.	Gdańsk	Production and processing of refined petroleum products (mainly fuels) and their wholesale	Not applicable	Not applicable
Direct fully-consolidated subsidiaries				
Exploration and production segment				
• LOTOS Upstream Sp. z o.o. (parent of another group: LOTOS Upstream Group)	Gdańsk	Activities of head offices and holdings	100.00%	100.00%
• LOTOS Petrobaltic S.A. (parent of another group: LOTOS Petrobaltic Group)	Gdańsk	Acquisition of crude oil and natural gas deposits, extraction of hydrocarbons	99.99%	99.99%
Refining and marketing segment				
• LOTOS Paliwa Sp. z o.o.	Gdańsk	Wholesale and retail sale of fuels and light fuel oil, management of the LOTOS service station network	100.00%	100.00%
• LOTOS Oil Sp. z o.o.	Gdańsk	Manufacturing and sale of lubricating oils and lubricants, and sale of base oils	100.00%	100.00%
• LOTOS Asfalt Sp. z o.o.	Gdańsk	Production and sale of bitumens	100.00%	100.00%
• LOTOS Kolej Sp. z o.o.	Gdańsk	Railway transport	100.00%	100.00%
• LOTOS Serwis Sp. z o.o.	Gdańsk	Maintenance of mechanical and electric operations and controlling devices, overhaul and repair services	100.00%	100.00%
• LOTOS Lab Sp. z o.o. (parent of another group: LOTOS Lab Group)	Gdańsk	Laboratory testing	100.00%	100.00%
• LOTOS Straż Sp. z o.o.	Gdańsk	Fire service activities	100.00%	100.00%
• LOTOS Ochrona Sp. z o.o.	Gdańsk	Security services	100.00%	100.00%
• LOTOS Terminale S.A. (parent of another group: LOTOS Terminale Group)	Czechowice-Dziedzice	Storage and distribution of fuels	100.00%	100.00%
• LOTOS Infrastruktura S.A. (parent of another group: LOTOS Infrastruktura Group)	Jasło	Storage and distribution of fuels, renting and operating of own or leased real estate	100.00%	100.00%
• LOTOS Gaz S.A. w likwidacji (in liquidation)	Kraków	Dormant	100.00%	100.00%
Non-consolidated direct subsidiaries (1)				
• Infrastruktura Kolejowa Sp. z o.o. w likwidacji	Gdańsk	Dormant	- (2)	100.00%
• LOTOS Foundation	Gdańsk	Public benefit activities within the scope of public tasks defined in the Act on Public Benefit and Volunteer Work. The Foundation does not conduct any business activity.	100.00%	100.00%

Name	Registered office	Principal business	Group's ownership interest	
			Dec 31 2020	Dec 31 2019
Indirect fully consolidated subsidiaries				
Refining and marketing segment				
LOTOS Lab Group				
• LOTOS Vera Sp. z o.o. w likwidacji (in liquidation) [(3)]	Warsaw	Manufacture of cars	100.00%	100.00%
LOTOS Infrastruktura Group				
• RCEkoenergia Sp. z o.o.	Czechowice-Dziedzice	Production and distribution of electricity, heat and gas	100.00%	100.00%
LOTOS Terminale Group				
• LOTOS Biopaliwa Sp. z o.o.	Czechowice-Dziedzice	Production of fatty acid methyl esters (FAME)	100.00%	100.00%
Exploration and production segment				
LOTOS Upstream Group				
• LOTOS Exploration and Production Norge AS	Norway, Stavanger	Crude oil exploration and production on the Norwegian Continental Shelf, provision of services incidental to oil and gas exploration and production	100.00%	100.00%
• AB LOTOS Geonafta (parent of another group: AB LOTOS Geonafta Group)	Lithuania, Gargždai	Crude oil exploration and production, drilling services, and purchase and sale of crude oil	100.00%	100.00%
• UAB Genciu Nafta	Lithuania, Gargždai	Crude oil exploration and production	100.00%	100.00%
• UAB Manifoldas	Lithuania, Gargždai	Crude oil exploration and production	100.00%	100.00%
• LOTOS Upstream UK Ltd. [(4)]	United Kingdom, London	Crude oil and gas exploration and production	100.00%	100.00%
LOTOS Petrobaltic Group				
• B8 Sp. z o.o.	Gdańsk	Support activities for extraction and quarrying operations	99.99%	99.99%
• B8 Spółka z ograniczoną odpowiedzialnością BALTIC S.K.A.	Gdańsk	Crude oil and gas exploration and production	99.99%	99.99%
• Miliana Shipholding Company Ltd. (parent of another group: Miliana Shipholding Company Group)	Cyprus, Nicosia	Storage and transport of crude oil, other sea transport services	99.99%	99.99%
• Technical Ship Management Sp. z o.o. (parent of another group: Technical Ship Management Group)	Gdańsk	Sea transport support activities, ship operation advisory services	99.99%	99.99%
• SPV Baltic Sp. z o.o.	Gdańsk	Provision of sea transport and related services	99.99%	99.99%
• SPV Petro Sp. z o.o.	Gdańsk	Support activities for oil and gas production, sea transport	99.99%	99.99%
• Miliana Shipmanagement Ltd.	Cyprus, Nicosia	Provision of sea transport and related services	99.99%	99.99%
• Bazalt Navigation Company Ltd.	Cyprus, Nicosia	Ship chartering	99.99%	99.99%
• Granit Navigation Company Ltd.	Cyprus, Nicosia	Ship chartering	99.99%	99.99%
• Kambr Navigation Company Ltd.	Cyprus, Nicosia	Ship chartering	99.99%	99.99%
• St. Barbara Navigation Company Ltd.	Cyprus, Nicosia	Ship chartering	99.99%	99.99%
• Petro Icarus Company Ltd.	Cyprus, Nicosia	Ship chartering	99.99%	99.99%
• Petro Aphrodite Company Ltd.	Cyprus, Nicosia	Ship chartering	99.99%	99.99%
• Energobaltic Sp. z o.o.	Władysławowo	Production of electricity, heat, LPG and natural gas condensate	99.99%	99.99%

(1) The companies were excluded from consolidation due to immateriality of the amounts disclosed in their financial statements as at December 31st 2020 (IFRS 10 Consolidated Financial Statements).
(2) On September 21st 2020, the District Court in Gdańsk deleted Infrastruktura Kolejowa Sp. z o.o. w likwidacji (in liquidation) from the Business Register of the National Court Register.
(3) On December 31st 2020, the Extraordinary General Meeting of LOTOS Vera Sp. z o.o. passed a resolution to dissolve the company.
(4) On November 25st 2020, the liquidation of the company was opened and a liquidator of the company was appointed.

For information on the Group's interests in equity-accounted joint ventures, see Note 14.

2.1 Planned merger with Polski Koncern Naftowy Orlen S.A.

On July 14th 2020, the European Commission issued a conditional approval for the concentration involving acquisition of control of Grupa LOTOS S.A. by Polski Koncern Naftowy ORLEN S.A. ("PKN Orlen"). The Commission's decision was issued pursuant to the second paragraph of Article 8(2) of Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the EC Merger Regulation) (OJ L No 24, p. 1). Therefore, PKN Orlen is required to implement remedies set out in the decision to prevent adverse effects of the proposed concentration on competition in the relevant markets (the "Remedies"). The Remedies include structural and behavioural commitments relating to the structure and policies of the undertakings involved in the concentration: PKN Orlen and Grupa LOTOS.

In Current Report No. 21/2020 of July 14th 2020, Grupa LOTOS reported on the obligations undertaken towards the European Commission. The following commitments are intended to continue in effect until the divestment of assets to be disposed of in the implementation of the Remedies ("LOTOS Divestment Assets") has been completed:

- Undertaking to preserve the value and competitiveness of the Lotos Divestment Assets in accordance with good market practice and to minimise as far as possible any risk of loss of competitive potential by the Lotos Divestment Assets;
- Undertaking to keep the LOTOS Divestment Assets separate from the business(es) that PKN Orlen and Grupa LOTOS S.A. are retaining (hold separate obligations), which involves in particular ensuring that the management and staff involved in any business retained by Grupa LOTOS S.A. have no involvement in the business of the LOTOS Divestment Assets, and that the staff (including key personnel) of the LOTOS Divestment Assets identified in the undertakings have no involvement in any business retained by Grupa LOTOS S.A. and do not report to any individuals outside the Lotos Divestment Assets. Immediately after the adoption of the Commission's decision, Grupa LOTOS S.A. will appoint an individual or individuals as an independent hold separate manager (the "Hold Separate Manager"). The Hold Separate Manager will be a member of key personnel of the LOTOS Divestment Assets. The Hold Separate Manager will manage the LOTOS Divestment Assets independently and will report to an individual appointed by PKN ORLEN to monitor the implementation of the Remedies (the Monitoring Trustee). The above undertaking will not apply to the Gdańsk refinery;
- Undertaking not to employ any key personnel of the LOTOS Divestment Assets within 12 months after the closing of divestment transactions giving effect to the Remedies;
- Undertaking to cooperate with and assist the Monitoring Trustee to a reasonable extent, as required by the Monitoring Trustee.

In the European Commission's decision, the following business areas of Grupa LOTOS S.A. ("Lotos Divestment Assets") were identified:

- Fuel production and wholesale,
- Fuel logistics,
- Retail activities,
- Aviation fuel,
- Bitumens.

In Current Report No. 20/2021 of March 12th 2021, Grupa LOTOS S.A informed that the Management Board adopted directional approval of intra-organizational activities, the aim of which is to optimize the structure of the capital group and preparation for the implementation of countermeasures necessary for the acquisition of capital control over the Company by PKN Orlen.

The Management Board has analysed the requirements of IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* taking into account the progress of the implementation of particular Remedies provided for in the decision. As at December 31st 2020, the Lotos Divestment Assets were not ready for sale. The process of preparing the individual Lotos Divestment Assets for sale involves a number of important, non-customary, activities in 2021 such as full separation and identification of the assets intended for divestment, obtaining relevant external approvals from the relevant regulatory authorities, and obtaining internal corporate approvals including those of the General Meeting of the Parent. The Management Board of Grupa LOTOS S.A. commenced active search for investors the first quarter of 2021. Both as at December 31st 2020 and as at the date of authorisation of these financial statements for issue, the outcome of the negotiations with investors cannot be reliably determined and therefore it may be necessary to make significant changes to the divestment plan in 2021.

In the opinion of the Management Board of the Parent, as at the date of these consolidated financial statements the conditions for reclassification of Lotos Divestment Assets (and related liabilities) as assets (liabilities) held for sale or the related operations as discontinued operations were not met.

3. Basis of preparation

These consolidated financial statements ("consolidated financial statements", "financial statements") have been prepared in accordance with the International Financial Reporting Standards ("IFRS") endorsed by the European Union and in effect as at December 31st 2020.

These consolidated financial statements have been prepared on the assumption that the Group companies will continue as going concerns in the foreseeable future. As at the date of authorisation of these financial statements for issue, no circumstances were identified which would indicate any threat to the Group companies' continuing as going concerns.

4. New standards and interpretations

The following new standards, amendments to existing standards and interpretations have been endorsed by the European Union (the "EU"):

- Amendments to References to the Conceptual Framework in IFRS Standards (effective for annual periods beginning on or after January 1st 2020),
- Amendments to IAS 1 *Presentation of Financial Statements* and IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* – Definition of Materiality (effective for annual periods beginning on or after January 1st 2020),
- Amendments to IFRS 9 *Financial Instruments*, IAS 39 *Financial Instruments: Recognition and Measurement*, IFRS 7 *Financial Instruments: Disclosures* – Interest Rate Benchmark Reform (effective for annual periods beginning on or after January 1st 2020),
- Amendments to IFRS 3 *Business Combinations* − Definition of a Business (effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1st 2020 and to asset acquisitions that occur on or after the beginning of that period),
- Amendments to IFRS 16 *Leases*: Covid-19-Related Rent Concessions (effective for annual periods beginning on or after June 1st 2020);
- Amendments to IFRS 4 *Insurance Contracts*, deferral of IFRS 9 *Financial Instruments* (effective for annual periods beginning on or after January 1st 2021).

New standards, amendments to existing standards and interpretations which have not been endorsed by the European Union:

- IFRS 14 *Regulatory Deferral Accounts* (the effective date of the amendments has been deferred),
- Amendments to IFRS 10 *Consolidated Financial Statements* and IAS 28 *Investments in Associates and Joint Ventures: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*, and subsequent amendments (the effective date of the amendments has been postponed until the research project on the equity method has been concluded),
- IFRS 17 *Insurance Contracts*, with subsequent amendments to IFRS 17 (effective for annual periods beginning on or after January 1st 2023),
- IAS 1 *Presentation of Financial Statements: classification of liabilities as current or non-current and classification of liabilities as current or non-current* – deferral of effective date (effective for annual periods beginning on or after January 1st 2023),
- Amendments to IFRS 3 *Business Combination*s, IAS 16 *Property, Plant and Equipment*, IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*, amendments to various standards as part of IFRS Annual Improvements cycle 2018−2020 (effective for annual periods beginning on or after January 1st 2022),
- Amendments to IFRS 9 *Financial Instruments*, IAS 39 *Financial Instruments: Recognition and Measurement*, IFRS 7 *Financial Instruments: Disclosures*, IFRS 4 *Insurance Contracts* and IFRS 16 *Leases* – Interest Rate Benchmark Reform – Phase 2 (effective for annual periods beginning on or after January 1st 2021).

The effective dates are stated in relevant standards issued by the International Accounting Standards Board. The dates of application of standards in the EU may differ from the effective dates stated in those standards and are announced upon their endorsement by the EU.

The Group has not elected to early adopt any of the standards, interpretations, or amendments endorsed by the EU which were not effective as at December 31st 2020.

5. Impact of the COVID-19 pandemic on the Group's performance

In 2020, the Group's performance was materially affected by the COVID-19 pandemic, mainly through increased impairment losses on non-current assets and write-downs due to inventory valuation to net realisable value.

Since March 2020, the market environment of the Group companies has been extremely volatile and unpredictable. The Group has been operating in an environment prone to rapid changes triggered by the pandemic and by measures taken to contain its impact, both in Poland and globally.

The balance and liquidity in international trade, including trade in goods and services, were adversely affected and passenger traffic was markedly reduced. Restrictions were imposed on both air and road transport. Many countries banned non-essential travel, restricted the use of services, retail outlets, institutions of culture and schools. Borders were closed for tourist traffic and migrant workforce. On March 14th 2020, the state of epidemic emergency was introduced in Poland, resulting in the imposition of the restrictions described above.

Impairment of non-current assets

In 2020, the Group assessed whether there was any indication of impairment of non-financial non-current assets. Given the market situation caused by the COVID-19 pandemic and based on both internal and external data, such as lower commodity and product prices, lower market interest rates, depressed demand and a decline in selling prices, the Group concluded that these factors may be an indication of impairment of non-financial non-current assets. Impairment tests demonstrated the need to recognise impairment losses on property, plant and equipment and intangible assets of PLN 923.8m, and on shares in equity-accounted joint ventures (see Note 14.1).

Inventories written down to net realisable value

As a result of a decline in oil and gas prices on the market destabilised by the COVID-19 pandemic, demand for the Group's products fell and so did their selling prices. In the three months ended March 31st 2020, the Group re-measured inventories to net realisable value, recognising write-downs of PLN 866.4m. In Q2 2020, the Group used the write-downs recognised in Q1 2020 following an increase in crude oil prices and in the volume of product sales driven by a gradual improvement in demand as the economy re-opened.

Assessment of expected credit loss (ECL)

Large-scale operational disruptions that could potentially entail liquidity constraints for certain entities may also have an adverse impact on the credit quality of various actors along the supply chain. As at December 31st 2020, the Group assessed the potential impact of the COVID-19 pandemic on its calculation of expected credit losses and the related impairment losses. The Group's credit policy, security instruments used and factoring agreements in place allow it to assume that the loss ratio for receivables recognised as at the reporting date will remain largely unchanged.

The Group monitors market developments and any information on its customers that could suggest a deterioration of their financial standing. Based on relevant analyses, the Group has not changed the assumptions used to evaluate its expected credit loss as at December 31st 2020 from those used at December 31st 2019. The Group will update the analysis and assumptions for the purposes of the financial statements for 2021 when further analyses show that such update is necessary.

Liquidity

As at the date of these consolidated financial statements, the Group remains liquid and has financing available for its operating and investing activities.

In 2020, despite unfavourable conditions caused by the COVID-19 pandemic, the Group optimally managed its own financial resources and the financial resources of other Group entities. Its key financial and liquidity ratios, including current ratio (1.4 vs 1.6 at the end of the previous year), quick ratio (0.8, unchanged from 2019), as well as total debt ratio (47.0% in 2020, compared with 46.3% in 2019) remained at safe levels, as a result of which liabilities were being serviced when due. Cash flows provided by operating activities were sufficient to meet the capex requirements and partly repay the outstanding debt. As a consequence of a PLN 1,449.5 million decrease in working capital, working capital to total assets fell to 9.7%, compared with 15.1% in 2019. The turnover ratios also changed. The inventory turnover ratio lengthened by 13.1 days compared with the year before, to 73.1 days. Following a 4.2% decrease in average trade receivables with revenue down 29.1%, the average collection period also lengthened, to 37.7 days (relative to 27.8 days the year before). As a result of lower average trade payables (down 7.2%) and lower cost of sales (down 24.2%), the average payment period was 33.7 days, having lengthened 6.3 days year on year. These changes led to the cash conversion cycle of 77.1 days, compared with 60.4 days recorded in 2019.

Under the credit facility agreement for refinancing of credit facilities contracted for the 10+ Programme, the net debt/EBITDA covenant was not complied with. In view of the expected failure to meet the covenant, Grupa LOTOS S.A. requested a waiver from the financing banks, in response to which it received a letter confirming the banks’ waiver of the covenant as at December 31st 2020.

As at December 31st 2020, there were delays relative to the schedule of work, budget overruns and a breach of one of the covenants under the agreements concluded by the special-purpose vehicle B8 Spółka z ograniczoną odpowiedzialnością BALTIC S.K.A. with Bank Gospodarstwa Krajowego and Polski Fundusz Rozwoju S.A. for financing of the development of the B8 oil field in the Baltic Sea, including senior notes and subordinated notes programme agreements. As at December 31st 2020, these liabilities were not accelerated (for more details, see Note 22.3).

The Group has in place a centralised cash management system (cash pool) covering the majority of Group companies. The cash pool makes it possible to effectively use any surplus funds, while reducing the system participants’ demand for day-to-day funding. In addition, as at December 31st 2020 the Group had undrawn overdraft facility, credit facility and factoring limits.

Currently, the Group’s economic performance, liquidity position and debt remain at comfortable levels, with no significant risks identified as at the date of issue of these consolidated financial statements that could adversely affect this situation.

6. Use of accounting assumptions, estimates and judgements

The preparation of financial statements in accordance with the International Financial Reporting Standards requires a number of assumptions, judgements and estimates which affect the value of items disclosed in these financial statements.

Although the assumptions and estimates are based on the management’s best knowledge of the current and future events and developments, the actual results might differ from the estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Any change in an accounting estimate is recognised in the period in which it was made if it refers exclusively to that period, or in the current period and future periods if it refers to both the current period and future periods. Material assumptions used in making the estimates are described in the relevant notes to these financial statements.

While making assumptions, estimates and judgements, the Company’s Management Board (Management Board) relies on its experience and knowledge and may take into consideration opinions, analyses and recommendations issued by independent experts.

Critical assumptions and estimates

Employee benefit obligations

Employee benefit obligations are estimated using actuarial methods. For information on the actuarial assumptions and valuation of employee benefit obligations, see Note 24.3.

Depreciation and amortisation

Depreciation and amortisation of the assets of onshore and offshore oil and gas extraction facilities is calculated (using the units-of-production method) based on 2P hydrocarbon reserve estimates (proved and probable reserves), evaluated, revised and updated by the Group, as well as forecast production volumes from the individual oil and gas fields based on geological data, test production, subsequent production data and the schedule of work adopted in the long-term strategy.

Depreciation and amortisation rates for refining and other non-current assets are determined based on the expected useful lives of property, plant and equipment and intangible assets. The Group reviews the useful lives of its assets annually, based on current estimates. The relevant estimate update which had an effect on the Group’s financial statements for 2020 concerned primarily the Parent, where depreciation/amortisation expense decreased by PLN 0.8m.

Fair value of financial instruments

The fair value of financial instruments for which no active market exists is measured using appropriate valuation techniques. In selecting the methods and assumptions appropriate for these objectives, the Group relies on professional judgement.

For more information on the assumptions adopted for the measurement of fair value of financial instruments, see Notes 7.20 and 7.22.

Deferred tax assets

The Group recognises deferred tax assets if it is assumed that taxable income will be generated in the future against which the assets can be utilised. If taxable profit deteriorates in the future, this assumption may prove invalid. The Parent’s Management Board reviews its estimates regarding the likelihood of recovering deferred tax assets taking into account changes in the factors on which such estimates were based, new information and past experience.

For information on deferred tax assets, see Note 10.3.

Impairment of cash-generating units, individual items of property, plant and equipment, and intangible assets

If there is any indication of impairment, the Group estimates the recoverable amounts of assets and cash-generating units. To determine the recoverable amount, the Group takes into account such key variables as discount rates, growth rates and price indices, as well as macroeconomic factors, including oil prices, the differential, refining margins and cracks.

As at December 31st 2020, following an analysis of cash flows for individual cash-generating units and the required impairment tests for assets, the Group made necessary adjustments to assets and disclosed detailed information on the test assumptions and results in Note 13.

Provision for decommissioning of the Exploration & Production segment's facilities and site restoration

As at the end of each reporting period, the Group analyses the costs necessary to decommission oil and gas extraction facilities and the expenditure to be incurred on future site restoration. As a result of those analyses, the Group adjusts the value of the site restoration provision recognised in previous years to reflect the estimated amount of necessary future costs. Any changes in the estimated time value of money are also reflected in the amount of the provision. For information on the rules for recognition of those provisions and information on provisions disclosed in these financial statements for 2020, see Note 7.24.1 and Note 25.1, respectively.

Lease discount rate

For each type of contract, the Group estimates the discount rate which will affect the final value of the contracts. The Group takes into account characteristics of the contract, the duration of the contract, the currency of the contract and the potential margin it would have to pay to external financial institutions if it wanted to enter into such a transaction on the financial market.

The process of determining the current incremental borrowing rate consists of the following steps:

- analysis of the lessee's current financing structure (e.g., debt instruments held by the lessee and their terms);
- determination of the appropriate reference rate – assuming specific currency, economic conditions and lease term;
- analysis of other material lease terms, including the nature of the underlying assets.

To calculate discount rates for leasing purposes, the Group assumes that the discount rate should reflect the cost that it would have to pay to borrow the funds necessary to purchase the leased asset.

The Group enters into lease contracts based on the three principal currencies to which it has assigned the base discount rate. These are PLN at the WIBOR base rate for short-term periods and interest rates on government bonds for long-term periods, EUR at the EURIBOR base rate for short-term periods and interest rate on government bonds for long-term periods, and USD at the LIBOR base rate for short-term periods and interest rate on government bonds for long-term periods.

Current discount rates are determined every quarter, and the discount rates so determined are then used for lease calculations in accordance with IFRS 16 for the period until the next determination of the discount rates.

Professional judgement in accounting

Joint control of an investee or operation

The Group and all other investors collectively control an investee when they must act together to direct the relevant activities. In such cases, because no investor can direct the activities without the cooperation of other investors, no investor individually controls the investee. The Group assesses whether it shares control of an arrangement, which – in accordance with IFRS 11 *Joint Arrangements* – may be defined either as a joint venture or a joint operation, taking into consideration whether all parties to the arrangement have control of it, whether they share exposure, or rights, to variable returns from their involvement with the investee, and whether they have the ability to jointly use their power over the investee to affect the amount of their returns.

As at the end of the reporting period, the Group was involved in joint operations under projects carried out in the Heimdal fields in Norway, and in joint ventures (see Note 14), as defined in IFRS 11, and in that respect, considering all facts and circumstances, it had joint control.

As at December 31st 2020, the Group also held interests in the Sleipner gas fields in Norway. Upon their acquisition in December 2015 (see Note 13.1.3 in the consolidated financial statements for 2015), the Group entered into an agreement with the other holders of the Sleipner, Gungne, Loke, Alfa Sentral and PL046D licences. Considering the IFRS 11 criteria, the Group's operations in those fields do not constitute joint arrangements as defined in the standard, and the Group does not have joint control of the operations, as there is more than one combination of parties that can agree to decisions about the relevant activities. Therefore, for the purpose of correct recognition and measurement of transactions related to the operations in the Sleipner fields, the Group applies other relevant IFRSs taking into account its interest in the fields, which ensures that there are no material differences in the accounting recognition and measurement of transactions related to these operations and the manner of recognising operations which are carried out jointly with the Heimdal licence interest holders and meet the definition of joint operations within the meaning of IFRS 11.

Classification of natural gas and crude oil assets in financial statements

The Group classifies its natural gas and crude oil assets as exploration and evaluation assets, development assets or production assets, relying on its professional judgement.

Once the size of a deposit is confirmed and its production plan is approved, the expenditure on natural gas and crude oil assets is transferred from exploration and evaluation assets to appropriate items of property, plant and equipment or intangible assets classified as development or production assets.

The decision to present natural gas and crude oil assets in the financial statements under development assets or production assets is made taking into account all conditions and circumstances related to the upstream project and the subsequent production from the field.

For information on accounting policies concerning natural gas and crude oil assets, see Note 7.11. For presentation and details of those assets in these financial statements, see Note 13.2.

7. Accounting policies

These consolidated financial statements have been prepared in accordance with the historical cost principle, with the exception of those financial instruments which are measured at fair value.

The key accounting policies applied by the Group are presented below.

7.1 Consolidation

These consolidated financial statements have been prepared on the basis of the financial statements of the Parent and financial statements of its subsidiaries and jointly controlled entities, prepared as at December 31st 2020.

All significant balances and transactions between the related entities, including material unrealised profits on transactions, have been eliminated in their entirety. Unrealised losses are eliminated unless they are indicative of impairment.

Subsidiaries are fully consolidated starting from the date when the Group assumes control over them and cease to be consolidated when the control is lost. According to IFRS 10 *Consolidated Financial Statements*, the Group controls an investee when it is exposed or has rights to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

The Group and all other investors collectively control an investee when they must act together to direct the relevant activities. In such cases, because no investor can direct the activities without the cooperation of other investors, no investor individually controls the investee. Interests in joint ventures held by the Group (see Note 14) are accounted for with the equity method (see Note 7.27).

7.2 Revenue

Revenue from contracts with customers is recognised when the Group satisfies a performance obligation by transferring a promised good or service to a customer (which is when the customer obtains control of that good or service). In the statement of comprehensive income, revenue from contracts with customers is recognised as revenue from the Group's day-to-day operations (i.e., revenue from sales of products, services, merchandise and materials), adjusted for the result on settlement of derivatives hedging future cash flows. Contracts with customers are presented in the Group's statement of financial position as a contract asset or a contract liability, depending on the relationship between the Group's performance and the customer's payment. Only the Group's unconditional rights to receive consideration are presented on a separate basis as trade receivables (e.g., where an invoice has been issued to a customer or where it received another legal title requiring it to make payment by a specified deadline). Conditional rights (where the passage of time is not the only condition for payment) are presented as contract assets. If several obligations arise under a single contract with respect to which both contract assets and contract liabilities have been recognised, such assets and liabilities are presented in net amounts in the statement of financial position. Contract assets are recognised and measured in accordance with IFRS 9 *Financial Instruments*.

Identifying contracts with customers

The Group carries out an analysis to determine whether the following criteria have been met before a contract is considered a 'contract with a customer':

- The contract between two or more parties has been concluded in writing, orally or in accordance with other customary business practices and has been approved by the parties;
- The contract identifies each party's rights and obligations regarding the goods or services and payment terms – the contract should clearly indicate the point in time when control over the goods sold or services provided is passed to the customer. In the case of sale of goods, the point in time when control is passed is usually the time when goods are transferred to the customer. In the case of provision of services, especially over a longer period of time, the point in time at which control passes may not be readily identifiable. If the point in time at which control is passed has not been specified in the contract or is not a customary business practice, then the contract fails to meet the criterion as the seller is unable to determine the time when revenue is recognised. The contract must also specify the payment method, amount and date;
- Each party expects to perform its contractual obligations and it is probable that for the transferred goods or services consideration will be collected which the Group is able to determine. When assessing the probability of payment at this stage, the Group considers only the customer's ability and intention to pay the consideration when it is due, and does not evaluate the amount of consideration to be received from the customer (such amount may differ from the contract price as a result of future discounts, rebates or other elements of variable consideration);
- The contract has commercial substance, which means that upon its performance, the risk, time and amount of the Group's future cash flows will change. If these parameters are not expected to change, it is rather unlikely that the contract has commercial substance. Planned cash flows do not have to change only through additional cash flows received from the customer, but also through decreasing outgoing cash flows from the seller, for example by receiving non-cash consideration from the customer;
- It is probable that the Group will receive the consideration to which it will be entitled in exchange for the goods or services that will be transferred to the customer.

Identifying performance obligations

At the inception of the contract, the Group assesses the goods or services that have been promised to the customer and identifies as a performance obligation any promise to transfer to the customer a good or service (or bundle of goods or services) 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.

A good or service is distinct if both of the following criteria are met:

- the customer can benefit from the good or services on its own or in conjunction with other readily available resources; and
- the Group's promise to transfer the good or service to the customer is separately identifiable from other promises in the contract.

Determination of transaction price

In determining the transaction price, the Group takes into account not only fixed consideration, but also other components of consideration, such as variable consideration (i.e. the consideration amount that is contingent on the occurrence of a future event), non-monetary consideration, consideration due to the customer, and a significant financing arrangement. The price does not include amounts collected on behalf of another entity, i.e. VAT and other sales taxes (excise duty, fuel charge).

Variable consideration

Some contracts with customers may contain variable remuneration amounts because of discounts, rebates, refunds, credits, incentives, performance bonuses, penalties, price concessions or other similar items.

The Group includes variable consideration in the transaction price if, and to the extent that, it is highly probable that its inclusion will not result in a significant revenue reversal in the future (prudence principle) and makes an estimate applying one of the following methods, depending on which one will make it possible to more accurately predict the amount of consideration to which it is entitled:

- the expected value method (the sum of the products of consideration amounts and the probabilities of their occurrence), which is applied if a large number of similar contracts are concluded and the contract may have more than two possible outcomes;
- the most likely outcome method (i.e. the most likely amount) if the contract has only two possible outcomes (e.g. with or without a bonus).

The selected method is consistently applied to the contract. The estimate is remeasured as at each reporting date. Adjustments to recognised revenue are disclosed in the period in which the remeasurement takes place (cumulative catch-up) – the total amount of recognised revenue should be equal to the amount which would have been recognised if the new information had been known to the Group from the beginning.

Non-cash consideration is measured at fair value and where it is not possible to make a reasonable estimate – directly by reference to the standalone selling price of the promised goods or services.
Consideration due to the customer reduces the transaction price unless it is a payment for the goods or services purchased from the customer. Revenue will be reduced upon the occurrence of the latter of the following events:

- the Group recognises revenue from the transfer of related goods or services to the customer; and
- the Group pays or undertakes to pay consideration (even if such payment is contingent on the occurrence of a future event).

At the end of each reporting period occurring during the term of the contract, the Group updates its estimates affecting the transaction price. Any change in the transaction price is allocated to all performance obligations unless the variable consideration relates to only one or more than one (but not all) such obligations.

Allocating the transaction price to performance obligations

The Group allocates the transaction price to each performance obligation (or to a distinct good or service) in an amount that reflects the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

Satisfaction of performance obligations

If a performance obligation is satisfied at a point in time, revenue is recognised as control over a product, good or service is passed (i.e., when the ability to direct the use and obtain substantially all benefits from that product, good or service is passed).

Factors that may indicate the point in time at which control passes include, but are not limited to:

- the Group has a present right to payment for the asset,
- the customer has legal title to the asset,
- the customer has physical possession of the asset,
- the customer has the significant risks and rewards related to the ownership of the asset,
- the customer accepted the asset.

Revenue from sale of products, merchandise and materials is recognised in profit or loss on a one-off basis at a point in time being the time when the performance obligation is satisfied (defined, in particular, on the basis of INCOTERMS).

In the case of contracts for continuing services, under which the Group is entitled to receive from a customer a consideration in an amount that corresponds directly to the value of the services which the customer has received so far, the Group recognises the revenue in the amount it is entitled to invoice.

Principal versus agent considerations

When another party is involved in providing goods or services to a customer, the Group determines whether its performance obligation is to provide the good or service itself (i.e., the Group is a principal) or to arrange for another party to provide the good or service (i.e., the Group is an agent).

The Group is a principal if it controls the promised good or service before transferring it to the customer. However, the entity is not acting as a principal if it obtains legal title to a specified good only momentarily before legal title is transferred to a customer. A principal may satisfy its performance obligation to provide the specified good or service itself or it may engage another party (e.g. a subcontractor) to satisfy some or all of the performance obligation on its behalf. In such circumstances, the Group recognises revenue in the gross amount to which it expects to be entitled in exchange for the specified goods or services transferred.

The Group is an agent if its performance obligation is to arrange for the provision of the specified good or service by another party. In such a case, the Group recognises revenue in the amount of any fee or commission to which it expects to be entitled in exchange for arranging for the specified goods or services to be provided by the other party.

Significant financing component

With regard to contracts with customers for whom the interval between transfer of the promised goods or services and payment by the customer is expected to be more than one year, the Group determines whether the contracts include a significant financing component. In order to determine the transaction price, the Group adjusts the promised amount of consideration for a significant financing component using the discount rate that would be reflected in a separate financing transaction between the entity and the customer at contract inception.

The Group has decided not to adjust the promised amount of consideration for the effect of a significant financing component if the Group expects, at contract inception, that the period between when the Group transfers a promised good or service to the customer and when the customer pays for that good or service will be one year or less. Therefore, the Group does not identify a significant financing component for short-term advance payments.

Non-cash consideration

Where a customer promises consideration in a form other than cash, in order to determine the transaction price the Group measures the non-cash consideration (or promise of non-cash consideration) at fair value. Where the fair value of the non-cash consideration cannot be reasonably estimated, the consideration is measured indirectly by reference to the stand-alone selling price of the goods or services promised to the customer (or class of customer) in exchange for the consideration.

Guarantees

The Group provides a guarantee for sold products, ensuring that a product conforms to the specifications agreed upon by the parties. The Group recognises such guarantees in accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*.
Some non-standard contracts with customers may contain extended guarantees. Such guarantees form a separate service which is recognised as a performance obligation and to which part of the transaction price is allocated.

Capitalised costs to obtain a contract

The Group recognises additional costs to obtain a contract with a customer as an asset if the costs are expected to be recovered. The additional costs to obtain a contract are those costs incurred by an entity to obtain a contract with a customer which the entity would not have incurred if the contract had not been concluded. Costs to obtain a contract that would have been incurred regardless of whether the contract was obtained are recognised as an expense when incurred, unless the costs are explicitly chargeable to the customer regardless of whether the contract is obtained. The Group recognises incremental costs to obtain a contract as an expense when they are incurred if the amortisation/depreciation period of the asset that would otherwise be recognised by the Group is one year or less. An asset is amortised/depreciated on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates. The Group updates the amortisation/depreciation period to reflect a significant change in the expected period of delivering the goods or services to which the asset relates to the customer.

Contract assets

As contract assets, the Group recognises the right to consideration in exchange for goods or services transferred to a customer when that right is conditioned on something other than the passage of time (for example, the entity's future performance). The Group assesses whether there is any impairment of a contract asset in the same way as in the case of a financial asset in accordance with IFRS 9.

Receivables

Under receivables, the Group recognises the right to consideration in exchange for goods or services transferred to a customer if the right is unconditional (only the passage of time is required before payment of that consideration is due.). The Group recognises a receivable in accordance with IFRS 9. On initial recognition of a contract receivable, any difference between the measurement of the receivable in accordance with IFRS 9 and the corresponding amount of revenue previously recognised are recognised as an expense (impairment loss).

Contract liabilities

Under contract liabilities, the Group recognises such consideration received or receivable from a customer which relates to the obligation to transfer goods or services to the customer.

Right of return assets

Under right of return assets, the Group recognises the right to recover products from customers on settling the refund liability.

Refund liabilities

The Group recognises a refund liability if, having received consideration from a customer, the Group expects to refund a part or all of that consideration to the customer. A refund liability is measured as the amount of consideration received (or receivable) to which the Group does not expect to be entitled (i.e. amounts not included in the transaction price). The refund liability (as well as a corresponding change in the transaction price and the related change in the contract liability) is updated at the end of each reporting period for changes in circumstances.

7.3 Dividend income

Dividend is recognised as finance income as at the date on which the appropriate governing body of the dividend payer resolves on distribution of profit, unless the resolution specifies another dividend record date. Although this classification policy does not follow directly from IAS 18, the Group decided to disclose dividend income under finance income since this is a common practice among entities, other than financial institutions, applying IFRSs. The Group applies this classification policy in a consistent manner.

7.4 Interest income

Interest income is recognised as the interest accrues (using the effective interest rate). The Group recognises interest income under finance income, following a common (and commonly accepted) practice among entities, other than financial institutions, applying IFRSs. The Group applies this classification policy in a consistent manner.

7.5 Income tax

Mandatory decrease in profit/(increase in loss) comprises current income tax (CIT) and deferred income tax. The current portion of income tax is calculated based on net profit/(loss) (taxable income) for a given financial year. Net profit/(loss) for tax purposes differs from net profit/(loss) for accounting purposes due to temporary differences between revenue amounts calculated for these two purposes, including income which is taxable and costs which are tax-deductible in a period other than the current accounting period, as well as permanent differences attributable to income and cost which will never be accounted for in tax settlements. Tax expense is calculated based on tax rates effective in a given financial year.

For the purposes of financial reporting, tax liabilities are calculated taking into account all temporary differences existing as at the end of the reporting period between the tax base of assets and liabilities and their carrying amounts disclosed in the financial statements.

Deferred tax liability is recognised for all taxable temporary differences:

- except to the extent that the deferred tax liability arises from the initial recognition of goodwill or the initial recognition of an asset or liability in a transaction which is not a business combination and which, at the time of its execution, affects neither accounting profit before tax nor taxable income or tax loss, and
- in the case of taxable temporary differences associated with investments in subsidiaries, jointly controlled entities or associates and interests in joint ventures, unless the investor is able to control the timing of reversal of temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are disclosed in relation to all deductible temporary differences, unused tax assets, and unused tax losses brought forward, in the amount of the probable taxable income which would enable these differences, assets and losses to be used:

- except to where the deferred tax assets related to deductible temporary differences arise from the initial recognition of an asset or liability in a transaction which is not a business combination and which, at the time of its execution, affects neither accounting profit before tax nor taxable income or tax loss, and
- in the case of deductible temporary differences associated with investments in subsidiaries, jointly controlled entities or associates and interests in joint ventures, the related deferred tax assets are recognised in the statement of financial position to the extent it is probable that in the foreseeable future the temporary differences will be reversed and taxable income will be generated which will enable the deductible temporary differences to be offset.

The carrying amount of deferred tax assets is revised as at the end of each reporting period and is subject to appropriate reduction to the extent it is no longer probable that taxable income sufficient for its partial or full realisation would be generated.

Deferred tax assets and deferred tax liabilities are measured using tax rates expected to be effective at the time of realisation of particular asset or liability, based on tax rates (and tax legislation) effective as at the end of the reporting period or tax rates (and tax legislation) which as at the end of the reporting period are certain to be effective in the future. The effect of deferred tax is recognised in profit or loss for the period, with the exception of taxes arising from transactions or events, which are recognised in other comprehensive income or directly in equity, and taxes arising from business combinations.

Deferred tax assets and deferred tax liabilities are presented in the statement of financial position in the amount obtained after they are offset for particular consolidated entities.

7.6 Value-added tax, excise duty, fuel charge and emission charge

Revenue, costs, assets and liabilities are recognised net of value added tax, excise duty, fuel charge and emission charge, except for:

- except where the value added tax (VAT) paid when purchasing assets or services is not recoverable from the tax authorities (in such a case it is recognised in the cost of a given asset or as part of the cost item), and
- receivables and payables which are recognised inclusive of value added tax, excise duty, fuel charge and emission charge.

The net amount of value added tax, excise duty, fuel charge and emission charge recoverable from or payable to tax authorities is carried in the statement of financial position under receivables or liabilities, as appropriate.

7.7 Functional currency, presentation currency and foreign currency translation

The Parent's functional currency and the presentation currency of these consolidated financial statements is the Polish złoty ("złoty", "zł", "PLN"). These consolidated financial statements have been prepared in millions of złoty and, unless indicated otherwise, all amounts are stated in millions of złoty.

The financial statements of foreign entities are translated into the presentation currency of the consolidated financial statements at the following exchange rates:

- items of the statement of financial position – at the mid-rate quoted by the National Bank of Poland for the end of the reporting period (NBP's mid-rate for the end of the reporting period),
- items of the statement of comprehensive income – at the exchange rate computed as the arithmetic mean of mid rates quoted by the National Bank of Poland for the end of each month in the reporting period (NBP's average mid-rate for the reporting period).

The resulting exchange differences are recognised as a separate component in equity and other comprehensive income.

Exchange differences on translating foreign operations comprise exchange differences resulting from the translation into the złoty of the financial statements of foreign companies and groups of companies.

Exchange differences arising on a monetary item that forms a part of a reporting entity's net investment in a foreign operation are recognised in equity and other comprehensive income, and on disposal of the investment they are reclassified to consolidated profit or loss in the statement of comprehensive income.

At the time of disposal of a foreign entity, the accumulated exchange differences recognised in equity and relating to this foreign entity are taken to profit or loss.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets or liabilities of the foreign operation and are translated into the presentation currency of the financial statements at the exchange rate prevailing at the end of the reporting period.

The following exchange rates were used in the valuation of items of the statement of financial position:

NBP's mid-rate quoted for:	Dec 31 2020 (1)	Dec 31 2019 (2)
USD	3.7584	3.7977
EUR	4.6148	4.2585
GBP	5.1327	4.9971
NOK	0.4400	0.4320

(1) NBP's mid rates table, effective for December 31st 2020.
(2) NBP's mid rates table, effective for December 31st 2019.

The following exchange rates were used in the valuation of items of the statement of comprehensive income:

NBP's average mid-rate for the reporting period	2020 (1)	2019 (2)
USD	3.9045	3.8440
EUR	4.4742	4.3018
GBP	5.0240	4.9106
NOK	0.4147	0.4367

(1) Based on the arithmetic mean of the mid rates quoted by the NBP for the last day of each full month in the period January 1st–December 31st 2020.
(2) Based on the arithmetic mean of the mid rates quoted by the NBP for the last day of each full month in the period January 1st–December 31st 2019.

7.8 Foreign currency transactions

Business transactions denominated in foreign currencies are reported in the consolidated financial statements after translation into the Group's presentation currency (Polish złoty) at the following exchange rates:

- the exchange rate actually applied on that date due to the nature of the transaction – in the case of sale or purchase of foreign currencies;
- the mid-rate quoted for a given currency by the National Bank of Poland (the "NBP") for the day immediately preceding the transaction date – in the case of payment of receivables or liabilities where there is no rationale for using the exchange rate referred to above, and for other transactions.

The exchange rate applicable to purchase invoices is the mid-rate quoted by the National Bank of Poland for the last business day immediately preceding the invoice date, and the exchange rate applicable to sales invoices is the mid-rate quoted by the National Bank of Poland for the last business day immediately preceding the sale date.

Any foreign exchange gains or losses resulting from currency translation are posted to the statement of comprehensive income (including intercompany foreign currency transactions), except for foreign exchange gains and losses which are treated as a part of borrowing costs and are capitalised in property, plant and equipment (foreign exchange gains and losses on interest and fees and commissions). Non-monetary items measured at historical cost in a foreign currency are translated at the exchange rate effective as at the date of the initial transaction. Non-monetary items measured at fair value in a foreign currency are translated at the exchange rate effective as at the date of determining the fair value.

The Company calculates realised and unrealised foreign exchange gains (losses) separately and recognises the resulting total balance in the statement of comprehensive income under:

- other income or other expenses: in the case of foreign exchange gains and losses related to settlement of trade receivables and payables,
- finance income or finance costs: in the case of borrowings, investment commitments, and cash and cash equivalents.

Exchange differences on end-of-period valuation of short-term investments (e.g. shares and other securities, loans, cash and cash equivalents) and receivables and liabilities denominated in foreign currencies are charged to finance income or costs and operating income or expenses.

7.9 Property, plant and equipment and intangible assets

7.9.1 Property, plant and equipment

Items of property, plant and equipment other than land are measured at cost less accumulated depreciation and impairment losses.

Land is measured at cost less impairment losses.

Initial value of an item of property, plant and equipment comprises its cost, which includes all costs directly related to its acquisition and bringing it to working condition for its intended use. The cost also includes the cost of replacing component parts of plant and equipment, which is recognised when incurred, provided that relevant recognition criteria are fulfilled. Costs incurred on an asset which is already in service, such as costs of repairs and overhauls or operating fees, are expensed in the reporting period in which they were incurred.

The initial value of property, plant and equipment includes borrowing costs (see Note 7.19).

Items of property, plant and equipment (including their components), other than land and property, plant and equipment comprising production infrastructure, are depreciated using the straight-line method over their estimated useful lives.

Items of property, plant and equipment comprising production infrastructure used in crude oil and natural gas extraction are depreciated using the units-of-production method, where depreciation per unit of produced crude oil or natural gas charged to expenses. The depreciation rate is estimated by reference to forecasts of crude oil and gas production from a given geological area. If the estimated hydrocarbon reserves (2P – proved and probable reserves) change materially as at the end of the reporting period, depreciation per unit of produced crude oil or natural gas is remeasured and the revised depreciation rate is applied starting from the new financial year (see Note 5).

Items of property, plant and equipment under construction are measured at the amount of aggregate costs directly attributable to their acquisition or production (including finance costs) less impairment losses, if any. Items of property, plant and equipment under construction are not depreciated until they are ready for their intended use.

	Depreciation method	Depreciation period/useful life
Land (excluding perpetual usufruct rights)	Not depreciated	
Property, plant and equipment under construction	Not depreciated	
Other items of property, plant and equipment:		
Buildings, structures	Straight-line method	From 1 to 80 years
Plant and equipment	Straight-line method	From 1 to 25 years
Vehicles, other	Straight-line method	From 1 to 15 years
Property, plant and equipment comprising production infrastructure used in crude oil and natural gas extraction	Units-of-production method	The depreciation rate is estimated by reference to forecasts of crude oil and gas production from a given geological area (2P – proved and probable reserves).

The residual values, useful economic lives and depreciation methods are reviewed on an annual basis and adjusted, if required, with effect as of the beginning of the next financial year.

An item of property, plant and equipment may be removed from the statement of financial position if it is sold or if the entity does not expect to realise any economic benefits from its further use. Any gains or losses on derecognition of an asset from the statement of financial position (calculated as the difference between net proceeds from its sale, if any, and the carrying amount of the asset) are disclosed in the statement of comprehensive income in the period of derecognition.

Property, plant and equipment comprising the Group's production infrastructure include assets corresponding to the amount of the provision for decommissioning of oil and gas extraction facilities (see also Note 7.24.1). These assets are recognised in accordance with IAS 16 *Property, Plant and Equipment*, which states: "Cost of an item of property, land and equipment includes […] the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period". The Group's obligation to incur costs of decommissioning of oil and gas extraction facilities results directly from the reasons specified in IAS 16. Under Section 63 of the standard, entities are obliged to review the value of the assets periodically, at least as at the end of each reporting period.

Revaluation of the assets may be caused by:
- change in the estimate of the cash outflow that will be necessary to ensure performance of the decommissioning obligation,
- change in the current market discount rate,
- change in the inflation rate.

Expenditure on property, plant and equipment used in exploration for and evaluation of crude oil and natural gas resources is capitalised until the deposit volume and the economic viability of production are determined; such expenditure is presented in a separate item of property, plant and equipment in accordance with IFRS 6 *Exploration for and Evaluation of Mineral Resources*. Upon confirmation of existence of reserves in the case of which extraction is technically feasible and economically viable, such expenditure is transferred to relevant items of property, plant and equipment classified as development or production assets, and is subsequently depreciated using the units-of-production method (see above) based on the volume of reserves and actual production.

If expenditure on property, plant and equipment under construction does not result in discovery of any reserves in the case of which extraction is technically feasible and economically viable, impairment losses on property, plant and equipment under construction are recognised and charged to profit or loss of the period in which it is found that commercial production from the deposits is not viable.

7.9.2 Goodwill

The acquirer recognises the acquiree's goodwill as at the acquisition date, in the amount equal to the excess of the difference between (A) the amount of consideration transferred, measured at its acquisition-date fair value, including the value of any non-controlling interests in the acquiree, (B) the acquisition-date fair value of the acquirer's previously held equity interest in the acquiree (in the case of a business combination achieved in stages), and (C) the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed measured at fair values as at the transaction date.
Goodwill = (C) - (A) - (B)

In the case of a business combination achieved in stages, the acquirer remeasures its previously held equity interest in the acquiree at its acquisition-date fair value and recognises the resulting gain or loss in the statement of comprehensive income.

Following initial recognition, goodwill is carried at cost less cumulative impairment losses. Goodwill is tested for impairment once a year. It is not amortised.

As at the acquisition date, the acquired goodwill is allocated to each of the identified cash-generating units that may benefit from the synergies of the business combination, provided that goodwill may not be allocated to a cash-generating unit higher than an operating segment. The Group calculates impairment of value by estimating the recoverable amount of a cash-generating unit ("CGU") to which goodwill has been allocated. If the recoverable amount of the CGU is lower than its carrying amount, an impairment loss is recognised. The impairment loss is not reversible. If goodwill is a part of a CGU and the Group sells a part of the CGU's business, the goodwill pertaining to the sold business is included in the carrying amount of the sold business for the purpose of calculating gain or loss on disposal of the part of business. In such a case, goodwill pertaining to the sold business should be measured using the relative value of the sold business, pro-rata to the interest in the retained part of the CGU.

7.9.3 Other intangible assets

Intangible assets other than goodwill comprise oil exploration and production licences in Lithuania acquired as part of a business combination, expenditure incurred on oil and gas exploration licences on the Norwegian Continental Shelf, other production and exploration licences in Poland, software licences, patents, trademarks, acquired CO_2 emission allowances and intangible assets under development.

Intangible assets are initially recognised at cost if they are acquired in separate transactions. Intangible assets acquired as part of a business combination are recognised at fair value as at the transaction date. Subsequent to initial recognition, intangible assets are carried at amounts reflecting accumulated amortisation and impairment losses.

Licences obtained in Lithuania during the step acquisition of the AB LOTOS Geonafta Group companies are disclosed under intangible assets classified as development or production assets and amortised using the unit-of-production method, where amortisation per unit of produced crude oil is charged to expenses. The amortisation rate is estimated by reference to forecasts of hydrocarbon production from a given field. If the estimated hydrocarbon reserves (2P – proved and probable reserves) change materially as at the end of the reporting period, amortisation per unit of produced crude oil or natural gas is remeasured and the revised amortisation rate is applied starting from the new financial year.

Expenditure on oil and gas exploration licences on the Norwegian Continental Shelf is presented as a separate item of intangible assets, as required under IFRS 6 Exploration for and Evaluation of Mineral Resources, and is not amortised until the technical feasibility and commercial viability of extraction is demonstrated. For more information on the accounting policies concerning expenditure on exploration for and evaluation of mineral resources, see Note 7.11.1.

Except capitalised development expenditure, expenditure on intangible assets produced by the Group is not capitalised, but is charged to expenses in the period in which it was incurred.

	Amortisation method	Amortisation period/useful life
Oil and gas development and production assets		
Licences (Lithuania, Poland)	Units-of-production method	The amortisation rate is estimated by reference to forecasts of hydrocarbon production from a given field (2P – proved and probable reserves).
Oil and gas exploration and evaluation assets		
Oil and gas exploration licences on the Norwegian Continental Shelf	Not amortised until the technical feasibility and commercial viability of extraction is demonstrated	
Other intangible assets		
Software licences, patents and trademarks	Straight-line method	from 2 to 40 years.
Acquired CO_2 emission allowances		
Intangible assets under development	Not amortised	

The amortisation period and the amortisation method for an intangible asset are reviewed at the end of each financial year. Changes in the expected useful life or pattern of generation of the future economic benefits embodied in an intangible asset are reflected by changing the amortisation period or amortisation method, as appropriate, and are treated as changes in accounting estimates (see Note 5).

7.10 Impairment losses on non-financial non-current assets

As at the end of each reporting period, the Group assesses whether there is an indication of impairment of any of its assets. If the Group finds that there is such indication or if it is required to perform annual impairment tests, the recoverable amount of the asset is estimated.

The recoverable amount of an asset is equal to the higher of:

- the fair value of the asset or cash generating unit in which such asset is used less cost to sell, or
- the value in use of the asset or cash generating unit in which such asset is used

whichever is higher.

The recoverable amount is determined for the individual assets unless a given asset does not generate separate cash flows largely independent from those generated by other assets or asset groups. If the carrying amount of an asset is higher than its recoverable amount, the value of the asset is impaired and an impairment loss is recognised, reducing the asset's carrying amount to the established recoverable amount.

In assessing value in use, the projected cash flows are discounted to their present value (at a pre-tax discount rate) which reflects current market assessments of the time value of money and risks specific to the asset. Any impairment losses on non-financial assets used in operations are recognised under other expenses.

The Group assesses at the end of each reporting period whether there is any indication that previously recognised impairment of an asset no longer exists or should be reduced. If there is such indication, the Group again estimates the recoverable amount of the asset, and the recognised impairment loss is reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. In such a case, the carrying amount of the asset is increased up to its recoverable amount. Such increased amount may not exceed the carrying amount of the asset that would have been determined (net of accumulated amortisation or depreciation) had no impairment loss been recognised for the asset in previous years. Reversal of an impairment loss on a non-financial non-current asset is immediately recognised as other income. Following reversal of an impairment loss, in the subsequent periods the amortisation/depreciation charge for a given asset is adjusted so that its revised carrying amount, less residual value, can be regularly written off over the remaining useful life of that asset.

The Group offsets corresponding items of other income and expenses, including impairment losses and their reversals, in accordance with IAS 1 *Presentation of Financial Statements* (Section 34) and recognises them in the statement of comprehensive income on a net basis.

Impairment of goodwill is presented in Note 7.9.2.

7.11 Non-current assets comprising production infrastructure used in crude oil and natural gas extraction

7.11.1 Expenditure on crude oil and natural gas exploration and evaluation (exploration and evaluation assets)

Exploration for and evaluation of mineral resources means the search for crude oil and natural gas resources and the determination of the technical feasibility and commercial viability of their extraction.

From the moment of obtaining the right to explore for hydrocarbons in a given area to the moment when the technical feasibility and commercial viability of extracting mineral resources is determined, expenditure directly connected with exploration for and evaluation of oil and gas resources is recognised in accordance with IFRS 6 *Exploration for and Evaluation of Mineral Resources* as a separate item of non-current assets. The expenditure includes the costs of acquisition of exploration rights, costs of exploration rigs, salaries and wages, consumables and fuel, insurance, costs of geological and geophysical surveys, as well as costs of other services.

The Group classifies its hydrocarbon exploration and evaluation assets as property, plant and equipment or intangible assets, depending on the type of the acquired assets, and applies this classification policy in a consistent manner.

Once the size of a deposit is confirmed and its production plan is approved, the expenditure is transferred to appropriate items of property, plant and equipment or intangible assets classified as development and production assets (see also Notes 7.9.1 and 7.9.3).

The Group examines the need to recognise impairment losses on exploration and evaluation assets by considering whether in relation to a specific area:

- the period for which the Group has the right to explore in the specific area has expired during the current financial year or will expire in the near future, and is not expected to be renewed,
- no substantial expenditure on further exploration for and evaluation of mineral resources is anticipated,
- exploration for and evaluation of mineral resources have not led to discovery of commercially viable quantities of mineral resources and the Group has decided to discontinue such activities,
- sufficient data exist to indicate that, although development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or by sale.

If expenditure on property, plant and equipment under construction does not result in discovery of any reserves in the case of which extraction is technically feasible and economically viable, impairment losses on property, plant and equipment under construction are recognised and charged to profit or loss of the period in which it is found that commercial production from the deposits is not viable.

7.11.2 Assets related to development and production of crude oil and natural gas (development and production assets)

Assets related to production of crude oil and natural gas are recognised and measured in accordance with the accounting policies presented in Note 7.9.1 (property, plant and equipment) and in Note 7.9.3 (intangible assets).

Property, plant and equipment comprising the Group's production infrastructure include assets corresponding to the amount of the provision for decommissioning of oil and gas extraction facilities (see Note 7.24.1). Those assets are recognised in accordance with IAS 16 *Property, Plant and Equipment*, which states: "Cost of an item of property, land and equipment includes […] the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period". The Group's obligation to incur costs of decommissioning of oil and gas extraction facilities results directly from the reasons specified in IAS 16. Under Section 63 of the standard, entities are obliged to review the value of the assets periodically, at least as at the end of each reporting period.

Revaluation of the assets may be caused by:

- change in the estimate of the cash outflow that will be necessary to ensure performance of the decommissioning obligation,
- change in the current market discount rate,
- change in the inflation rate.

7.12 Leases

The Group as a lessor

Finance leases are disclosed in the statement of financial position as receivables, at amounts equal to the net investment in the lease less the principal component of lease payments for a given financial year calculated based on a pattern reflecting a constant periodic rate of return on the lessor's net investment outstanding in respect of the finance lease.
Finance income from interest on a finance lease is disclosed in the relevant reporting periods based on a pattern reflecting a constant periodic rate of return on the net investment outstanding in respect of the finance lease.

Income from operating leases is recognised in the statement of comprehensive income on a straight-line basis over the lease term.

The Group as a lessee

The Group uses a single accounting model for leases under which the lessee recognises right-of-use assets and lease liabilities for all leases except short-term leases and leases of low-value assets.

Short-term leases are leases with a term of 12 months or less, containing no purchase options. In particular, the Group defines as short-term leases contracts made for an indefinite term which may be terminated on a short notice (up to 12 months) without any significant penalty imposed on the party.

The materiality level defined by the Group to identify low-value leases is PLN 20 thousand for entities whose functional currency is PLN, and the equivalent of USD 5 thousand for entities whose functional currency is other than PLN. The value of the underlying asset is measured based on the value of the asset when it is new, regardless of the age of the leased asset.

An asset is typically identified by being explicitly specified in a contract, but an asset can also be identified by being implicitly specified at the time it is made available for use by the customer. The Group recognises a right-of-use asset and a lease liability upon commencement of a contract under which control of the use of specified assets is transferred for a certain period of time. The date of commencement of a lease contract is the date on which the leased asset is made available to the Group as the lessee.

A right-of-use asset is initially measured at cost which includes:

- the amount of the lease liability initially measured,
- any lease payments made at or prior to commencement, less any lease incentives received,
- any initial direct costs incurred by the lessee,
- the initial estimate of the costs of dismantling and removing the underlying asset and restoring the site on which it is located.

Right-of-use assets are recognised in the statement of financial position as property, plant and equipment (Property, plant and equipment of the Refining & Marketing segment and property, plant and equipment of the Exploration & Production segment). Perpetual usufruct right to land acquired for a consideration or received free of charge is recognised in the same manner as other lease contracts (as right-of-use assets and lease liabilities). To calculate assets and liabilities related to perpetual usufruct, the Group conducts an analysis to determine the anticipated term of perpetual usufruct. Once the anticipated term of perpetual usufruct has been determined, the lease liability is calculated in accordance with general principles.

After the lease commencement date, the right-of-use asset is measured at cost less accumulated depreciation and accumulated impairment losses. If there is a lease modification, the right-of-use asset is adjusted to the remeasurement of the lease liability (reflecting changes resulting from the lease modification or revision of the discount rate).

The right-of-use asset is depreciated on a straight-line basis over the period corresponding to the estimated useful life of the asset. In the case of perpetual usufruct rights to land for which the amount of right-of-use assets was calculated in accordance with the perpetual usufruct formula, depreciation is not calculated. For other perpetual usufruct rights to land, depreciation is calculated in accordance with the term of the agreement.

If the lease transfers the ownership of an asset to the Company before the end of the lease term, or if the cost of the right-of-use asset reflects that the Company will exercise a purchase option, the Company depreciates the right-of-use asset from the commencement date to the end of the useful life of the underlying asset. In other cases, the Company depreciates the right-of-use assets from the commencement date to the earlier of the end of the useful life of the asset or the end of the lease term.

Decommissioning costs are capitalised as part of the right-of-use asset and amortised over the estimated useful life of the asset. The fair value of decommissioning costs is estimated by the Group in accordance with the methodology specified in IFRIC 1.

When the Group establishes a provision for the contractually required inspection or overhaul of a leased asset (for example, rolling stock), it recognises the value of the established provision as an asset component (rights of use) at the date of its initial recognition. The component should be fully depreciated by the time of the first contracted repair or overhaul (this component is used against the last repair required under the lease contract). If more than one overhaul of the asset is required before the end of the lease contract, the Group capitalizes the costs of the overhaul and amortises it until the next overhaul. The last overhaul required for a given contract results in the termination of the provision recognised at the commencement of the contract.

A lease liability is initially measured at the present value of lease payments outstanding at that date, including:

- fixed lease payments net of any lease incentives;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable by the lessee under residual value guarantees;
- the exercise price of a purchase option if exercise of that option by the lessee is reasonably certain;
- lease termination penalties if the lessee is entitled to exercise the option to terminate the lease.

Lease payments do not include variable charges that depend on external factors. Variable lease payments not included in the initial measurement of a lease liability are recognised directly in profit or loss.

After initial recognition, the Group measures lease liabilities by:

- increasing the carrying amount to reflect interest on the lease liability,
- reducing the carrying amount to reflect the lease payments made, and
- remeasuring the carrying amount in order to take into account a lease reassessment or modification, or to take account of revised substantially fixed lease payments, including increases or reductions due to index changes in the case of index-linked contracts.

Upon lease commencement, and to the extent that the costs are not included in the carrying amount of another asset in accordance with applicable standards other than IFRS 16, the lessee recognises in profit or loss both interest on the lease liability and variable lease payments not included in the measurement of the lease liability in the period in which the event or condition that triggers the payments occurs.

Lease payments are discounted using the interest rate implicit in the lease or the Group's incremental borrowing rate when the interest rate implicit in the lease cannot be readily determined. To determine the incremental borrowing rate, the Group takes into account the type of contract, the duration of the contract, the currency of the contract and the potential margin it would have to pay to external financial institutions if it wanted to enter into such a transaction on the financial market.
The Group determined incremental borrowing rates in a breakdown by contract currency and taking into account contract term, based on the time brackets presented below:

- short-term contracts (12 months or shorter),
- contracts for a term of 1 to 2 years (inclusive),
- contracts for a term of 2 to 5 years (inclusive),
- contracts for a term of 5 to 10 years (inclusive),
- contracts for a term of more than 10 years.

The process of determining the current incremental borrowing rate consists of the following steps:
- analysis of the lessee's current financing structure (e.g., debt instruments held by the lessee and their terms);
- determination of the appropriate reference rate – assuming specific currency, economic conditions and lease term;
- analysis of other material lease terms, including the nature of the underlying assets.

To calculate discount rates for the purposes of IFRS 16, the Group assumes that the discount rate should reflect the cost that it would have to pay to borrow the funds necessary to purchase the leased asset.

The Group enters into lease contracts based on the three principal currencies to which it has assigned the base discount rate, i.e., PLN with the WIBOR base rate for a specific term, EUR with the EURIBOR base rate for a specific term, and USD with the LIBOR base rate for a specific term. These base rates apply to short-term foreign-currency leases. Base discount rates for long-term leases are determined on a case-by-case basis.

7.13 Inventories

Inventories are measured at the lower of cost and net realisable value.

Costs incurred in order to bring an inventory item to its present location and condition are accounted for in the following manner:
- materials and merchandise – at cost,
- finished goods and work-in-progress – at the cost of direct materials and labour and an appropriate portion of indirect production costs, established on the basis of normal capacity utilisation.

Net realisable value is the selling price realisable as at the end of the reporting period, net of VAT, excise duty and fuel charge, less any rebates, discounts and other similar items, and less the estimated costs to complete and costs to sell.

Decrease in inventories is established with the weighted average method.

Write-downs of products or semi-finished products, resulting from revaluation based on net realisable value, are posted to production costs. Write-downs of merchandise are charged to cost of merchandise sold in the statement of comprehensive income.

As at the end of each reporting period, the Group estimates (based on an individual assessment of the usefulness of inventories for the purposes of the Group's business) the amount of write-downs of stored materials. If crude oil and refining product prices go down, the Group recognises an inventory write-down to adjust the carrying amount of inventories, given the difference between their cost and net realisable value, in accordance with IAS 2. Write-downs of stored materials due to their impairment are charged to costs.

If the reason for making an inventory write-down no longer exists, the value of the inventory item is increased by an amount equal to the entire or part of the write-down. For the sake of clarity and because of the economic substance of the operation, if a write-down is used, its reversal is reflected in operating activities.

7.14 Emergency stocks

The Group maintains emergency stocks as required by the following acts:
- Act on Stocks of Crude Oil, Petroleum Products and Natural Gas, and on the Rules to be Followed in the Event of Threat to National Fuel Security or Disruptions on the Petroleum Market of February 16th 2007 (Dz.U. of 2007, No. 52, item 343, dated March 23rd 2007, as amended).
- Regulation of the Minister of Economy, Labour and Social Policy, on fuel stocks at energy sector companies, dated February 12th 2003 (Dz.U. No. 39, item 338, as amended).

These regulations define the rules for creating, maintaining and financing stocks of crude oil, petroleum products and fuels at energy sector companies.

Emergency stocks are disclosed as current assets given their short turnover cycle. The Group's emergency stocks include crude oil, petroleum products (liquid fuels), LPG and coal. In the Refining & Marketing segment, emergency stocks are maintained mainly by the Parent.

7.15 Cash and cash equivalents

Cash in hand and at banks, as well as short-term deposits held to maturity are measured at par value.

Cash and cash equivalents disclosed in the consolidated statement of cash flows comprise cash in hand, overdraft facilities, and those bank deposits maturing within three months which are not classified as investments.

7.16 Equity

Equity is recognised in the consolidated financial statements by categories, in accordance with applicable laws and constitutional documents of the consolidated entities.

The share capital of the LOTOS Group is the share capital of the Parent and is recognised at its par value, in the amount specified in the Company's Articles of Association and in the relevant entry in the National Court Register.

7.17 Bank and non-bank borrowings and notes

All bank and non-bank borrowings and notes are initially recognised at cost, equal to the fair value, less cost of obtaining the financing.

Following initial recognition, bank and non-bank borrowings and notes are measured at amortised cost, using the effective interest rate method. Amortised cost includes the cost of obtaining financing and discounts, as well as premiums received on settlement of the liability. Upon removal of the liability from the statement of financial position or recognition of an impairment loss, gains or losses are recognised in the statement of comprehensive income.

7.18 Employee benefit obligations

7.18.1 Retirement severance payments, length-of-service awards and other employee benefits

In accordance with the Collective Bargaining Agreement, the Group's employees are entitled to length-of-service awards and severance payments upon retirement due to old age or disability, as well as death benefits.

Also, the employees, retired employees, and pensioners covered by the Group's social benefits are entitled to benefits from a separate social fund, which is established pursuant to applicable national regulations (Company Social Benefits Fund).

According to IAS 19 Employee Benefits, old-age and disability retirement severance payments, as well as contributions to the Company Social Benefits Fund to be used for payment of future benefits to retired employees, are classified as defined post-employment benefit plans, while length-of-service awards, death benefits, and benefits paid to currently retired employees are recognised under other employee benefits.

Present value of future post-employment benefit obligations as at the end of the reporting period is calculated by an independent actuary using the projected unit credit method, and represents the discounted value of future payments the employer will have to make to fulfil its obligations related the employees' services in previous periods (until the end of the reporting period), defined individually for each employee, taking into account employee turnover (probability of employees leaving), without including future employees.

The value of future employee benefit obligations includes length-of-service awards, old-age and disability retirement severance payments, as well as benefits paid to currently retired employees and the amount of estimated death benefits.

Length-of-service awards are paid after a specific period of employment. Old-age and disability retirement severance payments are one-off and paid upon retirement. Amounts of severance payments and length-of-service awards depend on the length of employment and the average remuneration of an employee. The amount of death benefit depends on the length of employment of the deceased employee, and the benefit is payable to the family, in accordance with the rules set forth in the Polish Labour Code.

Actuarial gains and losses on post-employment benefits are recognised in other comprehensive income.

Employees of the Group companies are also entitled to holidays in accordance with the applicable provisions of the Polish Labour Code. The Group calculates the cost of employee holidays on an accrual basis using the liability method. The amount of compensation for holiday entitlements is recognised based on the difference between the balance of holidays actually used and the balance of holidays established proportionately to the passage of time, and disclosed in the financial statements as, respectively, current or non-current liabilities under other employee benefits.

Obligations under other employee benefits also include bonuses and awards granted as part of the Group's incentive pay systems.

For detailed information on employee benefits, see Note 24, containing the individual items of employee benefit obligations and employee benefits expense, actuarial assumptions, as well as an analysis of the sensitivity of estimates to changes of those assumptions. The Group recognises the cost of discount on its employee benefit obligations in finance costs.

Given the different nature of retirement plans at the AB LOTOS Geonafta Group companies, and their immaterial effect on the Group's obligations under length-of-service awards and post-employment benefits, those companies' obligations are presented separately under Obligations under length-of-service awards and post-employment benefits at foreign companies.

7.18.2 Profit allocated for employee benefits and special accounts

In accordance with the business practice in Poland, shareholders have the right to allocate a part of profit to employee benefits by making contributions to the social benefits fund and to other special accounts. However, in the financial statements such distributions are charged to operating expenses of the period to which the profit distribution relates.

7.19 Borrowing costs

Borrowing costs (i.e. interest and other costs incurred in connection with borrowings) are recognised as an expense in the period in which they were incurred, with the exception of costs directly attributable to the acquisition, construction or production of a qualifying asset (including exchange differences where they are regarded as an adjustment to interest costs, and exchange differences on fees and commissions), which are capitalised as part of the cost of such asset (a qualifying asset is one that necessarily takes a substantial period of time to get ready for its intended use or sale).

To the extent that funds are borrowed specifically for the purpose of acquiring a qualifying asset, the amount of the borrowing costs which may be capitalised as part of such asset is determined as the difference between the actual borrowing costs incurred in connection with a given credit facility or loan in a given period and the proceeds from temporary investments of the borrowed funds.

To the extent that funds are borrowed without a specific purpose and are later allocated for the acquisition of a qualifying asset, the amount of the borrowing costs which may be capitalised is determined by applying an appropriate capitalisation rate to the expenditure on that asset.

7.20 Financial assets and liabilities

Financial assets

The Group classifies financial assets into the following measurement categories:

- measured at amortised cost,
- measured at fair value through profit or loss,
- measured at fair value through other comprehensive income.

The classification depends on the model adopted by the Group to manage financial assets and on the terms of contractual cash flows. The Group reclassifies investments in debt instruments only when the management model changes.

The Group assesses the model of managing debt financial assets (including trade receivables) based on the following three possible criteria:

- held to collect cash flows,
- held to collect cash flows and sell,
- other (effectively meaning assets held for disposal).

Measurement upon initial recognition

On initial recognition, the Group measures a financial asset at fair value plus transaction costs that are directly attributable to the acquisition of the financial asset if it is not measured at fair value through profit or loss. Transaction costs related to financial assets at fair value through profit or loss are recognised in profit or loss.

Derecognition

Financial assets are recognised when the Group becomes a party to the contractual provisions covering the instrument. Financial assets are derecognised when the rights to receive cash flows from financial assets have expired or have been transferred, and the Group has transferred substantially all risks and rewards related to ownership of assets.

Measurement after initial recognition

Financial assets measured at amortised cost

Debt instruments held to collect contractual cash flows which comprise solely payments of principal and interest (“SPPI”) are measured at amortised cost. Interest income is calculated using the effective interest rate method and recognised under interest income in profit or loss. Impairment losses are recognised in accordance with the accounting policy set out in Note 7.21 and presented under Impairment losses on financial assets.

In this category, the Group classifies in particular:

- trade receivables other than factoring receivables within the factoring limit granted to the Group,
- loans that meet the SPPI classification test and, in line with the business model, are recognised as ‘held to collect cash flows’,
- cash and cash equivalents,
- deposits, security deposits, investment receivables and other financial receivables.

Financial assets measured at amortised cost are classified as non-current assets if they mature more than 12 months after the reporting date.

If the effect of time value of money is material, the value of receivables is determined by discounting the projected future cash flows to their present value using a pre-tax discount rate reflecting the current market estimates of the time value of money.

Financial assets measured at fair value through other comprehensive income

Debt instruments giving rise to cash flows which are solely payments of principal and interest and which are held to collect contractual cash flows and to sell are measured at fair value through other comprehensive income. Changes in the carrying amount are recognised through other comprehensive income, except for impairment gains and losses, interest income and foreign exchange gains and losses, which are recognised in profit or loss. If a financial asset is derecognised, the total gain or loss previously recognised in other comprehensive income is reclassified from equity to profit or loss and recognised as other gains/(losses). Interest income on such financial assets is calculated using the effective interest rate method and recognised under ‘interest income’. Impairment due to expected credit losses is recognised in accordance with the accounting policy applicable to impairment of financial assets and presented under Impairment allowance for expected credit losses.

Financial assets at fair value through profit or loss

Assets which do not meet the criteria for measurement at amortised cost or at fair value through other comprehensive income are measured at fair value through profit or loss.

In particular, the Group classifies loans that do not meet the SPPI test (i.e. cash flows from these loans are not solely payments of principal and interest) at fair value through profit or loss.
The fair value of trade receivables subject to factoring within the limit available as at the last day of the reporting period is determined on the basis of the factoring agreement with the factor.

Gain or loss on fair value measurement of debt investments is recognised in profit or loss and presented under ‘Gains/(losses) on changes in the fair value of financial instruments’ in the period in which they arise. Gains/(losses) on fair value measurement include interest received on financial instruments classified as measured at fair value.

The instruments classified at fair value through profit or loss include the derivative instruments described in Note 7.22.

Equity instruments

Interests in other entities include such equity instruments in other entities which do not confer control, joint control or significant influence over such entities.

Interests in other entities are initially recognised at fair value plus transaction costs. Subsequently, they are measured at fair value. For all its investments, the Group has elected to present gains and losses on changes in the fair value of equity instruments in other comprehensive income as such investments are not held for short-term returns. If such election is made, gains and losses on changes in fair value are not reclassified to profit or loss when the investment is derecognised.

Dividends from such investments are recognised in profit or loss once the Group's right to receive payment is established.

Financial liabilities

Financial liabilities are initially recognised at fair value less transaction costs and subsequently at amortised cost using the effective interest rate method.

Under financial liabilities at amortised cost, the Group recognises mainly trade payables, investment commitments and other liabilities, bank and non-bank borrowings, and debt instruments. Such liabilities are recognised in the statement of financial position under: Bank and non-bank borrowings, notes and lease liabilities; Trade payables; Other liabilities and provisions.

Financial liabilities denominated in foreign currencies are translated into the functional currency using the exchange rate prevailing at the date of the transaction. Foreign exchange gains and losses on settlement of those liabilities and translation at the exchange rates prevailing at the reporting date are recognised in profit or loss unless their recognition in other comprehensive income is deferred when they qualify as cash flow hedging.

If contractual terms of a financial liability are modified in a way that does not result in derecognition of the existing liability, the gain or loss is immediately recognised in profit or loss. Profit or loss is calculated as the difference between the present value of modified and original cash flows, discounted using the original effective interest rate of the liability.

7.21 Impairment of financial assets

As at the last day of each reporting period, the Group estimates expected credit losses on debt instruments measured at amortised cost and at fair value through other comprehensive income, whether or not there has been any evidence of impairment. The Group applies the following impairment recognition approaches:

- general (basic) approach,
- simplified approach.

With respect to short-term trade receivables without a significant financing component, the Group applies the simplified approach and measures impairment losses in the amount of credit losses expected over the entire life of the receivable since its initial recognition. The Group applies the provision matrix for calculating impairment losses on trade receivables classified in different age groups or delinquency periods.

For the purpose of determining expected credit losses, receivables are grouped based on the similarity of credit risk characteristics. To determine the overall default rate, an analysis of collectability of receivables for the last three years is carried out. Default rates are calculated for the following periods:

- up to 30 days;
- from 30 to 90 days;
- from 90 to 180 days;
- more than 180 days.

To determine the default rate for a given period, the amount of written off trade receivables is compared with the amount of outstanding receivables. The calculation takes into account the effect of future factors on the amount of credit losses.

Impairment losses are calculated taking into account default rates adjusted for the effect of future factors and the amount of receivables outstanding at the reporting date for each period.

Material individual items of receivables (representing more than 5% of total receivables) are tested on a case-by-case basis.

Intra-group receivables carry a different credit risk than receivables from third parties due to existing links and control. In the event of financial difficulties, the Group usually supports its subsidiaries. Therefore, poor financial performance and position of a subsidiary do not necessarily translate into higher credit risk. In such a case, the Group estimates impairment based on individual analysis. In other cases, where the number of items is significant, they may form a separate portfolio of intra-group receivables based on a portfolio analysis.

The Group applies a three-stage impairment model with respect to financial assets other than trade receivables:

- Stage 1 – financial instruments that have not had a significant increase in credit risk since initial recognition. Expected credit losses are determined based on the probability of default within 12 months (i.e. the total expected credit loss is multiplied by the probability that the loss will occur over the next 12 months – 12 month ECL);
- Stage 2 – financial instruments that have had a significant increase in credit risk since initial recognition, but there is no objective evidence of impairment; expected credit losses are calculated based on the probability of default over the lifetime of the asset;
- Stage 3 – instruments for which there is objective evidence of impairment.

To the extent necessary – according to the general approach – to assess whether there has been a significant increase in credit risk, the following factors are taken into account by the Group:

- delinquency period of at least 30 days;
- any legislative, technological or macroeconomic changes with a material adverse effect on the debtor;
- a significant adverse event has been reported concerning the loan or another loan taken by the same debtor from another lender, such as termination of a loan agreement, breach of its terms and conditions, or its renegotiation due to financial difficulties, etc.;
- the debtor has lost a significant customer or supplier or has experienced other adverse developments on its market.

The Group recognizes that a financial assets are at risk of default if internal and external information indicates that it is unlikely that the Group will receive all of the remaining contractual cash flows. This is the case when the asset is past due 90 days or more. Financial assets are written off, in whole or in part, when the Group has used practically all measures to collect them and determines that they cannot be reasonably expected to be recovered.

Trade receivables are included in Stage 2 or Stage 3:

- Stage 2 – trade receivables for which a simplified approach to lifetime expected credit losses was applied, except for trade receivables included in Stage 3;
- Stage 3 – trade receivables that are more than 90 days past due or are identified as not serviced and identified impairment.

7.22 Derivative financial instruments

Derivative instruments used by the Group to hedge against currency risk include in particular FX forwards. The Group also uses commodity swaps to hedge its exposure to commodity and petroleum product price risk, and in the case of sale of products at fixed prices with an embedded option it uses commodity options. The Group uses futures contracts to manage its exposure to prices of carbon dioxide (CO_2) emission allowances, and interest rate swaps (IRSs) and forward rate agreements (FRAs) to hedge its interest rate exposure. Such financial derivatives are measured at fair value in line with the fair value hierarchy.

Based on the fair value measurement methods applied, the Group classifies its individual financial assets and liabilities according to the following levels (fair value hierarchy):

- Level 1: Financial assets and liabilities whose fair values are measured directly on the basis of quoted prices (used without adjustment) from active markets for identical assets or liabilities.
- Level 2: Financial assets and liabilities whose fair values are measured using measurement models when all significant input data is observable on the market either directly (unadjusted market prices) or indirectly (data based on market prices).
- Level 3: Financial assets and liabilities whose fair values are measured using measurement models when the input data is not based on observable market data (unobservable input data).

Derivatives outside the hedge accounting are classified as: financial assets measured at fair value through profit or loss and financial liabilities measured at fair value through profit or loss, and are measured at fair value with gains and losses on changes in fair value recognised in profit or loss.

The fair value of commodity swaps is established by reference to discounted cash flows connected with the transactions, calculated on the basis of the difference between the average market price and the transaction price. The fair value is established on the basis of prices quoted on active markets, as provided by an external consultancy. (Level 2 in the fair value hierarchy).

Fair value of commodity options is established by reference to cash flows connected with the transactions, calculated on the basis of the difference between the option premium paid and the current market price of the option. The fair value is established on the basis of prices quoted on active markets provided by an external consultancy (Level 2 in the fair value hierarchy).

The fair value of spots, forwards and currency swaps in the case of Grupa LOTOS S.A. is established by reference to future discounted cash flows from the transactions, calculated on the basis of the difference between the forward rate and the transaction price. The forward rate is calculated on the basis of the fixing rate quotations of the National Bank of Poland and the interest rate curve implied in FX swaps (Level 2 in the fair value hierarchy).

The fair value of FRAs in the case of Grupa LOTOS S.A. is established by reference to future discounted cash flows connected with the transactions, calculated on the basis of the difference between the forward rate and the transaction price. The forward rate is calculated using the zero-coupon interest rate curve based on 6M or 3M LIBOR, depending on the type of transaction (Level 2 in the fair value hierarchy). The fair value of FRAs held by LOTOS Asfalt Sp. z o.o. is presented based on the information provided by the banks which are counterparties to those transactions (Level 2 in the fair value hierarchy).

The fair value of futures hedging the risk of prices of carbon dioxide (CO_2) emission allowances is determined based on the difference between the market price quoted on the valuation date by the Intercontinental Exchange (ICE) and the transaction price. (Level 1 in the fair value hierarchy).

The fair value of derivative instruments does not take into account counterparty risk or the Group's own credit risk. Analysis showed that the credit value adjustment (CVA) accounting for counterparty credit risk and the debit value adjustment (DVA) accounting for the Group's credit risk would have no material effect on the measurement results. The effect of credit risk on the fair value of derivative instruments was analysed using conservative assumptions. A method estimating CVA as the hypothetical cost to purchase credit default swaps (CDS) for the projected exposure of derivatives entered into with a given counterparty was used for this purpose. The exposure forecast is made based on the current level of forward prices without taking into account their volatility. If no CDS are published on the market for a given entity, unsecured bond spreads over government bonds are used first, or, if no such spreads are published, Fitch, S&P and Moody's ratings are used to determine the hypothetical CDS level.

To manage the risk related to carbon dioxide emission allowances, the Group assesses, on a case-by-case basis, the risk of expected deficit of emission allowances allocated free of charge under the carbon emission reduction system and manages the risk of changes in the price of emission allowance traded on an active market.

To hedge against the risk of changes in the prices of CO_2 emission allowances, the Company enters into EUA, CER and ERU futures contracts. In 2019, due to the then-existing plans to settle the carbon futures through physical delivery, the valuation of the contracts was not recognised in financial assets/liabilities. However, the Company monitored and measured the contracts' value (on an off-balance sheet basis) as part of the assessment of effectiveness of its CO_2 risk management policy. In 2020, unlike 2019, the classification of futures hedging the risk of CO_2 emission allowance prices was no longer classified as own-use transactions. Accordingly, they are recognised in financial assets / liabilities in the financial statements.

For information on the limit of free carbon dioxide emission allowances allocated to the Group and description of the Group's risk management process, see Note 27.2.

In the statement of financial position, financial derivatives are presented separately as either current or non-current, depending on the expected time of realisation of assets and liabilities. If their amount is immaterial, they are recognised under other assets and liabilities.

The Group applies hedge accounting. Changes in the fair value of derivative financial instruments designated to hedge cash flows, to the extent representing an effective hedge, are posted directly to other comprehensive income. For more information on hedge accounting, see Note 7.23.

7.23 Hedge accounting

The Group has elected the option to continue to apply the existing requirements of IAS 39 as of January 1st 2019 and not to apply the new hedge accounting requirements of IFRS 9 until the International Accounting Standards Board has completed work on accounting for macro hedging.

The Parent applies cash flow hedge accounting for USD-denominated borrowings designated as a hedging instrument for future highly probable USD-denominated revenue from sales of commodities and petroleum products exposed to the risk of USD/PLN exchange rate movements.

The objective of cash flow hedge accounting is to guarantee a specific Polish złoty value of revenue generated in USD. The hedged items comprise a number of highly probable and planned USD-denominated refined product sale transactions, in particular the first portion of revenue (up to the amount of the designated principal repayment) in USD generated in a given calendar month, or if the amount of revenue in a given month is lower than the amount of the designated principal payment – the first portion of revenue generated in three successive months. If a subsequent portion of revenue is designated in a given calendar month, the hedged item is the first portion of revenue generated after the previously designated portion of revenue in USD in a given calendar month, or if the amount of revenue in a given month is lower than the amount of the designated principal repayment – a subsequent portion of revenue generated in three successive months. A hedged item is linked to relevant hedging instruments based on an individual document designating the hedging relationship.

The designated hedging instruments cover an obligation to repay a USD-denominated credit facility, whose settlement dates fall on business days of specified calendar months, in accordance with the principal repayment schedule.

Changes in the fair value of financial instruments designated as cash flow hedges are posted directly to other comprehensive income to the extent they represent an effective hedge, while the ineffective portion is charged to other finance income or costs in the reporting period.

At the time when a hedge is undertaken, the Group formally designates and documents the hedging relationship, as well as its risk management objective and strategy for undertaking the hedge. The relevant documentation identifies: (i) the hedging instrument, (ii) the hedged item or transaction, (iii) the nature of the hedged risk, and (iv) specifies how the Company will assess the hedging instrument's effectiveness in offsetting changes in the fair value of the hedged item or cash flows attributable to the hedged risk. The hedge is expected to be highly effective in offsetting changes in fair value or cash flows attributable to the hedged risk. The hedge is assessed on an ongoing basis to determine whether it remains highly effective during all the reporting periods for which it was undertaken.

7.24 Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and the amount of the obligation can be reliably estimated. If the Group anticipates that the costs for which provisions have been recognised will be recovered, e.g. under an insurance agreement, the recovery of such funds is recognised as a separate asset, but only when such recovery is practically certain to occur. The cost related to a given provision is disclosed in the statement of comprehensive income net of any recoveries. If the effect of the time value of money is significant, the amount of provisions is determined by discounting projected future cash flows to their present value at a pre-tax discount rate reflecting the current market estimates of the time value of money and risks, if any, specific to a given obligation. If the discount method is applied, an increase in the provision as a result of passage of time is recognised as finance costs. Provisions, other than provisions for decommissioning and site restoration costs, are charged against operating expenses, other expenses, or finance costs, depending on what circumstances the future obligation relates to.

7.24.1 Provisions for decommissioning and restoration costs

Provisions for decommissioning and restoration costs are recognised when the Group has an obligation to decommission oil and gas extraction facilities or to demolish, disassemble or remove other property, plant and equipment and restore the site to its original condition, and when a reliable estimate can be made of the amount of the obligation.

If a decommissioning obligation arises with respect to new property, plant and equipment, such as production and transport infrastructure (pipelines) or refinery installations, it is recognised on completion of construction or installation. If a decommissioning obligation arises with respect to a production well, it is recognised on completion of drilling, irrespective of the hydrocarbon flow recorded.

A decommissioning obligation may be further adjusted over the useful life of a well, production or transport infrastructure, etc. to reflect changes in applicable laws or a decision to suspend certain operations. The recognised amount of the obligation is the present value of future expenditures, estimated for the local conditions and requirements.

On recognition of a decommissioning obligation, a matching decommissioning asset is recognised in the same amount (in an appropriate item of property, plant and equipment), which is subsequently depreciated in line with the asset subject to decommissioning.

The amount of the decommissioning provision and its corresponding asset is adjusted to reflect changes to the present value of estimated decommissioning and restoration costs, other than provision discount reversals. Adjustments are also made for foreign exchange gains or losses arising from translation of a decommissioning obligation denominated in a foreign currency when it is certain that the obligation will be settled in that currency.

Periodic discount unwinding is recognised as finance costs in the statement of comprehensive income.
Deferred tax assets and liabilities are recognised in respect of the decommissioning provision and the corresponding decommissioning asset.

Under the Polish Geological and Mining Law of February 4th 1994 (Dz.U.05.228.1947, as amended), the Group is required to operate an Oil and Gas Extraction Facility Decommissioning Fund, whose financial resources may only be used to cover the cost of decommissioning of an oil and gas extraction facility or its designated part.

The amount of contribution to the Fund is calculated separately for each facility and represents an equivalent of 3% or more of the depreciation charge recognised on the facility's property, plant and equipment, determined in accordance with applicable corporate income tax laws. Companies are required to deposit the contributions in a separate bank account until decommissioning start date.

7.25 Trade and other payables, and accrued expenses and deferred income

Short-term trade and other payables are reported at nominal amounts payable.

The Group derecognises a financial liability when it is extinguished, that is when the obligation specified in the contract is either discharged or cancelled or expires. When a debt instrument between the same parties is replaced by another instrument whose terms are substantially different, the Group treats such replacement as if the former financial liability was extinguished and recognises a new liability. Similarly, material modifications to the terms of a contract concerning an existing financial liability are presented as extinguishment of the former and recognition of a new financial liability. Any differences in the respective carrying amounts arising in connection with the replacement are charged to profit or loss.
Other non-financial liabilities include in particular value added tax, excise duty and fuel charge liabilities to the tax authorities and liabilities under received prepayments, which are to be settled by delivery of goods or tangible assets, or performance of services. Other non-financial liabilities are measured at nominal amounts payable.

Accrued expenses are recognised at probable amounts of current-period liabilities. The Group discloses accrued expenses and deferred income under other non-financial liabilities or, if they are related to employee benefits, under employee benefit obligations.

7.26 Grants

If there is reasonable certainty that a grant will be received and that all related conditions will be fulfilled, grants are recognised at fair value.

If a grant concerns a cost item, it is recognised as income in matching with the expenses it is to compensate for. If it concerns an asset, its fair value is recognised as deferred income, and then it is written off annually in equal parts through the statement of comprehensive income over the estimated useful life of the asset.

7.27 Joint arrangements

IFRS 11 defines a joint arrangement as a contractual arrangement under which the business of two or more parties is subject to joint control. Joint control exists only when decisions about the relevant activities under the arrangement require the unanimous consent of all the parties.

Joint arrangements are classified into two types – joint operations and joint ventures. The distinction between the two is based on different rights and obligations of the parties under the joint arrangement.

If under the joint arrangement the parties with joint control of the arrangement have rights to the net assets of the arrangement, then it is a joint venture, which in principle requires the establishment of a separate vehicle. The Group's joint ventures include LOTOS-Air BP Polska Sp. z o.o., a jointly controlled entity operating in the Refining & Marketing segment, and the following entities operating in the Exploration & Production segment: Baltic Gas Sp. z o.o., Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp.k., and UAB Minijos Nafta.

Investments in joint ventures measured in accordance with IFRS 11 *Joint Arrangements* are accounted for with the equity method and recognised in the statement of financial position at cost, adjusted for subsequent changes in the Group's share of the net assets of such entities, less impairment losses, if any. The statement of comprehensive income reflects the share in the results of operations of such entities, and if a change is recognised directly in their equity, the Group recognises its share in each change and, if applicable, discloses it in the statement of changes in equity and in the statement of comprehensive income under other comprehensive income, net.

Joint arrangements under which the parties with joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement, are defined as joint operations.

The Group holds interests in joint operations in the Exploration & Production segment through a Norwegian company, LOTOS Exploration and Production Norge AS, a subsidiary of LOTOS Petrobaltic S.A. In accordance with IFRS 11, the Group recognises its interest in assets, liabilities, costs and expenses related to its joint operations in the Heimdal field in Norway.

Considering the IFRS 11 criteria, not all operations involving a number of participants are joint operations or joint ventures as defined in the standard. In some situations, the Group is a party to an arrangement whose nature is that of joint operations, but has no joint control of the arrangement. This happens when there is more than one combination of the parties that can agree to make significant decisions about the operations. For the purposes of correct recognition of revenues, costs, assets and liabilities, the Group does not apply IFRS 11 in such situations, but other relevant IFRSs, taking into account its interest in the arrangement underlying the operations.

The Group is a party to arrangements involving joint operations in the Sleipner fields in Norway which are not subject to IFRS 11. The Group recognises the operations proportionately, i.e. according to its share in revenue, costs, receivables and liabilities relating to joint exploration and production of crude oil and natural gas in the Sleipner field. Therefore, there is no practical difference in recognising transactions relating to operations under the Sleipner licences with respect to the requirement to recognise joint operations under the Heimdal licence, which meet the definition of joint operations in accordance with IFRS 11.

7.28 Segment reporting

For management purposes, the LOTOS Group is divided into business units which correspond to the business segments, whereas for financial reporting purposes the Group's operating activity comprises two main reportable operating segments:

- Exploration & Production segment – comprising activities related to the acquisition of crude oil and natural gas reserves, and crude oil and natural gas production,
- Refining & Marketing segment – comprising the production and processing of refined petroleum products and their wholesale and retail sale, as well as auxiliary, transport and service activities.

The reportable operating segments are identified at the Group level. The Parent is included in the Refining & Marketing segment.
Segment performance is assessed on the basis of revenue, EBIT and EBITDA.
EBIT is operating profit/(loss)
and EBITDA is operating profit/(loss) before depreciation and amortisation.

The segments' revenue, EBIT and EBITDA do not account for intersegment adjustments.

Financial information of the operating segments used by the chief operating decision makers to assess the segments' performance is presented in Note 8.

7.29 Contingent liabilities and assets

In line with the policies applied by the Group, consistent with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*, a contingent liability is understood as:

- a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity, or
- a present obligation that arises from past events but is not recognised in the financial statements because:
  (i) it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation, or
  (ii) the amount of the obligation cannot be measured with sufficient reliability.

Contingent liabilities are not recognised in the statement of financial position, however information on contingent liabilities is disclosed, unless the likelihood of the outflow of resources embodying economic benefits is negligible.

In accordance with the IFRS, the Group defines a contingent asset as a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity.

Contingent receivables are not recognised in the statement of financial position, but information on them is disclosed if the inflow of resources embodying economic benefits is likely to occur.

Examples of contingent assets and liabilities include liabilities or receivables related to pending court disputes whose future impacts are neither known nor fully controlled by the entity. For more information on pending court disputes and other contingent liabilities, see Note 29.1 and Note 29.2, respectively.

7.30 Carbon dioxide (CO_2) emission allowances

CO_2 emission allowances are presented by the Group in its financial statements in accordance with the net liability approach, which means that the Group recognises only those liabilities that result from exceeding the limit of emission allowances granted. The Group reviews the limits granted to it on an annual basis. The liability is recognised only after the Group actually exceeds the limit. Income from sale of unused emission allowances is recognised in the statement of comprehensive income at the time of sale.

Additionally purchased emission allowances are measured at acquisition cost less impairment, if any, taking into consideration the residual value of allowances, and presented as intangible assets.

If purchased allowances are used to cover a deficit existing on the date of settling the annual limit of emission allowances, the allowances thus used are offset at carrying amount with the liability previously recognised for covering the deficit.

7.31 Energy certificates

Property rights arising under energy certificates are presented as merchandise.

Purchased energy certificates are recognised at cost. Energy certificates granted free of charge are recognised as merchandise at fair value, with a corresponding entry under liabilities/deferred income made in Grants.

The value of surrendered energy certificates is measured at the weighted average price and charged to operating expenses in proportion to the volume of electricity sold and consumed. In the case of certificates received free of charge, the relevant grant is accounted for in proportion to the amount credited to other income.

Sales of energy certificates are recognised as sales of merchandise and credited to revenue from sale of merchandise.

Impairment losses on energy certificates are made as at the reporting date and charged to other expenses.

To give effect to the matching principle with respect to expenses and revenue from consumption and sale of electricity, and a lack of purchased or granted property rights, a provision for energy certificates is recognised. The amount of the provision is charged to operating expenses.

8. Business segments

	Exploration & production segment		Refining & marketing segment		Consolidation adjustments		Consolidated	
	2020	2019	2020	2019	2020	2019	2020	2019
Revenue:	**1,111.5**	**1,186.7**	**20,319.5**	**28,826.2**	**(522.4)**	**(519.6)**	**20,908.6**	**29,493.3**
Intersegment sales	464.1	456.1	58.3	63.5	(522.4)	(519.6)	-	-
External sales	647.4	730.6	20,261.2	28,762.7	-	-	20,908.6	29,493.3
Operating profit/(loss) (**EBIT**)	**(764.2)**	**487.2**	**(615.1)**	**1,474.7**	**(17.5)**	**7.8**	**(1,396.8)**	**1,969.7**
Depreciation and amortisation	322.0	236.2	767.9	673.1	-	-	1,089.9	909.3
Operating profit/(loss) before depreciation and amortisation (**EBITDA**)	**(442.2)**	**723.4**	**152.8**	**2,147.8**	**(17.5)**	**7.8**	**(306.9)**	**2,879.0**
Total assets as at the end of the reporting period	**4,307.7**	**4,899.4**	**20,013.2**	**21,159.7**	**(2,464.5)**	**(2,387.0)**	**21,856.4**	**23,672.1**

8.1 Revenue

Type of goods or services	Exploration & production segment		Refining & marketing segment		Consolidated	
	2020	2019	2020	2019	2020	2019
Revenue from contracts with customers:	**647.4**	**730.6**	**20,501.4**	**28,893.9**	**21,148.8**	**29,624.5**
Products and services	646.4	729.0	19,360.9	27,618.5	20,007.3	28,347.5
Merchandise and materials	1.0	1.6	1,140.5	1,275.4	1,141.5	1,277.0
Effect of cash flow hedge accounting	-	-	(240.2)	(131.2)	(240.2)	(131.2)
Total revenue	**647.4**	**730.6**	**20,261.2**	**28,762.7**	**20,908.6**	**29,493.3**

Sales by products, merchandise and services	Exploration & production segment		Refining & marketing segment		Consolidated	
	2020	2019	2020	2019	2020	2019
Gasolines	-	-	3,032.7	4,346.6	3,032.7	4,346.6
Naphtha	-	-	752.7	936.9	752.7	936.9
Diesel oils	-	-	11,814.0	16,246.8	11,814.0	16,246.8
Bunker fuel	-	-	156.3	211.0	156.3	211.0
Light fuel oil	-	-	492.1	618.8	492.1	618.8
Heavy fuel oil	-	-	198.2	1,416.6	198.2	1,416.6
Aviation fuel	-	-	418.1	1,114.2	418.1	1,114.2
Lubricants	-	-	345.4	291.4	345.4	291.4
Base oils	-	-	320.7	460.1	320.7	460.1
Bitumens	-	-	1,010.8	1,223.1	1,010.8	1,223.1
LPG	-	-	470.5	513.0	470.5	513.0
Crude oil	332.7	233.9	37.6	-	370.3	233.9
Natural gas	248.1	434.6	1.1	1.0	249.2	435.6
Xylene fraction	-	-	140.1	235.4	140.1	235.4
Other refining products, merchandise and materials	0.2	-	410.7	338.0	410.9	338.0
Other products, merchandise and materials	5.7	8.3	546.0	568.2	551.7	576.5
Services	60.7	53.8	354.4	372.8	415.1	426.6
Effect of cash flow hedge accounting	-	-	(240.2)	(131.2)	(240.2)	(131.2)
Total	**647.4**	**730.6**	**20,261.2**	**28,762.7**	**20,908.6**	**29,493.3**

Geographical structure of sales	Exploration & production segment		Refining & marketing segment		Consolidated	
	2020	2019	2020	2019	2020	2019
Poland	15.6	8.0	17,744.4	24,132.1	17,760.0	24,140.1
Belgium	-	-	291.2	338.5	291.2	338.5
Czech Republic	-	-	144.2	270.3	144.2	270.3
Denmark	49.2	-	70.7	169.3	119.9	169.3
France	3.1	-	171.8	93.0	174.9	93.0
Netherlands	82.8	-	574.0	1,752.1	656.8	1,752.1
Germany	224.0	47.3	478.6	298.0	702.6	345.3
Norway	83.6	651.5	19.4	71.4	103.0	722.9
Sweden	10.7	-	235.1	548.7	245.8	548.7
United Kingdom	84.8	20.4	152.6	365.0	237.4	385.4
Other countries	93.6	3.4	619.4	855.5	713.0	858.9
Effect of cash flow hedge accounting	-	-	(240.2)	(131.2)	(240.2)	(131.2)
Total	**647.4**	**730.6**	**20,261.2**	**28,762.7**	**20,908.6**	**29,493.3**

In 2019–2020, there were no customers with a share in excess of 10% of the LOTOS Group’s total revenue.

9. Income and expenses

9.1 Costs by nature of expense

	Note	2020	2019
Depreciation and amortisation	8	1,089.9	909.3
Raw materials and consumables used [1]		15,462.7	22,283.3
Services		1,433.1	1,468.1
Taxes and charges		764.1	594.6
Employee benefits expense	9.2	938.7	920.4
Other costs by nature of expense		273.8	235.8
Merchandise and materials sold		977.7	1,046.5
Total costs by nature of expense		**20,940.0**	**27,458.0**
Change in products and adjustments to cost of sales		435.6	107.5
Total		**21,375.6**	**27,565.5**
including:			
Cost of sales		19,441.7	25,649.1
Selling expenses		1,412.9	1,425.6
Administrative expenses		521.0	490.8

[1] Including PLN 3.8m of foreign exchange losses related to operating activities, recognised as cost of sales (2019: PLN 66.0m of foreign exchange gains); see note 26.3.

9.2 Employee benefits expense

	Note	2020	2019
Current service costs		702.1	685.2
Social security and other employee benefits		209.4	195.7
Length-of-service awards, retirement and other post-employment benefits	24.2	27.2	39.5
Total employee benefits expense	**9.1**	**938.7**	**920.4**
Change in products and adjustments to cost of sales		6.0	(3.1)
Total		**944.7**	**917.3**
including:			
Cost of sales		559.7	547.9
Selling expenses		49.7	50.1
Administrative expenses		335.3	319.3

9.3 Other income

	Note	2020	2019
Provisions		**-**	**39.7**
- remeasurement of provision for contingent payments − Sleipner assets acquisition agreement	25.1	-	44.5
- other provisions		-	(4.8)
Reversal of impairment loss on property, plant and equipment and intangible assets:		**-**	**61.1**
Reversal of impairment losses:		**-**	**105.8**
• on oil and gas development assets: Norway: YME field	13.2.2	**-**	**105.4**
• refinery and other non-current assets:		**-**	**0.4**
Impairment losses:		**-**	**(44.7)**
•on oil and gas production assets:	13.2.2	**-**	**(12.1)**
- Lithuania: Vėžaičiai, Girkaliai fields		-	(8.9)
- Poland: B-8 field		-	(3.2)
• oil and gas exploration and evaluation assets: Norway: PL866 licence	13.2.1	**-**	**(3.8)**
• refinery and other non-current assets:		**-**	**(28.8)**
- service stations	13.1.1	-	(21.2)
- ships	13.2.3	-	(5.9)
- other assets	13.1.1	-	(1.7)
Grants		**3.0**	**14.5**
Damages		**23.9**	**6.4**
Lease modifications		**5.5**	**4.3**
Early termination of lease contracts		**3.6**	**1.1**
Supply of materials related to counteracting the COVID-19 pandemic		**37.2** [1]	**-**
Other		**7.1**	**7.5**
Total		**80.3**	**134.6**

[1] on the basis of an agreement concluded with the State Treasury (see note 30.1)

The Group offsets similar transaction items in accordance with IAS 1 *Presentation of Financial Statements*, Sections 34 and 35. Material items of income and expenses charged to profit or loss are disclosed separately, as presented in the table above.

9.4 Other expenses

	Note	2020	2019
Impairment losses on property, plant and equipment and intangible assets:		**904.8**	**-**
Impairment losses:		**923.8**	**-**
• oil and gas exploration and evaluation assets:	13.2.1	**15.8**	**-**
- Poland: Górowo Iławeckie		10.5	-
- Poland: Młynary area		5.3	-
• on oil and gas development assets: Norway: YME field	13.2.2	**460.6**	**-**
• on oil and gas production assets:	13.2.2	**437.4**	**-**
- Poland: B-3 field		118.3	-
- Poland: B-8 field		135.0	-
- Norway: Utgard field		155.0	-
- Lithuania: Nausodis, Genciai, Vėžaičiai and Girkaliai fields		29.1	-
• refinery and other non-current assets:	13.1.1	**10.0**	**-**
- service stations		8.8	-
- other assets		1.2	-
Reversal of impairment losses:		**(19.0)**	**-**
• on oil and gas production assets:	13.2.2	**(17.5)**	**-**
- Poland: B-3 field		(0.9)	-
- Norway: Heimdal area, Vale field		(16.6)	-
• refinery and other non-current assets:		**(1.5)**	**-**
- ships	13.2.3	(1.1)	-
- other assets		(0.4)	-
Loss on disposal of non-financial non-current assets		**2.2**	**-**
Loss on discontinued projects		**1.0**	**42.3**
- Norway: PL910, PL871, PL866 exploration licences	13.2.1	-	41.2
- other assets		1.0	1.1
Provisions		**17.8**	**-**
- provisions for disputed claims	29.1	32.1	-
- remeasurement of provision for contingent payments − Sleipner assets acquisition agreement	25.1	(4.5)	-
- remeasurement of provisions for costs of decommissioning of oil and gas extraction facilities – Heimdal	25.1	(13.8)	-
- restructuring provisions		3.7	-
- other provisions		0.3	-
Fines and compensation		**1.6**	**3.5**
Damage to property arising in ordinary course of business		**1.2**	**1.4**
Charitable donations		**19.4**	**0.3**
Supply of materials related to counteracting the COVID-19 pandemic		**48.7** [(1)]	
Other		**8.7**	**8.9**
Total		**1,005.4**	**56.4**

[(1)] on the basis of an agreement concluded with the State Treasury (see note 30.1)

The Group offsets similar transaction items in accordance with IAS 1 *Presentation of Financial Statements*, Sections 34 and 35. Material items of income and expenses charged to profit or loss are disclosed separately, as presented in the table above.

9.5 Finance income

	Note	2020	2019
Dividends:		**3.0**	**6.9**
- equity-accounted joint ventures		-	4.3
- equity investments measured at fair value through other comprehensive income	26.3	3.0	2.6
Interest:		**9.8**	**41.6**
• interest calculated using the effective interest method:		**9.7**	**41.6**
- on trade receivables	26.3	2.4	2.8
- on cash	26.3	1.3	6.4
- on deposits	26.3	5.4	32.3
- other		0.6	0.1
• other interest		**0.1**	**-**
Exchange differences:		**42.2**	**-**
- on bank borrowings	26.3	39.9	-
- on realised foreign-currency transactions in bank accounts	26.3	(7.7)	-
- on notes	26.3	2.4	-
- on cash	26.3	16.2	-
- on leases	26.3	(4.1)	-
- on investment commitments	26.3	(6.8)	-
- on trade receivables and trade payables	26.3	2.3	-
Revaluation of derivative financial instruments:		**65.7**	**15.8**
- measurement	26.3	43.1	34.8
- settlement	26.3	22.6	(19.0)
Loan commission		**4.9**	**-**
Other		**0.2**	**5.8**
Total		**125.8**	**70.1**

9.6 Finance costs

	Note	2020	2019
Interest:		**225.8**	**246.8**
• interest calculated using the effective interest method:		**168.5**	**195.2**
- on bank borrowings	26.3	82.3	100.5
- on non-bank borrowings	26.3	1.5	2.3
- on notes	26.3	8.0	11.9
- on leases	26.3	75.8	79.7
- other		0.9	0.8
• other interest		**57.3**	**51.6**
- discount on provisions for oil and natural gas extraction facilities and for site restoration, and other provisions	25.1	51.7	44.4
- cost of discount on employee benefit obligations	24.1; 24.2	4.4	5.1
- other		1.2	2.1
Exchange differences:		**-**	**46.0**
- on bank borrowings	26.3	-	31.6
- on translation of intercompany loans [(1)]	26.3	-	(1.2)
- on realised foreign-currency transactions in bank accounts	26.3	-	12.4
- on notes	26.3	-	2.4
- on deposits and other cash	26.3	-	1.1
- on leases	26.3	-	(0.4)
- on investment commitments	26.3	-	(1.2)
- on trade receivables and trade payables	26.3	-	1.6
- other		-	(0.3)
Impairment losses on shares in equity-accounted joint ventures	26.3; 14.1	**114.5**	**-**
Bank fees		**7.9**	**54.2**
Provision for disputed claims	29.1	**17.6**	**0.3**
Tax risk provision		**4.2**	**4.1**
Other		**0.5**	**0.4**
Total		**370.5**	**351.8**

[(1)] According to IAS 21 *The Effects of Changes in Foreign Exchange Rates*, foreign exchange gains and losses on intercompany foreign currency transactions are recognised in the Group's net profit or loss.

The Group offsets similar transaction items in accordance with IAS 1 *Presentation of Financial Statements*, paragraphs 34 and 35. Material items of income and expenses charged to profit or loss are disclosed separately, as presented in the table above.

9.7 (Impairment losses)/reversal of impairment losses on financial instruments

	Note	2020	2019
Impairment losses on receivables	26.3	**(4.7)**	**(36.3)**
- impairment losses		(10.5)	(51.0)
- reversal of impairment losses		5.8	14.7
(Impairment losses) on loans	26.3	**(9.4)**	**-**
Total		**(14.1)**	**(36.3)**

10. Income tax

10.1 Tax expense

	Note	2020	2019
Current tax		58.6	430.6
Deferred tax	10.3	(565.2)	108.7
Total income tax charged to net profit or loss	**10.2**	**(506.6)**	**539.3**
Tax expense recognised in other comprehensive income (net), including:		40.6	17.9
- cash flow hedging	20	42.0	19.9
- actuarial gain/(loss) relating to post-employment benefits		(1.4)	(2.0)

For the entities operating in Poland, the current and deferred portion of income tax was calculated at the rate of 19% of taxable income.

In the case of Norwegian subsidiary LOTOS Exploration and Production Norge AS, the marginal tax rate is 78% of the tax base. LOTOS Exploration and Production Norge AS's activities are subject to taxation under two parallel tax systems: the corporate income tax system (22% tax rate) and the petroleum tax system (additional tax rate of 56%).

In the case of Lithuanian subsidiaries (AB LOTOS Geonafta Group), the current and deferred portion of income tax was calculated at the rate of 15%.

10.2 Corporate income tax calculated at effective tax rate and reconciliation of profit before tax to taxable income

	2020	2019
Profit before tax	(1,652.8)	1,692.2
Income tax at 19%	**(314.0)**	**321.5**
Permanent differences:	49.7	0.1
- tax risk provision	-	5.7
- other permanent differences	49.7	(5.6)
Tax effect of impairment losses on deferred tax assets due to tax losses settled over time	36.2	-
Tax effect of share in profit of equity-accounted entities	(0.4)	(0.8)
Adjustments disclosed in current year related to tax for previous years	(0.1)	0.7
Difference resulting from the application of tax rates other than 19%:	(278.0)	217.7
- Norway	(281.1)	214.5
- Lithuania	3.0	(1.1)
- other	0.1	4.3
Other differences	-	0.1
Income tax	**(506.6)**	**539.3**
Effective tax rate	**30.7%**	**31.9%**

10.3 Deferred income tax

	Note	Statement of financial position		Change
		Dec 31 2020	Dec 31 2019	
Deferred tax assets		384.2	174.5	209.7
Deferred tax liabilities		(144.5)	(475.2)	330.7
Net deferred tax assets/(liabilities)	**10.3.1**	**239.7**	**(300.7)**	**540.4**
Exchange differences on translating deferred tax of foreign operations				(15.8)
Deferred tax recognised in other comprehensive income/(loss), net	10.1			40.6
Deferred tax expense charged to net profit or loss	**10.1**			**565.2**

Taxable temporary differences are expected to expire in 2021–2098.

As at December 31st 2020, unrecognised tax assets on account of tax losses were PLN 36.2m (December 31st 2019: PLN 0.2m) The period during which tax losses for which no tax asset has been recognised may be settled in accordance with applicable tax laws expires in 2025.

10.3.1 Deferred tax assets and liabilities

	Note	Dec 31 2019	Deferred tax recognised in net profit or loss	Deferred tax recognised in other comprehensive income/(loss)	Exchange differences on translating deferred tax of foreign operations	Dec 31 2020
Deferred tax assets						
Employee benefit obligations		70.0	9.0	1.4	0.2	80.6
Provisions for/assets related to decommissioning of oil and gas extraction facilities and site restoration		634.7	75.3	-	15.7	725.7
Difference between current tax value and carrying amount of settlements under joint operations (Norwegian fields)		7.2	3.3	-	0.3	10.8
Cash flow hedge accounting		47.8	-	(42.0)	-	5.8
Tax losses carried forward		12.7	254.5	-	-	267.2
Other		75.6	49.9	-	0.2	125.7
		848.0	**392.0**	**(40.6)**	**16.4**	**1,215.8**
Deferred tax liabilities						
Difference between current tax value and carrying amount: of property, plant and equipment and intangible assets		1,008.2	(175.4)	-	(0.6)	832.2
Difference on accounting and tax measurement of lease contracts		25.1	(8.0)			17.1
Other		115.4	10.2	-	1.2	126.8
		1,148.7	**(173.2)**	**-**	**0.6**	**976.1**
Net deferred tax assets/(liabilities)	10.3	**(300.7)**	**565.2**	**(40.6)**	**15.8**	**239.7**

11. Earnings/(loss) per share

	2020	2019
Net profit/(loss) attributable to owners of the Parent (PLNm) (A)	(1,146.2)	1,152.9
Weighted average number of shares (million) (B)	184.9	184.9
Earnings/(loss) per share (PLN) (A/B)	**(6.20)**	**6.24**

Earnings/(loss) per share for each reporting period are calculated by dividing net profit/(loss) for the reporting period by the weighted average number of shares in the reporting period.

Diluted earnings/(loss) per share are equal to basic earnings/(loss) per share as there are no instruments with a dilutive effect.

12. Dividends

As at December 31st 2020, Grupa LOTOS S.A. was restricted in its ability to distribute funds in the form of dividends pursuant to a credit facility agreement of July 2nd 2019 entered into to refinance the 10+ Programme credit facilities, discussed in Note 22.1. The agreement limits the ability of Grupa LOTOS S.A. to pay dividends and makes it conditional on achievement of certain levels of financial ratios.

On June 30th , the General Meeting of Grupa LOTOS S.A. passed a resolution on the allocation of the Company’s net profit for 2019. Under the resolution, the 2019 net profit of PLN 834.3m was applied towards:

- dividend payment – PLN 184.9m,
- statutory reserve funds – PLN 649.4m.

The dividend was paid on September 28th 2020. The pre-tax dividend per share was PLN 1.0.

13. Property, plant and equipment and intangible assets

	Note	Dec 31 2020	Dec 31 2019
Non-current assets – Refining & Marketing	**13.1**	**9,627.9**	**9,798.4**
Property, plant and equipment, including:	13.1.1	9,466.9	9,638.4
Group-owned		8,126.7	8,241.2
Right-of-use assets	13.3	1,340.2	1,397.2
Intangible assets, including:		161.0	160.0
Goodwill	13.1.2	45.6	45.6
Other intangible assets	13.1.3	115.4	114.4
Non-current assets – Exploration & Production	**13.2**	**3,236.9**	**3,962.9**
Property, plant and equipment, including:		2,923.1	3,632.4
Group-owned		2,890.5	3,576.6
Right-of-use assets	13.3	32.6	55.8
Intangible assets, including:		313.8	330.5
Goodwill		1.1	1.1
Other intangible assets		312.7	329.4
Total property, plant and equipment and intangible assets		**12,864.8**	**13,761.3**
including:			
Property, plant and equipment, including:		12,390.0	13,270.8
Group-owned		11,017.2	11,817.8
Right-of-use assets		1,372.8	1,453.0
Intangible assets		474.8	490.5

13.1 Non-current assets – Refining & Marketing

13.1.1 Property, plant and equipment of the Refining & Marketing segment

	Note	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Total	
Gross carrying amount Jan 1 2020		**1,180.1**	**5,690.2**	**6,982.5**	**1,231.8**	**349.8**	**15,434.4**	
Capital expenditure		-	-	-	21.7	403.6	425.3	(1)
Transfer from property, plant and equipment under construction		10.5	86.9	134.6	79.0	(311.0)	-	
Borrowing costs		-	-	-	-	6.1	6.1	
Leases		40.2	28.4	-	80.0	(0.4)	148.2	
Sale		(5.2)	(4.1)	(15.4)	(13.0)	(0.2)	(37.9)	
Other		-	0.2	(1.3)	(4.0)	(7.7)	(12.8)	
Gross carrying amount Dec 31 2020		**1,225.6**	**5,801.6**	**7,100.4**	**1,395.5**	**440.2**	**15,963.3**	
Accumulated depreciation Jan 1 2020		**55.9**	**2,148.7**	**2,875.0**	**577.3**	**-**	**5,656.9**	
Depreciation		37.2	215.5	321.0	179.7	-	753.4	
Leases		-	(0.3)	-	(37.8)	-	(38.1)	
Sale		(0.5)	(2.1)	(13.3)	(10.8)	-	(26.7)	
Other		-	0.3	0.7	1.5	-	2.5	
Accumulated depreciation Dec 31 2020		**92.6**	**2,362.1**	**3,183.4**	**709.9**	**-**	**6,348.0**	
Impairment losses Jan 1 2020		**19.8**	**99.3**	**12.0**	**6.9**	**1.1**	**139.1**	
Recognised	9.4	7.6	1.7	0.6	0.1	-	10.0	(2)
Used/Reversed		-	(0.1)	(0.5)	(0.1)	-	(0.7)	
Impairment losses Dec 31 2020		**27.4**	**100.9**	**12.1**	**6.9**	**1.1**	**148.4**	
Net carrying amount Dec 31 2020		**1,105.6**	**3,338.6**	**3,904.9**	**678.7**	**439.1**	**9,466.9**	
Gross carrying amount Jan 1 2019		**1,144.8**	**4,916.6**	**5,842.8**	**1,050.5**	**1,969.8**	**14,924.5**	
Capital expenditure		-	-	-	10.6	292.6	303.2	(1)
Transfer from property, plant and equipment under construction		0.1	774.2	1,154.9	47.7	(1,976.9)	-	
Borrowing costs		-	-	-	-	71.0	71.0	
Leases		35.3	1.9	-	141.3	0.4	178.9	
Sale		(0.1)	(2.5)	(14.1)	(15.5)	(0.3)	(32.5)	
Other		-	-	(1.1)	(2.8)	(6.8)	(10.7)	
Gross carrying amount Dec 31 2019		**1,180.1**	**5,690.2**	**6,982.5**	**1,231.8**	**349.8**	**15,434.4**	
Accumulated depreciation Jan 1 2019		**19.4**	**1,952.7**	**2,619.1**	**448.7**	**-**	**5,039.9**	
Depreciation		36.5	197.3	269.9	156.7	-	660.4	
Leases		-	-	-	(13.3)	-	(13.3)	
Sale		-	(1.3)	(14.2)	(15.3)	-	(30.8)	
Other		-	-	0.2	0.5	-	0.7	
Accumulated depreciation Dec 31 2019		**55.9**	**2,148.7**	**2,875.0**	**577.3**	**-**	**5,656.9**	
Impairment losses Jan 1 2019		**1.5**	**97.9**	**10.9**	**6.9**	**1.0**	**118.2**	
Recognised	9.3	18.3	2.9	1.6	-	0.1	22.9	(2)
Used/Reversed		-	(1.5)	(0.5)	-	-	(2.0)	
Impairment losses Dec 31 2019		**19.8**	**99.3**	**12.0**	**6.9**	**1.1**	**139.1**	
Net carrying amount Dec 31 2019		**1,104.4**	**3,442.2**	**4,095.5**	**647.6**	**348.7**	**9,638.4**	

(1) The capital expenditure was spent mainly on construction of a delayed coking unit and related EFRA infrastructure (2020: PLN 64.3m, 2019: PLN 70.1m), service station network roll-out (2020: PLN 140.5m, 2019: PLN 95.0m), construction of a railway loading unit (2020: PLN 49.2m, 2019: PLN 20.1m), purchase of rolling stock (2020: PLN 54.3m, 2019: PLN 20.8m), and purchase of spare parts (2020: PLN 21.7m, 2019: PLN 10.6m),

(2) Including impairment losses on the service station chain (2020: PLN 8.8m; 2019: PLN 21.2m).

Impairment losses on service stations

In 2020, LOTOS Paliwa Sp. z o.o. recognised an impairment loss on service station assets totalling PLN 8.8m, see Note 9.4 (2019: PLN 21.2m, see Note 9.3). The recoverable amount of property, plant and equipment related to the service station network was determined based on the value in use of each station, calculated with the discounted cash flow method. Future cash flows were calculated based on five-year cash-flow projections, prepared using the approved budget for 2020 and the cash inflow and outflow plan for subsequent years, based on the long-term development strategy until 2020. The residual value for the discounted cash flows was calculated using the growing perpetuity formula. LOTOS Paliwa Sp. z o.o.'s net weighted average cost of capital (WACC) based on the company's financing structure was assumed at 5.65% (2019: 7.69%).

Calculation of the value in use of cash-generating units is most sensitive to the following variables:

- Gross margin, which depends on average values of unit margins for the budget period. In the first year of the budget period, the unit fuel margin has stayed close to the 2020 level, taking into account micro-markets of the relevant service stations. The level of the unit margin on fuel is planned to cover the operating costs and their possible increase in the financial year. The level of the unit margin in subsequent years reflects macroeconomic inflation indices applied in the model. The unit margin on non-fuel sales adopted for the budget period is on average 5% higher than in the year preceding the budget period. A gradual return to pre-COVID-19 levels is assumed. The unit non-fuel margin is expected to rise in subsequent years reflecting a change in the product mix, with a growing share of high-margin products, mainly food and beverage, in total sales.
- Discount rate which reflects the expected rate of return on assets at a specific risk level, after taking into account the marginal tax rate of 19% (the rate is calculated in accordance with the WACC and CAPM methodologies using such inputs as the median of 10-year treasury bond quotations, market risk premium (MRP), country risk premium (CRP), and the market structure of financing).
- Volumes based on the dynamics of fuel consumption growth in the retail segment and on business analysis taking into account the nature of micro-markets at the analysed locations.
- Market share in the budget period (an increase in the market share was assumed).
- The growth rate used to estimate cash flows outside the budget period (0.0%).

13.1.2 Goodwill of the Refining & Marketing segment

Goodwill is allocated to the following groups of cash-generating units presented in the table below.

	Dec 31 2020	Dec 31 2019
Goodwill arising on the acquisition of an organised part of business by LOTOS Paliwa Sp. z o.o.:		
- wholesale of LPG	10.0	10.0
- service stations chains (ESSO, Slovnaft Polska)	33.7	33.7
Total	**43.7**	**43.7**
Goodwill arising on acquisition of other entities	1.9	1.9
Total goodwill	**45.6**	**45.6**

As at December 31st 2020 and as at December 31st 2019, impairment tests of individual cash-generating units to which goodwill was allocated did not reveal any impairment indicators.

The Group determines the recoverable amount of cash-generating units based on their respective values in use, calculated on the basis of a five-year cash flow projection. The residual value for the discounted cash flows was calculated using the growing perpetuity formula. The discount rate adopted for the calculation reflects net WACC of 5.65% (2019: 7.69%). It was assumed that the cash flow rate will remain constant after the forecast period, at 0.0%.

The most material factors affecting the estimated values in use of cash-generating units were: gross margin, discount rate, volumes forecast, projected market shares in the budget period and estimated growth rate beyond the forecast period.

The Group believes that no reasonably probable change in the key parameters identified above would result in goodwill impairment.

13.1.3 Other intangible assets of the Refining & Marketing segment

	Patents, trademarks and licences	Other	Intangible assets under development	Total
Gross carrying amount Jan 1 2020	**231.3**	**29.6**	**8.1**	**269.0**
Capital expenditure	-	16.5	9.4	25.9
Transfer from intangible assets under development	11.4	0.5	(11.9)	-
Borrowing costs	-	-	0.1	0.1
Sale	(0.2)	(0.2)	-	(0.4)
Used	-	(10.2) [1]	-	(10.2)
Other	-	(0.3)	-	(0.3)
Gross carrying amount Dec 31 2020	**242.5**	**35.9**	**5.7**	**284.1**
Accumulated amortisation Jan 1 2020	**139.2**	**15.4**	**-**	**154.6**
Amortisation	13.2	1.2	-	14.4
Sale	(0.1)	(0.2)	-	(0.3)
Accumulated amortisation Dec 31 2020	**152.3**	**16.4**	**-**	**168.7**
Impairment losses Jan 1 2020	**-**	**-**	**-**	**-**
Recognised	-	-	-	-
Used/Reversed	-	-	-	-
Impairment losses Dec 31 2020	**-**	**-**	**-**	**-**
Net carrying amount Dec 31 2020	**90.2**	**19.5**	**5.7**	**115.4**
Gross carrying amount Jan 1 2019	**212.7**	**31.8**	**12.6**	**257.1**
Capital expenditure	-	0.1	20.5	20.6
Transfer from intangible assets under development	24.2	1.1	(25.3)	-
Sale	(6.2)	(3.9)	-	(10.1)
Other	0.6	0.5	0.3	1.4
Gross carrying amount Dec 31 2019	**231.3**	**29.6**	**8.1**	**269.0**
Accumulated amortisation Jan 1 2019	**133.2**	**17.6**	**-**	**150.8**
Amortisation	11.6	1.1	-	12.7
Sale	(6.2)	(3.9)	-	(10.1)
Other	0.6	0.6	-	1.2
Accumulated amortisation Dec 31 2019	**139.2**	**15.4**	**-**	**154.6**
Impairment losses Jan 1 2019	**-**	**-**	**-**	**-**
Recognised	-	-	-	-
Used/Reversed	-	-	-	-
Impairment losses Dec 31 2019	**-**	**-**	**-**	**-**
Net carrying amount Dec 31 2019	**92.1**	**14.2**	**8.1**	**114.4**

[1] Carbon dioxide (CO_2) emission allowances

Intangible assets of the Refining & Marketing segment include licences relating to technological processes, including licences for technologies used in the refinery, licences for fuel production, storage and trading, software licences, patents, trademarks and acquired CO_2 emission allowances.

13.2 Non-current assets – Exploration & Production

	Note	Dec 31 2020	Dec 31 2019
Oil and gas exploration and evaluation assets	**13.2.1**	**328.3**	**327.5**
Property, plant and equipment		50.8	64.3
Intangible assets		277.5	263.2
Oil and gas development and production assets	**13.2.2**	**2,602.4**	**3,283.6**
Property, plant and equipment		2,568.7	3,218.7
Intangible assets		33.7	64.9
Other non-current assets of the Exploration & Production segment	**13.2.3**	**306.2**	**351.8**
Property, plant and equipment		303.6	349.4
Intangible assets		2.6	2.4
Total non-current assets of the Exploration & Production segment		**3,236.9**	**3,962.9**
including:			
Property, plant and equipment		2,923.1	3,632.4
Intangible assets		313.8	330.5

13.2.1 Oil and gas exploration and evaluation assets

	Note	Property, plant and equipment classified as exploration and evaluation assets	Intangible assets classified as exploration and evaluation assets			Total
		Poland	Poland	Norway	Lithuania	
Gross carrying amount Jan 1 2020		**176.2**	**14.1**	**281.2**	**10.2**	**481.7**
Capital expenditure		2.3	-	9.7	-	12.0
Exchange differences on translating foreign operations		-	-	5.9	0.9	6.8
Gross carrying amount Dec 31 2020		**178.5**	**14.1**	**296.8**	**11.1**	**500.5**
Accumulated depreciation/amortisation Jan 1 2020		**-**	**11.1**	**-**	**-**	**11.1**
Depreciation and amortisation		-	0.9	-	-	0.9
Accumulated depreciation/amortisation Dec 31 2020		**-**	**12.0**	**-**	**-**	**12.0**
Impairment losses Jan 1 2020		**111.9**	**-**	**21.0**	**10.2**	**143.1**
Recognised	9.4	15.8	-	-	-	15.8
Exchange differences on translating foreign operations		-	-	0.4	0.9	1.3
Used/Reversed		-	-	-	-	-
Impairment losses Dec 31 2020		**127.7**	**-**	**21.4**	**11.1**	**160.2**
Net carrying amount Dec 31 2020		**50.8**	**2.1**	**275.4**	**-**	**328.3**
Gross carrying amount Jan 1 2019		**173.9**	**13.7**	**265.2**	**10.3**	**463.1**
Capital expenditure		2.3	0.4	57.7	-	60.4
Exchange differences on translating foreign operations		-	-	(0.5)	(0.1)	(0.6)
Write-off of abandonment expenditure	9.4	-	-	(41.2) [1]	-	(41.2)
Gross carrying amount Dec 31 2019		**176.2**	**14.1**	**281.2**	**10.2**	**481.7**
Accumulated depreciation/amortisation Jan 1 2019		**-**	**10.3**	**-**	**-**	**10.3**
Depreciation and amortisation		-	0.8	-	-	0.8
Accumulated depreciation/amortisation Dec 31 2019		**-**	**11.1**	**-**	**-**	**11.1**
Impairment losses Jan 1 2019		**111.9**	**-**	**17.2**	**10.3**	**139.4**
Recognised	9.3	-	-	3.8	-	3.8
Exchange differences on translating foreign operations		-	-	-	(0.1)	(0.1)
Used/Reversed		-	-	-	-	-
Impairment losses Dec 31 2019		**111.9**	**-**	**21.0**	**10.2**	**143.1**
Net carrying amount Dec 31 2019		**64.3**	**3.0**	**260.2**	**-**	**327.5**

[1] Write-offs of drilling costs on PL910, PL871, and PL866 licences.

Property, plant and equipment are classified as exploration and evaluation assets until the technical feasibility and commercial viability of extracting the discovered resources are demonstrated.

13.2.2 Oil and gas development and production assets

		Oil and gas development assets			Oil and gas production assets				Total
	Note	Poland	Norway	Total	Poland	Norway	Lithuania	Total	
Gross carrying amount Jan 1 2020		**-**	**1,964.9**	**1,964.9**	**2,213.8**	**1,884.8**	**643.5**	**4,742.1**	**6,707.0**
Capital expenditure		-	228.8	228.8	103.2	16.9	0.2	120.3	349.1
Exchange differences on translating foreign operations		-	(5.1)	(5.1)	-	35.3	53.6	88.9	83.8
Estimated costs of decommissioning of oil and gas extraction facilities		-	26.1	26.1	73.5	(10.4)	0.5	63.6	89.7
Borrowing costs		-	-	-	8.0	-	-	8.0	8.0
Leases	13.3	-	-	-	-	-	0.1	0.1	0.1
Sale		-	(942.9) [1]	(942.9)	(4.3)	-	(0.1)	(4.4)	(947.3)
Other		-	9.6	9.6	-	-	-	-	9.6
Gross carrying amount Dec 31 2020		**-**	**1,281.4**	**1,281.4**	**2,394.2**	**1,926.6**	**697.8**	**5,018.6**	**6,300.0**
Accumulated depreciation/amortisation Jan 1 2020		**-**	**-**	**-**	**574.0**	**1,183.0**	**325.3**	**2,082.3**	**2,082.3**
Depreciation and amortisation		-	-	-	52.7	195.4	10.5	258.6	258.6
Exchange differences on translating foreign operations		-	-	-	-	33.8	27.4	61.2	61.2
Sale		-	-	-	(2.9)	-	(0.1)	(3.0)	(3.0)
Accumulated depreciation/amortisation Dec 31 2020		**-**	**-**	**-**	**623.8**	**1,412.2**	**363.1**	**2,399.1**	**2,399.1**
Impairment losses Jan 1 2020		**-**	**956.8**	**956.8**	**3.7**	**144.8**	**235.8**	**384.3**	**1,341.1**
Recognised	9.4	-	460.6 [2]	460.6	253.3 [3]	155.0 [5]	29.1 [7]	437.4	898.0
Exchange differences on translating foreign operations		-	(11.9)	(11.9)	-	11.2	20.5	31.7	19.8
Used/Reversed		-	(942.9) [1]	(942.9)	(0.9) [4]	(16.6) [6]	-	(17.5)	(960.4)
Impairment losses Dec 31 2020		**-**	**462.6**	**462.6**	**256.1**	**294.4**	**285.4**	**835.9**	**1,298.5**
Net carrying amount Dec 31 2020		**-**	**818.8**	**818.8**	**1,514.3**	**220.0**	**49.3**	**1,783.6**	**2,602.4**

(1) Decommissioning of YME assets
(2) YME field
(3) Fields: B-3, B-8
(4) B-3 field (see note 9.4)
(5) Utgard field
(6) Vale field (see note 9.4)
(7) Fields: Nausodis, Genciai, Vėžaičiai and Girkaliai

(PLNm)

	Note	Oil and gas development assets			Oil and gas production assets				Total
		Poland	Norway	Total	Poland	Norway	Lithuania	Total	
Gross carrying amount Jan 1 2019		**-**	**1,996.8**	**1,996.8**	**1,983.4**	**1,458.8**	**646.2**	**4,088.4**	**6,085.2**
Capital expenditure		-	325.5	325.5	186.2	34.3	-	220.5	546.0
Exchange differences on translating foreign operations		-	(2.2)	(2.2)	-	(6.0)	(6.4)	(12.4)	(14.6)
Estimated costs of decommissioning of oil and gas extraction facilities		-	12.0	12.0	32.5	30.5	1.1	64.1	76.1
Reclassification of development assets to production assets		-	(367.2)	(367.2)	-	367.2	-	367.2	-
Borrowing costs		-	-	-	12.0	-	-	12.0	12.0
Leases	13.3	-	-	-	(0.3)	-	0.4	0.1	0.1
Other		-	-	-	-	-	2.2	2.2	2.2
Gross carrying amount Dec 31 2019		**-**	**1,964.9**	**1,964.9**	**2,213.8**	**1,884.8**	**643.5**	**4,742.1**	**6,707.0**
Accumulated depreciation/amortisation Jan 1 2019		-	**-**	**-**	**535.8**	**1,063.3**	**315.7**	**1,914.8**	**1,914.8**
Depreciation and amortisation		-	-	-	38.2	122.0	13.0	173.2	173.2
Exchange differences on translating foreign operations		-	-	-	-	(2.3)	(3.1)	(5.4)	(5.4)
Other		-	-	-	-	-	(0.3)	(0.3)	(0.3)
Accumulated depreciation/amortisation Dec 31 2019		**-**	**-**	**-**	**574.0**	**1,183.0**	**325.3**	**2,082.3**	**2,082.3**
Impairment losses Jan 1 2019		**-**	**1,124.3**	**1,124.3**	**0.5**	**83.1**	**229.0**	**312.6**	**1,436.9**
Recognised	9.3	-	-	-	3.2 [2]	-	8.9 [3]	12.1	12.1
Exchange differences on translating foreign operations		-	0.4	0.4	-	(0.8)	(2.1)	(2.9)	(2.5)
Reclassification of development assets to production assets		-	(62.5)	(62.5)	-	62.5	-	62.5	-
Used/Reversed	9.3	-	(105.4) [1]	(105.4)	-	-	-	-	(105.4)
Impairment losses Dec 31 2019		**-**	**956.8**	**956.8**	**3.7**	**144.8**	**235.8**	**384.3**	**1,341.1**
Net carrying amount Dec 31 2019		**-**	**1,008.1**	**1,008.1**	**1,636.1**	**557.0**	**82.4**	**2,275.5**	**3,283.6**

(1) YME field
(2) B-8 field
(3) Fields: Vėžaičiai, Girkaliai

Impairment testing of assets in the B-8 field in the Baltic Sea

As at December 31st 2020 and December 31st 2019, the Group tested the B-8 field assets for impairment.

Key assumptions underlying computation of the recoverable amount of the tested assets:

- the cash flow projection period was assumed to equal the assets' planned life;
- the discount rate was assumed to equal the weighted average cost, at 7.26% (2019: 7.58%) after taxation at the 19% marginal tax rate;
- production volumes in line with current forecasts, taking into account current geological data;
- sales volumes, capital expenditure, operating expenses and field decommissioning costs were assumed in line with current projections for the B-8 field;
- the price assumptions described below.

The following price assumptions were adopted for the estimates as part of the impairment test as at December 31st 2020:
- <u>for crude oil in USD/bbl (per barrel of oil equivalent):</u>
  - 2021–2025 – prices in line with price assumptions in available market scenarios;
  - 2026 and beyond − prices stable in the long term, on par with the 2025 level, adjusted for inflation.

The following assumptions were adopted for the estimates as part of the impairment test as at December 31st 2019:
- <u>for crude oil in USD/bbl (per barrel of oil equivalent):</u>
  - 2020–2023 – prices in line with the price assumptions for the available market scenarios,
  - 2024 and beyond − prices stable in the long term, on par with the 2023 level, adjusted for inflation.

In the first half of 2020, impairment losses were recognised on B8 oil and gas production assets of PLN 135.0m (see Note 9.4). The key reason for recognising the impairment losses was the macroeconomic environment created by the global Covid-19 pandemic, which caused a significant deterioration in key calculation parameters, such as Brent oil prices and US dollar exchange rates.

The tests carried out as at December 31st 2020 showed no need to recognise further impairment losses.

The impairment tests carried out as at December 31st 2019 showed the need to recognise a PLN 3.2m impairment loss on the field assets (see Note 9.3).

Due to significant market volatility, in particular with respect to crude oil prices, the adopted assumptions may be subject to justifiable changes, and such changes may necessitate a revision of the carrying amounts of the field's assets in the future. Therefore, the Group points to a number of uncertainties as to the recoverable amount of the assets:

- volatility of market prices of crude oil,
- estimates of investment expenditure related to contracts for which no contractor has yet been selected,
- amount of site restoration commitments,
- volatility of the PLN/USD exchange rate,
- discount rates.

To determine the effect of key factors on the test results, the Group carried out an analysis of sensitivity to a -15%/+15% change in oil and gas prices, -15%/+15% change in production volumes, -15%/+15% change in the USD/PLN exchange rate, and -0.5pp/+0.5pp change in the discount rate.

Below is presented an estimated amount of recognisable (-) and reversible (+) impairment losses on the B-8 field assets in the three months ended December 31 2020, with the key assumptions modified compared with those originally applied:

Factor	Change	Estimated amount of impairment losses (PLNm)	
Crude oil and gas prices	+/- 15%	-	-244.4
Production volume	+/- 15%	-	-197.0
USD/PLN exchange rate	+/- 15%	-	-238.8
Discount rate	+/- 0.5 pp	-	-

(This is a translation of a document originally issued in Polish)

Impairment testing of assets in the B-3 field in the Baltic Sea

As at December 31st 2020 and December 31st 2019, the Group tested the B-3 field assets for impairment.

Key assumptions underlying computation of the recoverable amount of the tested assets:

- the cash flow projection period was assumed to equal the assets' planned life;
- the discount rate was assumed to equal the weighted average cost of capital after taxation at the marginal tax rate of 19% – at 7.56% (2019: 7.58%);
- production volumes in line with current forecasts, taking into account current geological data;
- sales volumes, capital expenditure and operating expenses were assumed in line with current projections.

The following price assumptions were adopted for the estimates as part of the impairment test as at December 31st 2020:
- for crude oil in USD/bbl (per barrel of oil equivalent):

- 2021–2025 – prices in line with price assumptions in available market scenarios;
- 2026 and beyond − prices stable in the long term, on par with the 2025 level, adjusted for inflation.

The following assumptions were adopted for the estimates as part of the impairment test as at December 31st 2019:
- for crude oil in USD/bbl (per barrel of oil equivalent):

- 2020–2023 – prices in line with the price assumptions for the available market scenarios,
- 2024 and beyond − prices stable in the long term, on par with the 2023 level, adjusted for inflation.

In the first half of 2020, impairment losses were recognised on B3 oil and gas production assets of PLN 118.3m (see Note 9.4). The key reason for recognising the impairment losses was the macroeconomic environment created by the global Covid-19 pandemic, which caused a significant deterioration in key calculation parameters, such as Brent oil prices and US dollar exchange rates.

The tests carried out as at December 31st 2020 showed no need to recognise further impairment losses.

The impairment tests carried out as at December 31st 2019 showed no need to recognise impairment losses on the field assets.

Due to the significant market volatility, and given the prevailing uncertainty as well as sensitivity of judgements and estimates (in particular with respect to crude oil prices), the adopted assumptions may be subject to reasonable changes, and such changes may necessitate a revision of the carrying amounts of the field assets in the future. The Group points to a number of uncertainties as to the recoverable amount of the assets:

- volatility of market prices of crude oil,
- estimates of investment expenditure related to contracts for which no contractor has yet been selected,
- volatility of the PLN/USD exchange rate,
- discount rates.

To determine the effect of key factors on the test results, the Group carried out an analysis of sensitivity to a -15%/+15% change in oil and gas prices, -15%/+15% change in production volumes, -15%/+15% change in the USD/PLN exchange rate, and -0.5pp/+0.5pp change in the discount rate.

Below is presented an estimated amount of recognisable (-) and reversible (+) impairment losses on the B-3 field assets in the three months ended December 31 2020, with the key assumptions modified compared with those originally applied:

Factor	Change	Estimated amount of impairment losses (PLNm)	
Crude oil and gas prices	+/- 15%	-	-107.1
Production volume	+/- 15%	-	-104.9
USD/PLN exchange rate	+/- 15%	-	-104.6
Discount rate	+/- 0.5 pp	-	-

Progress of the YME field development project in Norway

In 2020, another risk of delay on the YME field development project was identified in addition to the risk of delay in the scope of work attributable to the main subcontractor Aker Solutions after COVID-19 was declared a pandemic. Given the occurrence of force majeure and change in law affecting the contract performance, the operator assumed various "First Oil' scenarios, depending on how the situation would develop. The Group identified significant risks to the work schedule related, among other things, to delays in the onshore completion work. The base case for "First Oil' assumed by the Group is the fourth quarter of 2021. The project reached the significant milestone of onshore completion on December 29th 2020, with the platform towed to sea and installed at the field on December 31st 2020. Key existing technical risks involved: the launch of offshore production, work on the subsea infrastructure and well head module, maintenance and repair work, and weather windows enabling work to be performed at sea in winter.

Accordingly, the Group tested the YME field (in the development phase) for impairment. The test was based on the following assumptions, equivalent to those adopted for oil and gas production assets, as at December 31st 2020:

- the cash flow projection period was assumed to equal the assets' planned life;
- the discount rate was assumed to equal the weighted average cost, at 6.70% (2019: 6.19%) after taxation with the 78% marginal tax rate (applicable in Norway);
- production and sales volumes, capital expenditure, operating expenses and field decommissioning costs were assumed as projected by the field operator.

The following price assumptions were adopted for the estimates as part of the impairment test as at December 31st 2020:

- <u>for crude oil in USD/bbl (per barrel of oil equivalent):</u>
  - 2021–2025 – prices in line with price assumptions in available market scenarios;
  - 2026 and beyond − prices stable in the long term, on par with the 2025 level, adjusted for inflation.

The following assumptions were adopted for the estimates as part of the impairment test as at December 31st 2019:

- <u>for crude oil in USD/bbl (per barrel of oil equivalent):</u>
  - 2020–2023 – prices in line with the price assumptions for the available market scenarios,
  - 2024 and beyond − prices stable in the long term, on par with the 2023 level, adjusted for inflation.

In connection with risks inherent in the field development phase (such as geological, technical, schedule and operational risks), the Group adopted, in accordance with IAS 36 *Impairment of Assets*, a conservative approach to calculating the recoverable amount of the YME project, taking account of additional costs resulting from delays due to force majeure and change of law, based on analysis of contracts with contractors that could be identified at that stage.

In June 2020, a temporary aid package was introduced in Norway for oil & gas sector operators, comprising tax changes to be effective in 2020–2021. The amendments provide for the possibility of faster amortisation of capital expenditure for tax purposes in 2020–2021, additional tax relief in the form of an increased uplift rate, as well as the possibility of receiving tax returns if tax losses are generated in 2020–2021. The overriding objective of the changes to the tax regime is to protect the current financial liquidity of entities engaging in exploration and production activities on the Norwegian Continental Shelf. The additional tax reliefs will also apply to projects approved for development on the NCS before the end of 2023.

Verification of the recoverable amount as at December 31st 2020 revealed the need to recognise impairment losses on the YME field totalling PLN 460.6m (see Note 9.4).

Remeasurement of the recoverable amount performed as at December 31st 2019 showed no need to recognise an impairment loss on the YME field. As a result of the impairment test, the Group recognised a PLN 105.4m reversal of impairment losses recognised in previous years (see Note 9.3).

Due to significant market volatility, in particular with respect to oil and gas prices, the adopted assumptions may be subject to reasonable changes, and such changes may necessitate a revision of the carrying amounts of the YME field's assets in the future.

To determine the effect of key factors on the test results, the Group carried out an analysis of sensitivity to a -15%/+15% change in oil and gas prices, -15%/+15% change in production volumes, -15%/+15% change in the USD/NOK exchange rate, and -0.5pp/+ 0.5pp change in the discount rate.

Below are presented estimated amounts of impairment losses recognisable (-) and reversible (+) in the three months ended December 31st 2020 with the key assumptions modified compared with those used in the test:

Factor	Change	Recognition and reversal of impairment losses – estimated amount (PLNm)	
Crude oil and gas prices	+/- 15%	+185.5	-290.2
Production volume	+/- 15%	+176.9	-281.6
USD/NOK exchange rate	+/- 15%	+176.9	-281.6
Discount rate	+/- 0.5 pp	-74.3	-28.6

Impairment testing of the production assets of the offshore gas and condensate production facility in the Heimdal field and of the Sleipner and Utgard gas field in Norway

In 2020, the Group tested for impairment each cash-generating unit's production assets for the producing Heimdal fields (Atla, Vale, Skirne, Heimdal) and the Sleipner and Utgard fields. The tests demonstrated the need to recognise impairment losses on the Utgard field of PLN 155m (see Note 9.4). This was due to a strong decline in recovery rates from the field, caused by a considerable break-through of water into the production wells and the resulting technical constraints on the processing of crude oil on the Sleipner platform, to which Utgard is tied back. In the final months of 2020, production from both wells was largely reduced, which led the operator to conduct further intervention activities in late December 2020 and early January 2021. The results of these activities are being analysed, with production having stabilised. As at December 31st 2020, an impairment loss of PLN 16.6m on the Vale field was reversed (see Note 9.4) due to an extension of the production horizon.

As at December 31st 2019, the Group tested for impairment the production assets of each centre generating cash flows from the producing Heimdal fields (Atla, Vale, Skirne, Heimdal) and the Sleipner and Utgard fields. The tests revealed no need to recognise impairment losses on those assets.

As part of impairment testing of the Norwegian production assets, their recoverable amount was determined as their value in use estimated using the discounted future cash flows method.

Key assumptions underlying computation of the recoverable amount of the tested assets:

- the cash flow projection period was assumed to equal the assets' planned life;
- the discount rate was assumed to equal the weighted average cost, at 6.70% (2019: 6.19%) after taxation with the 78% marginal tax rate (applicable in Norway);
- production and sales volumes, capital expenditure, operating expenses and field decommissioning costs were assumed as projected by the field operators.

The following price assumptions were adopted for the purposes of the impairment tests as at December 31st 2020:

- <u>for crude oil in USD/bbl (per barrel):</u>
  - 2021–2025 – prices in line with price assumptions in available market scenarios;
  - 2026 and beyond − prices stable in the long term, on par with the 2025 level, adjusted for inflation;

- <u>for natural gas in USD/boe (per barrel of oil equivalent):</u>
  - 2021–2025 − prices in line with the price assumptions of available market scenarios, and in 2026 and beyond − prices stable in the long term, on par with the 2025 level, adjusted for inflation.

The following assumptions were adopted for the estimates as part of the impairment tests as at December 31st 2019:

- <u>for crude oil in USD/bbl (per barrel):</u>
  - 2020–2023 – prices in line with the price assumptions for the available market scenarios,
  - 2024 and beyond − prices stable in the long term, on par with the 2023 level, adjusted for inflation;

- <u>for natural gas in USD/boe (per barrel of oil equivalent):</u>
  - 2020–2023 − prices in line with the price assumptions of available market scenarios, and in 2024 and beyond − prices remaining stable in the long term on par with the 2023 level, adjusted for inflation.

Due to significant market volatility, in particular with respect to oil and gas prices, the adopted assumptions may be subject to justifiable changes, and such changes may necessitate a revision of the carrying amounts of the LOTOS E&P Norge's assets in the future.

To determine the effect of key factors on the test results, the Group carried out an analysis of sensitivity to a -15%/+15% change in oil and gas prices, -15%/+15% change in production volumes, -15%/+15% change in the USD/NOK exchange rate, and -0.5pp/+ 0.5pp change in the discount rate .

Below are presented estimated amounts of recognised (-) and reversed (+) impairment losses on the tested Heimdal, Sleipner and Utgard assets in the three months ended December 31 2020, with the key assumptions modified compared with those originally applied:

Factor	Change	Recognition and reversal of impairment losses – estimated amount (PLNm)	
Crude oil and gas prices	+/- 15%	+51.0	+5.2
Production volume	+/- 15%	+52.7	+3.5
USD/NOK exchange rate	+/- 15%	+50.5	+5.7
Discount rate	+/- 0.5 pp	+27.5	+28.7

Impairment testing of onshore oil and gas extraction facilities in Lithuania

As a result of impairment tests performed in 2020 for the resources and production infrastructure in Lithuania, the Group recognised impairment losses of PLN 29.1m on the capital expenditure associated with the Lithuanian licences (see Note 9.4).

As a result of impairment tests performed for the resources and production infrastructure in Lithuania, as at December 31st 2019 the Group recognised an aggregate impairment loss of PLN 8.9m on investment associated with the Vėžaičiai and Girkaliai licences (see Note 9.3).

The Group determines the recoverable amount of the tested assets as their value in use measured using the discounted future cash flows method.

Key assumptions underlying computation of the recoverable amount of the tested assets in Lithuania:

- the cash flow projection period was assumed to equal the assets' planned life;
- the discount rate was assumed to equal the weighted average cost, at 6.95% (2019: 6.41%);
- production volumes were assumed to be in line with a competent person report prepared by Miller & Lents based on the most recent available geological information;
- capital expenditure was assumed to match the projected production volumes.

The following crude oil price assumptions (USD/bbl) were adopted for the purposes of the estimates made in 2020:
- 2020–2025 – prices in line with the price assumptions of available market scenarios;
- 2026 and beyond − prices stable in the long term, on par with the 2025 level, adjusted for inflation.

Crude oil price assumptions (USD/bbl) adopted for the purposes of the estimates as at December 31st 2019:
- 2020–2023 – prices in line with the price assumptions for the available market scenarios,
- 2024 and beyond − prices stable in the long term, on par with the 2023 level, adjusted for inflation.

Due to significant market volatility, in particular with respect to crude oil prices, the adopted assumptions may be subject to reasonable changes, and such changes may necessitate a revision of the carrying amounts of the assets in the future.

To determine the effect of key factors on the test results, the Group carried out an analysis of sensitivity to a -15%/+15% change in oil prices, -15%/+15% change in production volumes, -15%/+15% change in the USD/EUR exchange rate, and -0.5%/+0.5% change in the discount rate.

Below are presented estimated amounts of recognised (-) and reversed (+) impairment losses on the Lithuanian assets in the three months ended December 31 2020, with the key assumptions modified:

Factor	Change	Recognition and reversal of impairment losses – estimated amount (PLNm)	
Crude oil and gas prices	+/- 15%	+17.8	-21.8
Production volume	+/- 15%	+12.1	-19.4
USD/EUR exchange rate	+/- 15%	+15.7	-21.2
Discount rate	+/- 0.5 pp	-9.6	-7.0

13.2.2.1 Assets related to future costs of decommissioning of oil and gas extraction facilities

As part of its development and production assets, the Group discloses assets related to future costs of decommissioning of oil and gas extraction facilities depreciated with the units-of-production method. These assets are recognised along with the recognition and remeasurement of provisions for decommissioning of oil and gas extraction facilities.

	Oil and gas development assets	Oil and gas production assets				Total
	Norway	Poland	Norway	Lithuania	Total	
Gross carrying amount Jan 1 2020	**131.6**	**168.6**	**726.7**	**4.1**	**899.4**	**1,031.0**
Estimated costs of decommissioning of oil and gas extraction facilities	26.1	73.5	(10.4)	0.5	63.6	89.7
Exchange differences on translating foreign operations	4.0	-	12.9	0.3	13.2	17.2
Gross carrying amount Dec 31 2020	**161.7**	**242.1**	**729.2**	**4.9**	**976.2**	**1,137.9**
Accumulated depreciation/amortisation Jan 1 2020	**-**	**85.7**	**538.5**	**2.1**	**626.3**	**626.3**
Depreciation and amortisation	-	6.2	48.2	0.3	54.7	54.7
Exchange differences on translating foreign operations	-	-	13.0	0.2	13.2	13.2
Accumulated depreciation/amortisation Dec 31 2020	**-**	**91.9**	**599.7**	**2.6**	**694.2**	**694.2**
Impairment losses Jan 1 2020	**119.8**	**-**	**65.3**	**-**	**65.3**	**185.1**
Recognised	-	-	8.3	-	8.3	8.3
Exchange differences on translating foreign operations	2.2	-	1.6	-	1.6	3.8
Used/Reversed	-	-	(2.5)	-	(2.5)	(2.5)
Impairment losses Dec 31 2020	**122.0**	**-**	**72.7**	**-**	**72.7**	**194.7**
Net carrying amount Dec 31 2020	**39.7**	**150.2**	**56.8**	**2.3**	**209.3**	**249.0**
Gross carrying amount Jan 1 2019	**119.9**	**136.0**	**697.1**	**3.0**	**836.1**	**956.0**
Estimated costs of decommissioning of oil and gas extraction facilities	12.0	32.5	30.5	1.1	64.1	76.1
Exchange differences on translating foreign operations	(0.3)	-	(0.9)	-	(0.9)	(1.2)
Other	-	0.1	-	-	0.1	0.1
Gross carrying amount Dec 31 2019	**131.6**	**168.6**	**726.7**	**4.1**	**899.4**	**1,031.0**
Accumulated depreciation/amortisation Jan 1 2019	**-**	**82.8**	**507.7**	**1.5**	**592.0**	**592.0**
Depreciation and amortisation	-	2.9	31.5	0.5	34.9	34.9
Exchange differences on translating foreign operations	-	-	(0.7)	0.1	(0.6)	(0.6)
Accumulated depreciation/amortisation Dec 31 2019	**-**	**85.7**	**538.5**	**2.1**	**626.3**	**626.3**
Impairment losses Jan 1 2019	**119.9**	**-**	**65.4**	**-**	**65.4**	**185.3**
Recognised	-	-	-	-	-	-
Exchange differences on translating foreign operations	(0.1)	-	(0.1)	-	(0.1)	(0.2)
Used/Reversed	-	-	-	-	-	-
Impairment losses Dec 31 2019	**119.8**	**-**	**65.3**	**-**	**65.3**	**185.1**
Net carrying amount Dec 31 2019	**11.8**	**82.9**	**122.9**	**2.0**	**207.8**	**219.6**

13.2.3 Other non-current assets of the Exploration & Production segment

	Note	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Intangible assets	Total
Gross carrying amount Jan 1 2020		**14.3**	**59.7**	**74.1**	**602.4**	**23.7**	**15.2**	**789.4**
Capital expenditure		-	-	0.3	6.4	7.9	1.1	15.7
Transfer from property, plant and equipment under construction		-	0.1	0.5	13.6	(14.2)	-	-
Leases	13.3	2.0	-	-	0.3	-	-	2.3
Exchange differences on translating foreign operations		-	0.2	(0.2)	(2.2)	-	0.2	(2.0)
Sale		-	-	(0.1)	(0.1)	-	-	(0.2)
Gross carrying amount Dec 31 2020		**16.3**	**60.0**	**74.6**	**620.4**	**17.4**	**16.5**	**805.2**
Accumulated depreciation/amortisation Jan 1 2020		**5.1**	**26.6**	**42.6**	**342.1**	**-**	**12.8**	**429.2**
Depreciation and amortisation		0.4	2.9	3.3	57.4	-	1.0	65.0
Exchange differences on translating foreign operations		-	0.1	(0.2)	(2.3)	-	0.1	(2.3)
Sale		-	-	-	(0.1)	-	-	(0.1)
Accumulated depreciation/amortisation Dec 31 2020		**5.5**	**29.6**	**45.7**	**397.1**	**-**	**13.9**	**491.8**
Impairment losses Jan 1 2020		**-**	**-**	**0.6**	**7.8**	**-**	**-**	**8.4**
Recognised		-	-	-	-	-	-	-
Exchange differences on translating foreign operations		-	-	-	(0.1)	-	-	(0.1)
Used/Reversed	9.4	-	-	-	(1.1)	-	-	(1.1)
Impairment losses Dec 31 2020		**-**	**-**	**0.6**	**6.6**	**-**	**-**	**7.2**
Net carrying amount Dec 31 2020		**10.8**	**30.4**	**28.3**	**216.7**	**17.4**	**2.6**	**306.2**
Gross carrying amount Jan 1 2019		**14.3**	**59.6**	**73.0**	**589.6**	**20.5**	**14.0**	**771.0**
Capital expenditure		-	-	0.5	0.1	9.3	1.2	11.1
Transfer from property, plant and equipment under construction		-	-	0.5	5.7	(6.2)	-	-
Leases	13.3	-	-	-	5.1	-	-	5.1
Exchange differences on translating foreign operations		-	-	0.2	2.4	0.1	-	2.7
Sale		-	-	(0.1)	(0.5)	-	-	(0.6)
Other		-	0.1	-	-	-	-	0.1
Gross carrying amount Dec 31 2019		**14.3**	**59.7**	**74.1**	**602.4**	**23.7**	**15.2**	**789.4**
Accumulated depreciation/amortisation Jan 1 2019		**4.7**	**23.6**	**39.3**	**285.7**	**-**	**12.4**	**365.7**
Depreciation and amortisation		0.4	3.0	3.3	55.9	-	0.4	63.0
Exchange differences on translating foreign operations		-	-	0.1	1.0	-	-	1.1
Sale		-	-	(0.1)	(0.5)	-	-	(0.6)
Accumulated depreciation/amortisation Dec 31 2019		**5.1**	**26.6**	**42.6**	**342.1**	**-**	**12.8**	**429.2**
Impairment losses Jan 1 2019		**-**	**-**	**0.6**	**2.0**	**-**	**-**	**2.6**
Recognised	9.3	-	-	-	5.9	-	-	5.9
Exchange differences on translating foreign operations		-	-	-	(0.1)	-	-	(0.1)
Used/Reversed		-	-	-	-	-	-	-
Impairment losses Dec 31 2019		**-**	**-**	**0.6**	**7.8**	**-**	**-**	**8.4**
Net carrying amount Dec 31 2019		**9.2**	**33.1**	**30.9**	**252.5**	**23.7**	**2.4**	**351.8**

Other property, plant and equipment and intangible assets of the Exploration & Production segment include ships and a multi-purpose mobile drilling rig.

13.3 Right-of-use assets

Refining & Marketing	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Total	
Gross carrying amount Jan 1 2020	**852.0**	**146.4**	**0.1**	**729.8**	**0.4**	**1,728.7**	
New leases	30.0	27.6	-	116.5	-	174.1	
Early termination of lease contract	-	(1.5)	-	(24.6)	-	(26.1)	
Termination of leases	-	-	-	(17.1)	-	(17.1)	
Purchase of asset – transfer to property, plant and equipment	-	-	-	(50.9)	-	(50.9)	
Lease modifications	10.0	2.3	-	(7.0)	-	5.3	
Recognition of liquidation assets	0.2	-	-	-	-	0.2	
Unsettled upfront payments	-	-	-	-	11.8	11.8	
Settled upfront payments	-	-	-	12.2	(12.2)	-	
Other	-	-	-	0.7	-	0.7	
Gross carrying amount Dec 31 2020	**892.2**	**174.8**	**0.1**	**759.6**	**-**	**1,826.7**	
Accumulated depreciation Jan 1 2020	**38.0**	**17.9**	**-**	**254.2**	**-**	**310.1**	
Depreciation	36.0	19.1	0.1	147.5	-	202.7	
Early termination of lease contract	-	(0.2)	-	(15.6)	-	(15.8)	
Termination of leases	-	-	-	(16.7)	-	(16.7)	
Purchase of asset – transfer to property, plant and equipment	-	-	-	(16.3)	-	(16.3)	
Lease modifications	-	(0.1)	-	(5.5)	-	(5.6)	
Other	-	-	-	(1.4)	-	(1.4)	
Accumulated depreciation Dec 31 2020	**74.0**	**36.7**	**0.1**	**346.2**	**-**	**457.0**	
Impairment losses Jan 1 2020	**18.5**	**2.9**	**-**	**-**	**-**	**21.4**	
Recognised	7.6	0.5	-	-	-	8.1	(1)
Used/Reversed	-	-	-	-	-	-	
Impairment losses Dec 31 2020	**26.1**	**3.4**	**-**	**-**	**-**	**29.5**	
Net carrying amount Dec 31 2020	**792.1**	**134.7**	**-**	**413.4**	**-**	**1,340.2**	

(1) Impairment losses on service stations

(PLNm)

Refining & Marketing	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Total
Gross carrying amount Jan 1 2019	**621.7**	**144.4**	**0.1**	**613.3**	**-**	**1,379.5**
New leases	21.5	-	-	177.3	-	198.8
Reclassification to right-of-use assets	195.1	-	-	9.1	-	204.2
Early termination of lease contract	-	-	-	(36.0)	-	(36.0)
Purchase of asset – transfer to property, plant and equipment	-	-	-	(38.2)	-	(38.2)
Lease modifications	10.6	1.6	-	(12.4)	-	(0.2)
Recognition of liquidation assets	3.1	0.4	-	-	-	3.5
Unsettled upfront payments	-	-	-	-	13.3	13.3
Settled upfront payments	-	-	-	12.9	(12.9)	-
Other	-	-	-	3.8	-	3.8
Gross carrying amount Dec 31 2019	**852.0**	**146.4**	**0.1**	**729.8**	**0.4**	**1,728.7**
Accumulated depreciation Jan 1 2019	**-**	**-**	**-**	**151.5**	**-**	**151.5**
Depreciation	35.1	17.9	-	127.3	-	180.3
Reclassification to right-of-use assets	2.9	-	-	4.5	-	7.4
Early termination of lease contract	-	-	-	(9.3)	-	(9.3)
Purchase of asset – transfer to property, plant and equipment	-	-	-	(12.2)	-	(12.2)
Lease modifications	-	-	-	(3.8)	-	(3.8)
Other	-	-	-	(3.8)	-	(3.8)
Accumulated depreciation Dec 31 2019	**38.0**	**17.9**	**-**	**254.2**	**-**	**310.1**
Impairment losses Jan 1 2019	**-**	**-**	**-**	**-**	**-**	**-**
Reclassification to right-of-use assets	0.2	-	-	-	-	0.2
Recognised	18.3	2.9	-	-	-	21.2[(1)]
Used/Reversed	-	-	-	-	-	-
Impairment losses Dec 31 2019	**18.5**	**2.9**	**-**	**-**	**-**	**21.4**
Net carrying amount Dec 31 2019	**795.5**	**125.6**	**0.1**	**475.6**	**0.4**	**1,397.2**

[(1)] Impairment losses on service station chain (see Note 9.3).

Exploration & Production	Oil and gas production assets	Other non-current assets					Total
		Land	Buildings, structures	Plant and equipment	Vehicles, other	Total	
Gross carrying amount Jan 1 2020	**2.3**	**12.7**	**6.5**	**0.9**	**61.9**	**82.0**	**84.3**
New leases	-	-	-	-	0.3	0.3	0.3
Termination of leases	0.1	-	-	-	-	-	0.1
Purchase of asset – transfer to property, plant and equipment	-	-	-	(0.9)	-	(0.9)	(0.9)
Lease modifications	-	2.0	-	-	-	2.0	2.0
Exchange differences on translating foreign operations	-	-	0.1	-	(0.5)	(0.4)	(0.4)
Gross carrying amount Dec 31 2020	**2.4**	**14.7**	**6.6**	**-**	**61.7**	**83.0**	**85.4**
Accumulated depreciation Jan 1 2020	**0.3**	**4.6**	**1.2**	**0.5**	**21.5**	**27.8**	**28.1**
Depreciation	0.4	0.4	1.1	-	23.7	25.2	25.6
Purchase of asset – transfer to property, plant and equipment	-	-	-	(0.5)	-	(0.5)	(0.5)
Exchange differences on translating foreign operations	-	-	0.1	-	(0.9)	(0.8)	(0.8)
Accumulated depreciation Dec 31 2020	**0.7**	**5.0**	**2.4**	**-**	**44.3**	**51.7**	**52.4**
Impairment losses Jan 1 2020	**0.4**	**-**	**-**	**-**	**-**	**-**	**0.4**
Recognised	-	-	-	-	-	-	-
Used/Reversed	-	-	-	-	-	-	-
Impairment losses Dec 31 2020	**0.4**	**-**	**-**	**-**	**-**	**-**	**0.4**
Net carrying amount Dec 31 2020	**1.3**	**9.7**	**4.2**	**-**	**17.4**	**31.3**	**32.6**

Exploration & Production	Oil and gas production assets	Other non-current assets					Total
		Land	Buildings, structures	Plant and equipment	Vehicles, other	Total	
Gross carrying amount Jan 1 2019	**2.2**	**2.9**	**6.4**	**0.9**	**56.1**	**66.3**	**68.5**
New leases	-	-	-	-	5.1	5.1	5.1
Reclassification to right-of-use assets	-	9.8	-	-	-	9.8	9.8
Lease modifications	0.1	-	-	-	-	-	0.1
Exchange differences on translating foreign operations	-	-	-	-	0.7	0.7	0.7
Other	-	-	0.1	-	-	0.1	0.1
Gross carrying amount Dec 31 2019	**2.3**	**12.7**	**6.5**	**0.9**	**61.9**	**82.0**	**84.3**
Accumulated depreciation Jan 1 2019	**-**	**-**	**-**	**0.3**	**-**	**0.3**	**0.3**
Depreciation	0.3	0.4	1.2	0.2	21.8	23.6	23.9
Reclassification to right-of-use assets	-	4.2	-	-	-	4.2	4.2
Exchange differences on translating foreign operations	-	-	-	-	(0.3)	(0.3)	(0.3)
Accumulated depreciation Dec 31 2019	**0.3**	**4.6**	**1.2**	**0.5**	**21.5**	**27.8**	**28.1**
Impairment losses Jan 1 2019	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Recognised	0.4	-	-	-	-	-	0.4
Used/Reversed	-	-	-	-	-	-	-
Impairment losses Dec 31 2019	**0.4**	**-**	**-**	**-**	**-**	**-**	**0.4**
Net carrying amount Dec 31 2019	**1.6**	**8.1**	**5.3**	**0.4**	**40.4**	**54.2**	**55.8**

Leasing costs recognised in the statement of comprehensive income		2020	2019
Depreciation	Costs by nature of expense	225.9	203.4
Short-term leases	Costs by nature of expense: Services	45.1	57.1
Leases of low-value assets other than short-term leases	Costs by nature of expense: Services	0.4	0.3
Variable lease payments not included in the measurement of lease liabilities	Costs by nature of expense: Services	11.9	13.0
Interest on lease liabilities	Finance costs	75.8	79.7
Total		**359.1**	**353.5**

Allocation of depreciation expense	2020	2019
Cost of sales	171.3	151.6
Selling expenses	50.0	48.0
Administrative expenses	4.6	3.8
Total depreciation expense recognised in the statement of comprehensive income	**225.9**	**203.4**
Capital expenditure	2.4	0.8
Total	**228.3**	**204.2**

For information on lease liabilities, see Note 22.4.

In 2020, the total amount of expenditure on lease contracts, disclosed in the statement of cash flows as financing or operating cash flows, was PLN 347.2m (2019: PLN 338.5m).

13.4 Other information on property, plant and equipment and intangible assets

Allocation of depreciation expense	Note	2020	2019
Cost of sales		944.4	758.8
Selling expenses		127.0	117.6
Administrative expenses		31.5	33.1
Change in products and adjustments to cost of sales		(13.0)	(0.2)
Total depreciation expense recognised in the statement of comprehensive income	**9.1**	**1,089.9**	**909.3**
Capital expenditure		2.4	0.8
Total		**1,092.3**	**910.1**

In 2020, the Group capitalised finance costs of PLN 14.2m as property, plant and equipment under construction and intangible assets under development (2019: PLN 83.4m). As at December 31st 2020, finance costs capitalised as property, plant and equipment under construction, intangible assets under development, and property, plant and equipment related to oil and gas production totalled PLN 71.2m (December 31st 2019: PLN 76.2m).

As at December 31st 2020, property, plant and equipment as well as intangible assets serving as collateral for the Group's liabilities totalled PLN 4,345.6m (December 31st 2019: PLN 5,237.1m).

As at December 31st 2020, the Group's future contractual commitments related to purchases of property, plant and equipment and intangible assets, undisclosed in the statement of financial position, totalled PLN 458.9m (December 31st 2019: PLN 103.7m). As at December 31st 2020, the contracted expenditure was related, among others, to the upgrade of the Fuel Depot in Piotrków Trybunalski, upgrade of the Claus sulphur recovery unit, construction of a railway loading unit, development of the B-8 field, expansion of the service station network and purchase of intermodal rolling stock.

14. Equity-accounted joint ventures

The Group holds interests in equity-accounted joint ventures, which include:

- Joint venture agreement between Grupa LOTOS S.A. and BP Europe SE on joint operations related to supply of aviation fuel through LOTOS - Air BP Polska Sp. z o.o.
- Agreement on cooperation between LOTOS Petrobaltic S.A. and CalEnergy Resources Poland Sp. z o.o. with respect to development and production of gas and condensate reserves from the B-4 and B-6 fields in the Baltic Sea, performed through special purpose vehicles Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp.k. and Baltic Gas Sp. z o.o. (general partner).
- Joint venture set up for the purpose of oil exploration and production operations in Lithuania, operated in the form of UAB Minijos Nafta.

	Registered office	Principal business	The Group's ownership interest of shares		Carrying amount (PLNm)	
			Dec 31 2020	Dec 31 2019	Dec 31 2020	Dec 31 2019
Refining & Marketing						
LOTOS-Air BP Polska Sp. z o.o.	Gdańsk	Sale of aviation fuel and logistics services	50.00%	50.00%	26.1	27.6
Exploration & Production						
Baltic Gas Sp. z o.o.	Gdańsk	Crude oil and gas production (support activities for crude oil and gas production)	50.00%	50.00%	-	-
Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp.k. (1)	Gdańsk	Crude oil and gas production	45.99%	45.71%	-	114.6
UAB Minijos Nafta	Lithuania, Gargždai	Crude oil exploration and production	50.00%	50.00%	-	-
Total					**26.1**	**142.2**

(1) The ownership interests as at December 31st 2020 were determined based on the value of contributions made by individual partners relative to the sum of all contributions:

- Baltic Gas Sp. z o.o. (general partner) 0.001% (December 31st 2019: 0.001%),
- LOTOS Upstream Sp. z o.o. (limited partner) 45.992% (December 31st 2019: LOTOS Petrobaltic S.A.: 45.707%),
- CalEnergy Resources Poland Sp. z o.o. ("CalEnergy") (limited partner) 54.008% (December 31st 2019: 54.292%).

The Group's indirect ownership interest in Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp. k. (jointly-controlled entity) is 45.99% (December 31st 2019: 45.71%).

In 2020, LOTOS Upstream Sp. z o.o. made the agreed cash contributions to Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp. k., amounting to PLN 7.0m, which led to a change in the Group's ownership interest in the company. The expenditure on cash contributions made by LOTOS Upstream Sp. z o.o was disclosed by the Group in the consolidated statement of cash flows under Cash contributions − equity-accounted joint ventures.

	The Group's share in the companies' net profit or loss	
	2020	2019
Refining & Marketing		
LOTOS-Air BP Polska Sp. z o.o.	(1.7)	4.5
Exploration & Production		
Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp.k. (1)	(0.2)	(0.3)
Total	**(1.9)**	**4.2**

(1) In the partnership agreement, the shares of each of the partners in the profit or loss of Baltic Gas Sp. z o.o. i wspólnicy sp.k. were defined as follows:

- Baltic Gas Sp. z o.o. holds a 0.001% share in profit and a 100% share in loss,
- LOTOS Upstream Sp. z o.o holds a 50.9995% share in profit,
- CalEnergy holds a 48.9995% share in profit.

Accordingly, for IFRS purposes, Baltic Gas Sp. z o.o. i wspólnicy sp.k is an entity jointly controlled by the Group (equity-accounted joint venture under IFRS 11).

14.1 Condensed financial information on equity-accounted joint ventures

Statement of comprehensive income	LOTOS-Air BP Polska Sp. z o.o.		Baltic Gas Sp. z o.o. i wspólnicy sp.k.		UAB Minijos Nafta	
	2020	2019	2020	2019	2020	2019
Revenue	162.1	531.7	-	-	9.9	24.3
Cost of sales	(142.1)	(480.2)	-	-	(11.2)	(20.5)
Gross profit/(loss)	**20.0**	**51.5**	**-**	**-**	**(1.3)**	**3.8**
Selling expenses	(18.4)	(34.2)	-	-	(0.2)	(0.1)
Administrative expenses	(4.9)	(5.5)	(0.3)	(0.4)	(2.7)	(4.7)
Net other income/(expenses)	0.4	(0.1)	-	-	0.1	-
Operating profit/(loss)	**(2.9)**	**11.7**	**(0.3)**	**(0.4)**	**(4.1)**	**(1.0)**
Net finance income/(costs)	(1.3)	(0.7)	-	-	(0.1)	0.1
Profit/(loss) before tax	**(4.2)**	**11.0**	**(0.3)**	**(0.4)**	**(4.2)**	**(0.9)**
Income tax	0.7	(2.2)	-	-	-	-
Net profit/(loss)	**(3.5)**	**8.8**	**(0.3)**	**(0.4)**	**(4.2)**	**(0.9)**
Other comprehensive income/(loss), net	-	(0.1)	-	-	-	-
Total comprehensive income/(loss)	**(3.5)**	**8.7**	**(0.3)**	**(0.4)**	**(4.2)**	**(0.9)**
Depreciation and amortisation	(3.0)	(2.9)	-	-	(2.0)	(3.3)

Statement of financial position	Note	LOTOS-Air BP Polska Sp. z o.o.		Baltic Gas Sp. z o.o. i wspólnicy sp.k.		UAB Minijos Nafta	
		Dec 31 2020	Dec 31 2019	Dec 31 2020	Dec 31 2019	Dec 31 2020	Dec 31 2019
Non-current assets		20.9	18.9	243.5	225.8	14.4	13.8
Current assets, including:		40.0	81.9	7.6	19.2	9.3	13.5
Cash and cash equivalents		23.7	21.6	6.1	16.7	4.1	6.5
Total assets		**60.9**	**100.8**	**251.1**	**245.0**	**23.7**	**27.3**
Non-current liabilities		10.2	8.9	-	-	21.3	15.0
Current liabilities		12.0	49.8	1.7	9.1	2.2	6.2
Total liabilities		**22.2**	**58.7**	**1.7**	**9.1**	**23.5**	**21.2**
Net assets		**38.7**	**42.1**	**249.4**	**235.9**	**0.2**	**6.1**
		50.00%	50.00%	*	*	50.00%	50.00%
Share of net assets		19.4	21.1	114.5	114.6	0.1	3.0
Impairment losses on shares		-	-	(114.5) (2)	-	-	-
Fair value measurement		6.7 (1)	6.7	-	-	(0.1)	(3.0)
Elimination of intercompany transactions		-	(0.2)	-	-	-	-
Interest in joint ventures	14	**26.1**	**27.6**	**-**	**114.6**	**-**	**-**

* For IFRS purposes, Baltic Gas Sp. z o.o. i wspólnicy sp.k is an entity jointly controlled by the Group (equity-accounted joint venture under IFRS 11; see Note 14 above).

(1) PLN 6.7m in gain on fair value measurement of a retained interest in a previously controlled entity as at the date of loss of control.

(2) The final investment decision (FID) to proceed with full implementation of the project was planned for late 2019 or early 2020. In 2020, the adverse downtrend in gas prices continued, and was further exacerbated by factors related to the COVID-19 pandemic, translating into increased risk of procurement for and execution of investment processes in the upstream sector. As a result, the project partners agreed that only preparatory work for the FID would be continued in 2020, including: continuation of activities designed to obtain the required formal and administrative approvals (including the environmental decision for the onshore section); the process to obtain updated licences for the B-4 and B-6 fields (completed in June 2020); completion of the process of arrangements with owners of land under the onshore gas pipeline; development of the procurement strategy (taking into account public procurement procedures), and preparation of for the procurement process. Adoption of the FID will be suspended until the partners agree that there are indications of a change in the macroeconomic trends and an alleviation of the execution risks caused by COVID-19. The project partners did not provide any specific date when the FID could be made. However, they are still supportive of the project in view of the long-term business prospects and fundamental factors supporting the long-term viability of the project. The prices of crude oil and natural gas are currently below levels assumed in the underlying economic criteria for investing in the FID can be met. In the opinion of the Group's management, the resulting uncertainty provides grounds to recognise a PLN 114.5m impairment loss on the project; see Note 9.6.

14.2 Transactions with equity-accounted joint ventures

Equity-accounted joint ventures		2020	2019
Sales		141.5	488.5
Purchases		9.5	21.9
	Note	Dec 31 2020	Dec 31 2019
Receivables	15	6.7	38.8
Liabilities	25	1.2	2.6

In 2020 and 2019, material transactions were made by the Group with LOTOS-Air BP Polska Sp. z o.o. and involved mainly sale of aviation fuel. The aggregate value of the transactions made in 2020 was PLN 141.4m (2019: PLN 488.4m). As at December 31st 2020, the balance of outstanding receivables under these transactions was PLN 6.7m (December 31st 2019: PLN 38.8m).

In 2020, the Group also executed transactions with UAB Minijos Nafta, for a total amount of PLN 9.5m (2019: PLN 21.9m). The transactions were crude oil purchases. As at December 31st 2020, the balance of outstanding payables under those transactions was PLN 1.2m (December 31st 2019: PLN 2.6m).

15. Trade receivables and other assets

	Note	Dec 31 2020	Dec 31 2019
Non-current financial assets:		**675.3**	**148.4**
Security deposits receivable		24.7	24.3
Finance lease receivables	15.2	7.6	7.1
Oil and Gas Extraction Facility Decommissioning Fund [1]		43.8	41.1
Cash pledged as security for contractual obligations related to future asset decommissioning		67.8	38.9
Settlements with the ICE exchange - deposit		15.4	17.1
Security deposits related to licensed activities and other		10.3	10.1
Shares		309.8 [2]	9.8
Loan advanced		195.9	-
Current financial assets:		**1,732.9**	**2,638.0**
Trade receivables		1,693.9	2,609.1
- including from related entities	14.2	6.7	38.8
Security deposits receivable		13.2	10.1
Investment receivables		6.1	0.2
Security deposits related to the use of gas fuel distribution and transmission system and other		1.9	1.8
Damages receivable		1.5	0.4
Receivables under payment cards (service stations)		5.8	6.4
Finance lease receivables	15.2	5.1	6.0
Other receivables		5.4	4.0
Financial assets		**2,408.2**	**2,786.4**
Non-current non-financial assets		**8.5**	**9.7**
Property and other insurance		3.9	3.0
Borrowing costs		3.5	4.4
Prepaid bonuses		-	1.1
Other		1.1	1.2
Current non-financial assets:		**275.3**	**305.2**
Value-added tax receivable		86.5	104.4
Other receivables from the state budget other than corporate income tax		3.6	2.3
Property and other insurance		73.3	6.2
Settlements under joint operations (Norwegian fields) [3]		51.9	47.8
Excise duty on inter-warehouse transfers		34.3	60.7
Prepaid deliveries		13.9	73.3
Prepaid bonuses		0.1	0.1
Prepayments for IT services		6.9	6.1
Other		4.8 [4]	4.3
Non-financial assets		**283.8**	**314.9**
Total		**2,692.0**	**3,101.3**
including:			
non-current		683.8	158.1
current:		2,008.2	2,943.2
- trade receivables		1,693.9	2,609.1
- other		314.3	334.1

[1] Cash deposited in the bank account of the Oil and Gas Facility Decommissioning Fund (created pursuant to the Geological and Mining Law of February 4th 1994 and the Minister of Economy's Regulation of June 24th 2002) to cover future costs of decommissioning of oil extraction facilities; see Note 25.1.

[2] On November 16th 2020, the Company acquired 15,967,352 shares in Grupa Azoty Polyolefins S.A., with a par value of PLN 10 per share. The shares were taken up for a cash contribution of PLN 300.0m. Following acquisition of the shares, the Company became a shareholder in Grupa Azoty Polyolefins S.A., with a 17.3% equity interest. Expenditure on acquisition of the shares is presented in the statement of cash flows from investing activities under Acquisition of shares.

[3] Receivables of LOTOS Exploration and Production Norge AS (LOTOS Upstream Group, the Exploration & Production segment) under mutual settlements between the operator and consortium members concerning specific Norwegian fields.

[4] Including funds allocated to the construction of a temporary hospital for patients with COVID-19 in the amount of PLN 0.7m.

Loan to Grupa Azoty Polyolefins S.A.

On May 31st 2020, Grupa LOTOS S.A. signed an agreement to provide a PLN 200.0m loan to Grupa Azoty Polyolefins S.A. as part of its participation in the financing of the Polimery Police Project. The loan was granted subject to fulfilment of the conditions precedent set out in the Transaction Documentation.
The loan was disbursed on December 22nd 2020. Amounts disbursed under the loan are presented in the statement of cash flows as cash flows from investing activities under Loans. The loan repayment date is December 15th 2037. The loan is secured by assignment of receivables, and it bears interest at a variable annual rate based on WIBOR.

As at December 31st 2020, PLN 16.1m of the Group's receivables was assigned by way of security for the Group's liabilities (December 31st 2019: PLN 17.0m).

As at December 31st 2020, cash of PLN 11.9m deposited in the bank account of the Extraction Facility Decommissioning Fund was pledged as security for repayment of the Group's liabilities.

As at December 31st 2020, all Grupa Azoty Polyolefins shares held by Grupa LOTOS S.A. were encumbered by financial and registered pledges to secure the financing parties' claims with respect to the Polimery Police Project.

The collection period for trade receivables in the ordinary course of business is 7−35 days.

For description of financial instruments, see Note 7.20.. For description of the objectives and policies of financial risk management, see Note 27.
For currency risk sensitivity analysis of financial assets, see Note 27.3.1.
For interest rate risk sensitivity analysis of financial assets, see Note 27.4.1.
For maximum credit risk exposure of financial assets, see Note 27.6.

15.1 Change in impairment losses on receivables

	2020	2019
At beginning of period	**217.7**	**109.9**
Recognised	24.0	149.2
Used	(7.7)	(24.9)
Reversed	(107.0)	(16.5)
At end of period	**127.0**	**217.7**

In 2020, the Group recognised and reversed impairment losses on receivables under other expenses, in the amount of PLN 4.7m, including: PLN 10.5m under recognised impairment losses and PLN 5.8m under reversed impairment losses (see Note 9.4).

In 2019, the Group recognised and reversed impairment losses on receivables under other expenses, in the amount of PLN 36.3m, including: PLN 51.0m under recognised impairment losses and PLN 14.7m under reversed impairment losses (see Note 9.4).

Ageing of trade receivables and expected credit loss

Dec 31 2020	Gross carrying amount	Expected credit loss	Weighted average rate of expected credit loss	Net carrying amount
Not past due receivables	1,671.2	2.0	0.0012	1,669.2
Past due receivables:	111.8	87.1	-	24.7
Up to 30 days	22.3	0.5	0.0224	21.8
From 30 to 90 days	2.9	0.6	0.2069	2.3
More than 90 days	86.6	86.0	0.9931	0.6
Trade receivables	**1,783.0**	**89.1**		**1,693.9**

Ageing of receivables past due but not impaired:	Dec 31 2020	Dec 31 2019
Up to 1 month	34.3	71.6
From 1 to 3 months	26.6	20.3
From 3 to 6 months	9.3	3.3
From 6 months to 1 year	2.6	2.3
Over 1 year	1.0	0.7
Total	**73.8**	**98.2**

No impairment losses were recognised on past due receivables, because they are secured against credit risk with a mortgage, pledge, insurance policy, bank guarantee or surety.

As at December 31st 2020, the share of trade receivables from the Group's five largest customers as at the end of the reporting period was 25% (December 31st 2019: 41%) of total trade receivables (individually: 0–12%). In the Group's opinion, with the exception of receivables from the above-mentioned customers, there is no material concentration of credit risk. The Group's maximum exposure to credit risk as at the end of the reporting period is best represented by the carrying amounts of those instruments.

15.2 Finance lease receivables

The Group has developed and operates the "LOTOS Family" Franchise Programme, which defines the procedures for managing service stations. The Group has entered into franchise agreements with entities operating service stations at their own risk and for their own account (Partners). Receivables under franchise agreements represent mainly expenditure on the design of DOFO service stations operated by dealers under agreements executed for periods from 5 to 10 years.

	Lease payments		Present value of lease payments	
	Dec 31 2020	Dec 31 2019	Dec 31 2020	Dec 31 2019
Up to 1 year	5.1	6.0	5.1	6.0
From 1 to 5 years	7.7	7.2	7.6	7.1
Total	**12.8**	**13.2**	**12.7**	**13.1**
Less unrealised finance income	(0.1)	(0.1)	-	-
Present value of lease payments	**12.7**	**13.1**	**12.7**	**13.1**
including:				
long-term portion			7.6	7.1
short-term portion			5.1	6.0

16. Inventories

	Dec 31 2020	Dec 31 2019
Finished goods	877.7	1,279.1
Semi-finished products and work in progress	382.7	518.5
Merchandise	180.4	221.0
Materials	2,054.9	2,835.7
Total	**3,495.7**	**4,854.3**
including inventories measured at:		
cost	3,487.2	4,840.0
net realisable value	8.5	14.3

Inventories are measured at the lower of cost or cost less write-downs to net realisable value less cost to sell.

As at December 31st 2020, the amount of inventories securing liabilities under bank borrowings was valued at PLN 2,704.0m (December 31st 2019: PLN 4,141.1m).

16.1 Change in inventory write-downs

	2020	2019
At beginning of period	**9.5**	**8.7**
Recognised	908.5	11.0
Used / Reversed	(908.5)	(10.2)
At end of period	**9.5**	**9.5**

The effect of revaluation of inventories is taken to cost of sales.

17. Cash and cash equivalents

	Note	Dec 31 2020	Dec 31 2019
Cash and cash equivalents in the statement of financial position	26.1	2,145.6	1,516.6
Overdraft facilities		(222.2)	-
Total cash and cash equivalents in the statement of cash flows		1,923.4	1,516.6

Cash at banks bears interest at variable rates linked to short-term interest rates prevailing on the interbank market. Short-term deposits are placed for a range of maturities, from one day to one month, depending on the Group's current cash needs, and bear interest at interest rates set for them.

As at December 31st 2020, the Group had undrawn credit of PLN 471.5m (December 31st 2019: PLN 847.2m) under working capital facilities for which all conditions precedent are met.

In July 2018, the Group began using the VAT split payment mechanism. As at December 31st 2020, the cash balance in VAT accounts was PLN 175.0m (December 31st 2019: PLN 78.3m).

As at December 31st 2020, cash in bank accounts serving as security for the Group's liabilities was PLN 799.2m (December 31st 2019: PLN 499.0m).

18. Share capital

	Dec 31 2020	Dec 31 2019
Series A shares	78.7	78.7
Series B shares	35.0	35.0
Series C shares	16.2	16.2
Series D shares	55.0	55.0
Total	**184.9**	**184.9**

As at December 31st 2020 and December 31st 2019, the share capital comprised 184,873,362 ordinary shares, fully paid-up, with a par value of PLN 1 per share. Each share confers the right to one vote at the General Meeting and carries the right to dividend.

19. Share premium

Share premium represents the excess of the issue price over the par value of Series B, C and D shares, net of costs directly attributable to the share issue.

	Series B	Series C	Series D	Total
Share premium	980.0	340.8	940.5	2,261.3
Costs directly attributable to the share issue	(9.0)	(0.4)	(23.6)	(33.0)
Total	**971.0**	**340.4**	**916.9**	**2,228.3**

20. Cash flow hedging reserve capital

Cash flow hedging reserve capital comprises changes in the valuation of foreign-currency bank borrowings used as cash flow hedges for USD-denominated sales, less the effect of deferred income tax.

Changes in the fair value of derivative financial instruments designated as cash flow hedges are charged to the cash flow hedging reserve to the extent they represent an effective hedge, while the ineffective portion is charged to finance income or costs in the reporting period.

	Note	2020	2019
At beginning of period		**(203.6)**	**(288.2)**
Valuation of cash flow hedging instruments	26.3	221.2	104.5
- effective portion		221.2	107.3
- ineffective portion		-	(2.8)
Income tax on valuation of cash flow hedging instruments	10.1	(42.0)	(19.9)
At end of period		**(24.4)**	**(203.6)**

21. Retained earnings

Retained earnings comprise capital reserves created and used in accordance with the rules stipulated by the applicable laws and deeds of incorporation, as well as current period's profit.

Furthermore, retained earnings include actuarial gains/losses relating to defined post-employment benefits, recognised inclusive of the tax effect, which are posted under Other comprehensive income/(loss), net in the statement of comprehensive income.

As at December 31st 2020 and December 31st 2019, Grupa LOTOS S.A. was restricted in its ability to distribute dividends; see Note 12.

21.1 Restricted ability of subsidiaries to transfer funds to the Parent in the form of dividends

In 2020 and 2019, the ability of the LOTOS Group subsidiaries to transfer funds to Grupa LOTOS S.A. in the form of dividends was restricted due to the following arrangements:

- The amount of cash surplus generated by LOTOS Paliwa Sp. z o.o. in a financial year that is available for distribution depends on the achievement of certain ratios defined in credit facility agreements.
- At LOTOS Asfalt Sp. z o.o., dividend payment is restricted under the credit facility agreement for the financing of the EFRA Project, whereby distribution of dividends is not permitted before the first instalment of the credit facility is paid and the EFRA Project is completed (the first instalment was paid on December 21st 2018) . Payment of dividends from operating cash flows is conditional upon fulfilment of the requirements defined in the agreement, including generation of a sufficient cash surplus and achievement of financial ratios at prescribed levels.

These restrictions were applicable as at December 31st 2020 and December 31st 2019.

22. Bank and non-bank borrowings, notes and leases

	Note	Dec 31 2020	Dec 31 2019
Bank borrowings	22.1	2,559.8	2,865.2
Non-bank borrowings	22.2	35.6	43.4
Notes	22.3	231.7	231.8
Leases	22.4	1,246.4	1,276.0
Total		**4,073.5**	**4,416.4**
including:			
long-term portion		2,717.7	3,142.6
short-term portion		1,355.8	1,273.8

For currency risk sensitivity analysis, see Note 27.3.1.
For interest rate risk sensitivity analysis, see Note 27.4.1.
For information on contractual maturities, see Note 27.5.

	Bank borrowings	Non-bank borrowings	Notes	Leases		Total
Jan 1 2020	**2,865.2**	**43.4**	**231.8**	**1,276.0**		**4,416.4**
Net proceeds	74.4	-	-	-		**74.4**
Net repayments	(563.6)	(7.9)	-	(202.8)	(1)	**(774.3)**
Interest, fees and commissions paid	(114.4)	(1.5)	(5.7)	(75.2)		**(196.8)**
New leases	-	-	-	174.5		**174.5**
Interest, fees and commissions accrued	76.8	1.6	8.0	75.8		**162.2**
Prepayments and accruals	19.8	-	-	-		**19.8**
Exchange differences	(20.6)	-	(2.4)	5.0		**(18.0)**
Change in overdraft facilities	222.2	-	-	-		**222.2**
Other	-	-	-	(6.9)		**(6.9)**
Dec 31 2020	**2,559.8**	**35.6**	**231.7**	**1,246.4**		**4,073.5**

(1) The item 'Payment of lease liabilities' in the statement of cash flows includes upfront lease payments of PLN 11.8m.

	Bank borrowings	Non-bank borrowings	Notes	Leases		Total
Jan 1 2019	**3,421.2**	**55.8**	**227.0**	**1,271.6**		**4,975.6**
Net proceeds	283.4	-	-	-		**283.4**
Net repayments	(1,347.3)	(11.9)	-	(181.1)	(1)	**(1,540.3)**
Interest, fees and commissions paid	(156.7)	(2.5)	(9.4)	(73.7)		**(242.3)**
New leases	-	-	-	203.9		**203.9**
Interest, fees and commissions accrued	174.3	2.2	12.0	79.7		**268.2**
Prepayments and accruals	35.0	0.1	-	-		**35.1**
Exchange differences	39.5	-	2.2	0.3		**42.0**
Change in overdraft facilities	(3.0)	-	-	-		**(3.0)**
Change in deposits securing payment of interest and principal	418.8	-	-	-		**418.8**
Other	-	(0.3)	-	(24.7)		**(25.0)**
Dec 31 2019	**2,865.2**	**43.4**	**231.8**	**1,276.0**		**4,416.4**

(1) The item "Payment of lease liabilities" in the statement of cash flows includes upfront lease payments of PLN 13.3m.

22.1 Bank borrowings

	Dec 31 2020	Dec 31 2019
Investment facilities	2,149.2	2,674.9
Working-capital facilities	222.4	0.2
Inventory financing and refinancing facility	188.2	190.1
Total	**2,559.8**	**2,865.2**
including:		
long-term portion	1,641.4	2,100.5
short-term portion	918.4	764.7

Repayment of the above facilities is secured with:

- power of attorney over bank accounts, blank promissory notes and bank guarantees,
- registered pledges over bank accounts, inventories, licences, existing and future movables, and shares in subsidiaries,
- mortgage,
- transfer of title to property, plant and equipment,
- assignment by way of security of rights under insurance agreements, including insurance of inventories,
- assignment by way of security of rights under inventory storage agreements,
- assignment by way of security of rights under licence agreements, design agreements and agreements for sale of products,
- assignment by way of security of rights under a conditional loan agreement,
- assignment of receivables,
- representation on voluntary submission to enforcement.

Bank borrowings by currency

	Currency of credit facility advanced to the Group				
	USD	**EUR**	**NOK**	**PLN**	**Total**
Dec 31 2020	2,389.4	27.0	4.4	139.0	**2,559.8**
Dec 31 2019	2,687.2	-	-	178.0	**2,865.2**

Bank borrowings bear interest based on:

- 1M, 3M or 6M LIBOR (USD), depending on the interest period selected at a given time − in the case of USD-denominated facilities,
- 1M EURIBOR – in the case of EUR-denominated facilities,
- 1M or 3M WIBOR − in the case of PLN-denominated facilities.

As at December 31st 2020, the average effective interest rate for the credit facilities denominated in US dollars was approximately 1.96% (December 31st 2019: 3.76%). The average effective interest rate for PLN-denominated facilities (excluding the syndicated facilities contracted by the Parent) was approximately 2.03% (December 31st 2019: 3.51%).

Pursuant to the terms of the inventory financing and refinancing facility, the Parent is required to maintain the Tangible Consolidated Net Worth (TCNW) and the Loan to Pledged Inventory Value Ratio at levels no higher than those specified in the facility agreement.
As at December 31st 2020 and December 31st 2019, the Parent complied with this requirement.

Refinancing of the 10+ Programme credit facilities

On July 2nd 2019, Grupa LOTOS S.A. and a bank syndicate signed credit facility agreements for a total amount of USD 500m to refinance credit facilities contracted in 2008 to finance the 10+ Programme.

Under the agreements, the bank syndicate extended to the Company:

- a USD 400m term facility,
- a USD 100m working capital facility, disbursable in USD, EUR or PLN.

As at December 31st 2020, the nominal amount drawn under the facilities was PLN 1,424.9m, including PLN 1,202.7m (USD 320m) under the term facility and PLN 222.2m under the working capital facility. As at December 31st 2019, the nominal amount drawn under the term facility was PLN 1,519.1m (USD 400m).

Under the facility agreements discussed above, Grupa LOTOS S.A. is required to maintain its net debt/ EBITDA ratio at a specified level. As at December 31st 2020, the ratios specified in the credit facility agreements were exceeded. Given the anticipated breach of one of the covenants, the Company requested a waiver from the financing banks. On December 29th 2020, the Company received a letter from the banks confirming their consent to waive a breach of covenants as at December 31st 2020.

Proceeds from and repayment of bank borrowings

In 2020, proceeds from the Group's bank borrowings were PLN 74.4m (2019: PLN 283.4m), while cash outflows on repayment of borrowings were PLN 563.6m (2019: PLN 1,347.3m). These amounts are presented in the consolidated statement of cash flows as cash flows from financing activities under Proceeds from bank borrowings and Repayment of bank and non-bank borrowings, respectively.

In 2020, proceeds from bank borrowings included:

- credit facilities contracted by LOTOS Asfalt Sp. z o.o. (PLN 70.3m),
- credit facilities contracted by LOTOS Exploration and Production Norge AS (PLN 4.1m).

In 2020, repayments of bank borrowings included mainly:

- repayment of investment credit facilities contracted by the Parent (PLN 309.2m),
- repayment of credit facilities contracted by LOTOS Asfalt Sp. z o.o. (PLN 215.4m),
- repayment of investment credit facilities contracted by LOTOS Paliwa Sp. z o.o. to finance and refinance purchase of service stations (PLN 26.6m),
- repayment of an investment facility contracted by SPV Baltic Sp. z o.o. to finance purchase of a multi-purpose platform (PLN 7.3m),
- repayment of a credit facility contracted by LOTOS Terminale S.A. (PLN 5.1m).

In 2020 and 2019, there were no defaults under the facilities.

For more information on the Group's bank borrowings, see the Directors' Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2020.

22.2 Non-bank borrowings

	Dec 31 2020	Dec 31 2019
Provincial Fund for Environmental Protection and Water Management in Gdańsk (WFOŚiGW)	3.0	3.6
Agencja Rozwoju Przemysłu S.A.	32.6	39.8
Total	**35.6**	**43.4**
including:		
long-term portion	27.4	35.7
short-term portion	8.2	7.7

The loan obtained from Agencja Rozwoju Przemysłu S.A. was intended to finance purchase of a drilling rig; the other loans were taken out to partly finance upgrade of locomotives and a rail tank car cleaning facility.

The loans are secured with:

- registered pledge over assets,
- registered and financial pledges over shares,
- assignment by way of security of rights under insurance policies and sale agreements,
- assignment by way of security of claims related to bank accounts,
- blank promissory notes and representation on voluntary submission to enforcement,
- sureties issued by Group companies.

The loans are denominated in the Polish złoty. The loans bear interest based on 1M WIBOR or the rediscount rate.

As at December 31st 2020, the average effective interest rate of the loans was approximately 3.27% (December 31st 2019: 4.58%).

Proceeds from and repayment of non-bank borrowings

In 2020 and 2019, the Group did not contract any non-bank borrowings, whereas repayments of non-bank borrowings were PLN 7.9m (2019: PLN 11.9m). These amounts are presented in the consolidated statement of cash flows as cash flows from financing activities under Repayment of bank and non-bank borrowings.

22.3 Notes

In 2016, the SPV B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A. (Exploration & Production segment) concluded agreements with Bank Gospodarstwa Krajowego S.A. (BGK) and Polski Fundusz Rozwoju S.A. (the Polish Development Fund, PFR) (Fundusz Inwestycji Infrastrukturalnych – Dłużny Fundusz Inwestycyjny Zamknięty Aktywów Niepublicznych) for the financing of the development of the B8 oil field in the Baltic Sea, including senior notes and subordinated notes programme agreements.

Security under the above agreements includes:

- pledges over shares,
- pledge over bank accounts,
- pledge over receivables,
- pledge over assets,
- sea mortgage,
- declaration of submission to enforcement,
- power of attorney to bank accounts.

On July 25th 2018, B8 spółka z ograniczoną odpowiedzialnością Baltic S.K.A. and Bank Gospodarstwa Krajowego executed an amendment to the senior note programme agreement and amendments to the terms and conditions of the notes issued by the company and acquired by BGK. On July 27th 2018, B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A. issued notes with a total nominal value of USD 30m. The issue proceeds were used to redeem all notes acquired by Polski Fundusz Rozwoju S.A. All the issued notes are due at dates falling in the period from September 30th 2020 to December 31st 2021. With respect to the currently outstanding notes of B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A., as at December 31st 2020 the project schedule and budget were exceeded and one of the covenants was breached, and therefore the long-term portion of the liabilities under the agreement is presented in current liabilities. On December 14th 2020, an amendment to the senior note programme agreement and amendments to the terms and conditions of the notes were signed, whereby the liabilities were not accelerated by BGK as at December 31st 2020, and the stand still was extended until January 31st 2021. On January 29th 2021, an amendment to the senior note programme agreement, amendments to the terms and conditions of the notes and an amendment to the commission letter were signed, extending the funding availability period until June 30th 2021 and setting the repayment dates for the end of each quarter from September 30th 2021 to December 31st 2024.

As at December 31st 2020, the liability under the outstanding notes issued by B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A., net of issue costs, was PLN 231.7m (December 31st 2019: PLN 231.8m).

22.4 Leases

	Lease payments		Present value of lease payments	
	Dec 31 2020	Dec 31 2019	Dec 31 2020	Dec 31 2019
Up to 1 year	222.5	335.7	197.5	269.6
From 1 to 5 years	570.3	714.4	383.2	407.7
From 5 to 10 years.	333.3	381.4	237.5	209.0
From 10 to 30 years.	228.5	458.8	177.2	247.7
From 30 to 50 years.	614.9	233.2	159.6	49.4
From 50 to 90 years.	169.3	171.5	91.4	92.6
Total	**2,138.8**	**2,295.0**	**1,246.4**	**1,276.0**
Less finance costs	(892.4)	(1,019.0)	-	-
Present value of lease payments	**1,246.4**	**1,276.0**	**1,246.4**	**1,276.0**
including:				
long-term portion			1,048.9	1,006.4
short-term portion			197.5	269.6

Lease liabilities are secured with promissory notes and assignment of receivables.

23. Derivative financial instruments

	Note	Dec 31 2020	Dec 31 2019
Non-current financial assets:		**1.2**	**0.1**
Commodity swaps (commodities and petroleum products)		1.2	0.1
Current financial assets:		**65.9**	**25.1**
Commodity swaps (commodities and petroleum products)		31.8	1.5
Currency forward and spot contracts		1.0	13.2
Currency swap		18.3	10.4
Futures (CO_2 emissions)		14.8	-
Financial assets	**26.1**	**67.1**	**25.2**
Non-current financial liabilities:		**1.0**	**6.6**
Commodity swaps (commodities and petroleum products)		1.0	3.0
Interest rate swap (IRS)		-	3.6
Current financial liabilities:		**18.5**	**15.3**
Commodity swaps (commodities and petroleum products)		4.1	12.3
Interest rate swap (IRS)		8.2	3.0
Currency swap		6.2	-
Financial liabilities	**26.1**	**19.5**	**21.9**

Description of derivative financial instruments is presented in Note 7.22. The objectives and principles of financial risk management are described in Note 27. The classification of derivative financial instruments according to the levels of the fair value hierarchy is presented in Note 23.1.

For analysis of sensitivity of the risk of movements in commodity and petroleum product prices, see Note 27.1.1

For analysis of sensitivity of the derivative financial instruments to the risk of movements in prices of carbon dioxide (CO_2) emission allowances, see Note 27.2.1.

For currency risk sensitivity analysis of the derivative financial instruments, see Note 27.3.1.

For interest rate sensitivity analysis of the derivative financial instruments, see Note 27.4.1.

For information on contractual maturities of the derivative financial instruments, see Note 27.5.

For information on maximum credit risk exposure of the derivative financial instruments (financial assets), see Note 27.6.

24. Employee benefit obligations

	Note	Dec 31 2020	Dec 31 2019
Non-current liabilities:	**24.1**	**230.2**	**207.5**
Post-employment benefits	24.1	62.7	52.4
Length-of-service awards and other benefits	24.1	167.5	155.1
Current liabilities		**196.1**	**174.3**
Post-employment benefits	24.1	6.0	7.4
Length-of-service awards and other benefits	24.1	14.4	14.7
Bonuses, awards and holiday entitlements		135.6	114.9
Salaries and wages payable		40.1	37.3
Total		**426.3**	**381.8**

24.1 Obligations under length-of-service awards and post-employment benefits

In accordance with the Group’s remuneration systems, the Group employees are entitled to post-employment benefits upon retirement. Length-of-service awards are paid after a specific period of employment. Therefore, based on valuations prepared by professional actuary firms or based on own estimates, the Group recognises the present value of obligations under length-of-service awards and post-employment benefits. The table below provides information on the amount of the obligations and reconciliation of changes in the obligations during the reporting period.

	Note	Post-employment benefits		Length-of-service awards and other benefits		Total	
		2020	2019	2020	2019	2020	2019
Jan 1		**58.7**	**47.5**	**169.8**	**142.9**	**228.5**	**190.4**
Current service cost	24.2	4.0	2.9	14.0	11.3	18.0	14.2
Cost of discount	24.2; 9.6	1.1	1.2	3.3	3.9	4.4	5.1
Settlement of the scheme		(0.1)	-	(0.4)	-	(0.5)	-
Benefits paid		(3.8)	(3.7)	(14.2)	(13.6)	(18.0)	(17.3)
Actuarial (gains)/losses under profit or loss	24.2	-	-	9.4	25.3	9.4	25.3
Actuarial (gains)/losses under other comprehensive income	24.2	7.7	10.8	-	-	7.7	10.8
Dec 31		**67.6**	**58.7**	**181.9**	**169.8**	**249.5**	**228.5**
including:							
non-current portion		62.0	51.7	167.5	155.1	229.5	206.8
current portion		5.6	7.0	14.4	14.7	20.0	21.7
Obligations under length-of-service awards and post-employment benefits at foreign companies (1)		1.1	1.1	-	-	1.1	1.1
Dec 31		**68.7**	**59.8**	**181.9**	**169.8**	**250.6**	**229.6**
including:							
non-current portion		62.7	52.4	167.5	155.1	230.2	207.5
current portion		6.0	7.4	14.4	14.7	20.4	22.1

(1) Given the different nature of retirement plans at the AB LOTOS Geonafta Group companies, and their immaterial effect on the Group's obligations under length-of-service awards and post-employment benefits, those companies' obligations are presented separately under Obligations under length-of-service awards and post-employment benefits at foreign companies.

24.2 Total cost of future employee benefit payments charged to profit or loss

	Note	2020	2019
Items recognised in profit or loss:		**31.6**	**44.6**
Length-of-service awards, retirement and other post-employment benefits	9.2	27.2	39.5
- current service cost	24.1	18.0	14.2
- effect of foreign operations		(0.2)	-
- actuarial (gains)/losses	24.1	9.4	25.3
Cost of discount	24.1; 9.6	4.4	5.1
Items recognised in other comprehensive income:		**7.8**	**10.9**
Actuarial (gains)/losses	24.1	7.7	10.8
Effect of foreign operations		0.1	0.1
Total comprehensive income		**39.4**	**55.5**

24.3 Actuarial assumptions

Key assumptions adopted by the actuary	Dec 31 2020	Dec 31 2019
Discount rate (%)	1.40%	2.00%
Expected inflation rate (%)	2.60%	2.50%
Employee turnover ratio (%)	4.40%	3.35%
Expected wage growth rate (%) in the following year	3.30%	5.00%
Expected wage growth rate (%) in subsequent years	2.50%	2.50%

- The employee attrition probability is based on the historical data on employee turnover at the Group and statistical data on the Polish labour market. The employee turnover ratios applied by the actuary were determined separately for age categories in ten-year intervals. The employee turnover ratio is now calculated on an average basis.
- The mortality and life expectancy ratios are based on the Life Expectancy Tables of Poland for 2019, published by Statistics Poland (GUS), and assume that the Group's employee population is representative of the average Polish population in terms of mortality (December 31st 2019: Life Expectancy Tables of Poland for 2016).
- It was assumed that employees would retire in accordance with the standard procedure, as prescribed by the Pensions Act, with the exception of employees who, according to the information provided by the Company, meet the conditions for early retirement entitlement.
  The discount rate on future benefits was assumed at 1.4%, i.e. reflecting the assumption made at the corporate level (December 31st 2019: 2.0%, i.e. reflecting the assumption made at the corporate level).

24.4 Termination benefits

In 2020, termination benefits and compensation payable in respect of the non-compete obligation totalled PLN 9.0m (2019: PLN 7.6m).

In 2020, the amount of provisions for termination benefits was PLN 0.1m (2019: PLN 0.1m).

24.5 Sensitivity analysis

The table below presents results of calculations for changed key actuarial assumptions: the salaries and wages growth rate and the discount rate.

Initial obligation balance

Wage growth rate	Discount rate	Length-of-service awards	Old-age and disability retirement severance payments	Death benefits	Social benefits fund	Total [1]
base	base	161.8	54.1	12.8	20.8	249.5
base + 1%	base	173.2	59.1	13.6	23.3	269.2
base - 1%	base	145.1	47.3	11.2	18.0	221.6
base	base + 0.5%	151.6	49.8	11.8	18.3	231.5
base	base - 0.5%	165.9	56.0	13.0	22.7	257.6

[1] Given the different nature of retirement plans at the AB LOTOS Geonafta Group companies, and their immaterial effect on the Group's obligations under length-of-service awards and post-employment benefits, those companies' obligations are not included in the analysis.

The tables below present results of calculations for changed key actuarial assumptions: the salaries and wages growth rate and the discount rate.

Current service cost projected for 2021

Wage growth rate	Discount rate	Length-of-service awards	Old-age and disability retirement severance payments	Death benefits	Social benefits fund	Total [1]
base	base	13.3	3.5	1.1	1.3	19.2
base + 1%	base	14.9	4.1	1.2	1.6	21.8
base - 1%	base	11.9	3.0	1.0	1.1	17.0
base	base + 0.5%	12.6	3.2	1.0	1.2	18.0
base	base - 0.5%	13.9	3.7	1.2	1.6	20.4

Cost of discount projected for 2021

Wage growth rate	Discount rate	Length-of-service awards	Old-age and disability retirement severance payments	Death benefits	Social benefits fund	Total [1]
base	base	2.2	0.7	0.2	0.3	3.4
base + 1%	base	2.3	0.7	0.2	0.3	3.5
base - 1%	base	2.0	0.6	0.2	0.3	3.1
base	base + 0.5%	2.8	0.9	0.2	0.3	4.2
base	base - 0.5%	1.4	0.5	0.1	0.2	2.2

Total current service cost and cost of discount projected for 2021

Wage growth rate	Discount rate	Length-of-service awards	Old-age and disability retirement severance payments	Death benefits	Social benefits fund	Total [1]
base	base	15.5	4.2	1.3	1.6	22.6
base + 1%	base	17.2	4.8	1.4	1.9	25.3
base - 1%	base	13.9	3.6	1.2	1.4	20.1
base	base + 0.5%	15.4	4.1	1.2	1.5	22.2
base	base - 0.5%	15.3	4.2	1.3	1.8	22.6

[1] Given the different nature of retirement plans at the AB LOTOS Geonafta Group companies, and their immaterial effect on the Group's obligations under length-of-service awards and post-employment benefits, those companies' obligations are not included in the analysis.

25. Trade payables, other liabilities and provisions

	Note	Dec 31 2020	Dec 31 2019
Non-current financial liabilities:		**19.3**	**22.9**
Investment commitments		7.1	5.1
Liabilities to Polish National Foundation		11.3	13.3
Other		0.9	4.5
Current financial liabilities:		**1,902.7**	**2,283.4**
Trade payables		1,636.0	1,940.8
- including to related entities	14.2	1.2	2.6
Investment commitments		150.1	222.6
Liabilities to insurers		2.4	5.7
Settlements under joint operations (Norwegian fields) (1)		92.4	76.8
Liabilities to Polish National Foundation		2.5	2.5
Other		19.3	35.0
- including to related entities		-	7.0
Financial liabilities		**1,922.0**	**2,306.3**
Non-current non-financial liabilities:		**1,401.2**	**1,243.1**
Provisions	25.1	1,377.1	1,234.5
Grants	25.2	23.8	8.4
Other		0.3	0.2
Current non-financial liabilities:		**2,161.4**	**1,894.9**
Provisions	25.1	179.2	111.4
Value-added tax payable		492.3	525.0
Excise duty and fuel charge payable		939.8	877.7
Other liabilities to the state budget other than corporate income tax		152.0	157.4
Grants	25.2	22.1	22.5
Settlements under joint operations (Norwegian fields) (1)		-	6.6
Prepaid deliveries		5.5	3.7
Liabilities under the NAVIGATOR loyalty programme		30.6	31.5
Provision for deficit in CO_2 emission allowances	27.2	142.0	71.8
National Reduction Target Provision		75.1	-
Provision for NIT emission charge		62.6	29.6
Provision for RES emission charge		17.4	14.5
Cost of services		17.0	17.9
Other		25.8	25.3
Non-financial liabilities		**3,562.6**	**3,138.0**
Total		**5,484.6**	**5,444.3**
including:			
non-current		1,420.5	1,266.0
current:		4,064.1	4,178.3
- trade receivables		1,636.0	1,940.8
- other		2,428.1	2,237.5

(1) Liabilities of LOTOS Exploration and Production Norge AS (LOTOS Upstream Group, the Exploration & Production segment) under mutual settlements between the operator and consortium members in relation to individual Norwegian fields.

Trade payables do not bear interest and are typically paid in 7-60 days. Other liabilities do not bear interest and their average payment period is one month. Amounts resulting from the difference between value added tax receivable and value added tax payable are paid to the relevant tax authorities on a monthly basis. Interest payable is usually settled on a monthly basis throughout the financial year.

For currency risk sensitivity analysis of trade and other payables, see Note 27.3.1.

For information on contractual maturities of trade and other payables, see Note 27.5.

(PLNm)

25.1 Provisions

	Note	Provisions for decommissioning and site restoration costs					Other provisions		Total
		Provision for oil and gas extraction facilities			Provisions for retired refining and other units	Total			
		Poland	Norway	Lithuania					
Jan 1 2020		**267.9**	**938.4**	**17.4**	**16.2**	**1,239.9**	**106.0**		**1,345.9**
Recognised		-	-	-	0.3	0.3	81.3	(1)	81.6
Remeasurement of decommissioning costs		73.5	1.9	0.5	-	75.9	1.2		77.1
Remeasurement of estimated provision for contingent payments	9.4	-	-	-	-	-	(4.5)		(4.5)
Change in provisions attributable to approaching due date of liability (discount unwinding effect)	9.6	11.8	36.0	3.8	-	51.6	0.1		51.7
Interest on Oil and Gas Facility Decommissioning Fund		0.3	-	-	-	0.3	-		0.3
Exchange differences on translating foreign operations		-	19.1	1.6	-	20.7	1.0		21.7
Used		-	(9.7)	-	-	(9.7)	(5.5)		(15.2)
Reversed		-	-	(0.1)	(0.2)	(0.3)	(2.0)		(2.3)
Dec 31 2020		**353.5**	**985.7**	**23.2**	**16.3**	**1,378.7**	**177.6**		**1,556.3**
including:									
non-current portion		353.5	980.0	23.2	16.2	1,372.9	4.2		1,377.1
current portion		-	5.7	-	0.1	5.8	173.4		179.2

Provisions for decommissioning and site restoration costs:

Provision for oil and gas extraction facilities in Poland – a provision for future costs of decommissioning of the oil and gas extraction facilities in the B-3 and B-8 licence areas, and the Oil and Gas Extraction Facility Decommissioning Fund, set up to cover future costs of decommissioning of oil and gas extraction facilities in accordance with the Geological and Mining Law of February 4th 1994 and the Minister of Economy's Regulation of June 24th 2002.

Provision for oil and gas extraction facilities in Norway − a provision for future costs of decommissioning of the oil extraction facilities in the YME field, and the oil and gas extraction facilities in the Heimdal, Sleipner and Utgard fields.

Provision for oil and gas extraction facilities in Lithuania − a provision for future costs of decommissioning of the Lithuanian oil extraction facilities.

Provisions for retired refining and other units − a provision for site restoration and the cost of disassembly and decommissioning of the retired units at LOTOS Terminale S.A., a provision for estimated cost of disassembly of the subsea pipeline operated by a subsidiary Energobaltic Sp. z o.o. (a company of the LOTOS Petrobaltic Group), as well as for site restoration and clean-up.

(1) Including PLN 49.7m in provisions for disputed claims (proceedings involving subsidiary LOTOS Petrobaltic S.A. and AGR Subsea Ltd., see Note 29.1).

	Note	Provisions for decommissioning and site restoration costs					Other provisions	Total
		Provision for oil and gas extraction facilities			Provisions for retired refining and other units	Total		
		Poland	Norway	Lithuania				
Jan 1 2019		**228.2**	**863.4**	**15.6**	**12.8**	**1,120.0**	**161.3**	**1,281.3**
Recognised		-	-	-	3.5	3.5	10.1	13.6
Remeasurement of decommissioning costs		32.5	42.5 [1]	1.1	-	76.1	0.2	76.3
Remeasurement of estimated provision for contingent payments	9.3	-	-	-	-	-	(44.5)	(44.5)
Change in provisions attributable to approaching due date of liability (discount unwinding effect)	9.6	6.8	34.8	0.8	-	42.4	2.0	44.4
Interest on Oil and Gas Facility Decommissioning Fund		0.4	-	-	-	0.4	-	0.4
Transfer		-	-	-	-	-	0.1	0.1
Exchange differences on translating foreign operations		-	(1.8)	(0.1)	-	(1.9)	0.6	(1.3)
Used		-	(0.5)	-	-	(0.5)	(22.6) [2]	(23.1)
Reversed		-	-	-	(0.1)	(0.1)	(1.2)	(1.3)
Dec 31 2019		**267.9**	**938.4**	**17.4**	**16.2**	**1,239.9**	**106.0**	**1,345.9**
including:								
non-current portion		267.9	928.2	17.4	16.1	1,229.6	4.9	1,234.5
current portion		-	10.2	-	0.1	10.3	101.1	111.4

Provisions for decommissioning and site restoration costs:

Provision for oil and gas extraction facilities in Poland – a provision for future costs of decommissioning of the oil and gas extraction facilities in the B-3 and B-8 licence areas, and the Oil and Gas Extraction Facility Decommissioning Fund, set up to cover future costs of decommissioning of oil and gas extraction facilities in accordance with the Geological and Mining Law of February 4th 1994 and the Minister of Economy's Regulation of June 24th 2002.

Provision for oil and gas extraction facilities in Norway − a provision for future costs of decommissioning of the oil extraction facilities in the YME field, and the oil and gas extraction facilities in the Heimdal, Sleipner and Utgard fields.

Provision for oil and gas extraction facilities in Lithuania − a provision for future costs of decommissioning of the Lithuanian oil extraction facilities.

Provisions for retired refining and other units − a provision for site restoration and the cost of disassembly and decommissioning of the retired units at LOTOS Terminale S.A., a provision for estimated cost of disassembly of the subsea pipeline operated by a subsidiary Energobaltic Sp. z o.o. (a company of the LOTOS Petrobaltic Group), as well as for site restoration and clean-up.

(1) The amount includes provisions for future costs of decommissioning of crude oil and gas extraction facilities related to the Heimdal, Sleipner and YME assets.
(2) Including PLN 21.6m related to a provision for contingent payments under the Sleipner assets acquisition agreement.

Provision for oil and gas extraction facilities − Norway

Provision for decommissioning and restoration of oil extraction facility in the YME field

As at December 31st 2020, the provision for decommissioning and restoration of the extraction facility in the YME field, totalling PLN 211.8m, was disclosed under Other liabilities and provisions and reflected the current estimate, made based on the Group's best knowledge, of future costs of removal of the YME infrastructure and costs of site restoration, assuming that the project is decommissioned in 2032. As at December 31st 2019, the provision was PLN 173.9m.

Provision for decommissioning and restoration of gas extraction facilities in the Heimdal fields

Decommissioning of the fixed assets of the offshore oil and gas extraction facility in the Heimdal fields and site restoration work are scheduled for 2019–2023. As at December 31st 2020, the provision was disclosed in the Group's statement of financial position under Other liabilities and provisions at PLN 194.1m. As at December 31st 2019, the provision was PLN 217.1m.

Provision for decommissioning and restoration of gas extraction facilities in the Sleipner and Utgard fields

Decommissioning of fixed assets and restoration of the offshore area of the oil and gas extraction facility on the Sleipner fields and the Utgard field, launched in 2019, are scheduled for 2026–2038. As at December 31st 2020, the provision was disclosed in the Group's statement of financial position under Other liabilities and provisions at PLN 579.8m. As at December 31st 2019, the provision was PLN 547.4m.

Other provisions

The tax risk provision as at December 31st 2020 was PLN 87.3m. As at December 31st 2019, the provision was PLN 83.1m.

As at December 31st 2020, the provision for disputed claims was PLN 55.1m. As at December 31st 2019, the provision was PLN 5.7m.

25.2 Grants

	Note	Dec 31 2020	Dec 31 2019
At beginning of period		**30.9**	**38.4**
Grants received in the period		21.7	10.2
Deferred grants		(6.7)	(17.7)
At end of period		**45.9**	**30.9**
including:			
non-current portion	25	23.8	8.4
current portion	25	22.1	22.5

The grants are primarily related to licences received free of charge, grants from the Eco Fund for the use of waste gas from an offshore oil extraction facility for heating purposes, and funding for the purchase of state-of-the-art intermodal rolling stock from the Centre for EU Transport Projects.

26. Financial instruments

26.1 Carrying amount

		IFRS 9								outside IFRS 9		Total	
		Measurement at amortised cost		Measurement at fair value through: Profit or loss		Measurement at fair value through: Other comprehensive income		Total					
	Note	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Financial assets													
Trade receivables	15	1,693.9	2,609.1	-	-	-	-	1,693.9	2,609.1	-	-	1,693.9	2,609.1
Derivative financial instruments	23	-	-	67.1	25.2	-	-	67.1	25.2	-	-	67.1	25.2
Finance lease receivables	15.2	-	-	-	-	-	-	-	-	12.7	13.1	12.7	13.1
Equity investments	15	-	-	-	-	309.8	9.8	309.8	9.8	-	-	309.8	9.8
Other financial assets	15	391.8	154.4	-	-	-	-	391.8	154.4	-	-	391.8	154.4
Cash and cash equivalents	17	2,145.6	1,516.6	-	-	-	-	2,145.6	1,516.6	-	-	2,145.6	1,516.6
Total		**4,231.3**	**4,280.1**	**67.1**	**25.2**	**309.8**	**9.8**	**4,608.2**	**4,315.1**	**12.7**	**13.1**	**4,620.9**	**4,328.2**
Financial liabilities													
Bank and non-bank borrowings and notes	22	2,827.1	3,140.4	-	-	-	-	2,827.1	3,140.4	-	-	2,827.1	3,140.4
Leases	22	-	-	-	-	-	-	-	-	1,246.4	1,276.0	1,246.4	1,276.0
Derivative financial instruments	23	-	-	19.5	21.9	-	-	19.5	21.9	-	-	19.5	21.9
Trade payables	25	1,636.0	1,940.8	-	-	-	-	1,636.0	1,940.8	-	-	1,636.0	1,940.8
Other financial liabilities	25	286.0	365.5	-	-	-	-	286.0	365.5	-	-	286.0	365.5
Total		**4,749.1**	**5,446.7**	**19.5**	**21.9**	**-**	**-**	**4,768.6**	**5,468.6**	**1,246.4**	**1,276.0**	**6,015.0**	**6,744.6**

26.2 Fair value measurement

Dec 31 2020	Note	Carrying amount	Fair value	Fair value hierarchy		
				Level 1	Level 2	Level 3
Financial assets						
Financial assets measured at fair value through other comprehensive income	15	309.8	309.8	-	-	309.8
Loans	15	195.9	195.9	-	195.9	-
Derivative financial instruments	23	67.1	67.1	14.8	52.3	-
Total		**572.8**	**572.8**	**14.8**	**248.2**	**309.8**
Financial liabilities						
Bank borrowings	22.1	2,559.8	2,572.2	-	2,572.2	-
Notes	22.3	231.7	233.6	-	233.6	-
Derivative financial instruments	23	19.5	19.5	-	19.5	-
Total		**2,811.0**	**2,825.3**	**-**	**2,825.3**	**-**

For the other classes of financial assets and liabilities, the fair value corresponds to their carrying amounts.

Dec 31 2019	Note	Carrying amount	Fair value	Fair value hierarchy		
				Level 1	Level 2	Level 3
Financial assets						
Financial assets measured at fair value through other comprehensive income	15	9.8	9.8	-	-	9.8
Loans	15	-	-	-	-	-
Derivative financial instruments	23	25.2	25.2	-	25.2	-
Total		**35.0**	**35.0**	**-**	**25.2**	**9.8**
Financial liabilities						
Bank borrowings	22.1	2,865.2	2,863.1	-	2,863.1	-
Notes	22.3	231.8	231.4	-	231.4	-
Derivative financial instruments	23	21.9	21.9	-	21.9	-
Total		**3,118.9**	**3,116.4**	**-**	**3,116.4**	**-**

For the other classes of financial assets and liabilities, the fair value corresponds to their carrying amounts.

(PLNm)

26.3 Items of income, expenses, gains and losses disclosed in the statement of comprehensive income by category of financial instrument

		IFRS 9											
		Measurement at amortised cost		Measurement at fair value through: Profit or loss		Measurement at fair value through: Other comprehensive income		Total		Outside IFRS 9		Total	
	Note	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Trade receivables:													
Interest income	9.5	2.4	2.8	-	-	-	-	2.4	2.8	-	-	2.4	2.8
Foreign exchange gains recognised in cost of sales	9.1	5.2	8.4	-	-	-	-	5.2	8.4	-	-	5.2	8.4
Foreign exchange gains/(losses) recognised in finance income/(costs)	9.5; 9.6	2.5	(0.8)	-	-	-	-	2.5	(0.8)	-	-	2.5	(0.8)
(Impairment losses)/reversal of impairment losses on financial instruments	9.7	(4.7)	(5.0)	-	-	-	-	(4.7)	(5.0)	-	-	(4.7)	(5.0)
Equity investments:													
Dividend income	9.5	-	-	-	-	3.0	2.6	3.0	2.6	-	-	3.0	2.6
Other financial assets:													
Interest income on deposits	9.5	5.4	32.3	-	-	-	-	5.4	32.3	-	-	5.4	32.3
Foreign exchange (losses) on non-bank borrowings recognised in finance income/(costs)	9.5; 9.6	(0.8)	(1.2)	-	-	-	-	(0.8)	(1.2)	-	-	(0.8)	(1.2)
Impairment (losses) on financial instruments	9.7	(9.4)	(31.3)	-	-	-	-	(9.4)	(31.3)	-	-	(9.4)	(31.3)
Cash and cash equivalents													
Interest income	9.5	1.3	6.4	-	-	-	-	1.3	6.4	-	-	1.3	6.4
Foreign exchange gains/(losses) recognised in finance income/(costs)	9.5; 9.6	16.2	(1.1)	-	-	-	-	16.2	(1.1)	-	-	16.2	(1.1)
Derivative financial instruments (financial assets/liabilities):													
Gains on fair value measurement of derivative financial instruments	9.5	-	-	43.1	34.8	-	-	43.1	34.8	-	-	43.1	34.8
Gains/(losses) on realised of derivative financial instruments	9.5	-	-	22.6	(19.0)	-	-	22.6	(19.0)	-	-	22.6	(19.0)
Bank and non-bank borrowings and notes:													
Interest expense	9.6	(91.8)	(114.7)	-	-	-	-	(91.8)	(114.7)	-	-	(91.8)	(114.7)
(Losses) on cash flow hedge accounting charged against revenue	8.1	(240.2)	(131.2)	-	-	-	-	(240.2)	(131.2)	-	-	(240.2)	(131.2)
Foreign exchange gains/(losses) on bank and non-bank borrowings, notes and realised foreign-currency transactions in bank accounts recognised in finance income/(costs)	9.5; 9.6	35.4	(44.0)	-	-	-	-	35.4	(44.0)	-	-	35.4	(44.0)
Gains on measurement of cash flow hedges recognised in other comprehensive income	20	221.2	104.5	-	-	-	-	221.2	104.5	-	-	221.2	104.5
Leases													
Interest expense	9.6	-	-	-	-	-	-	-	-	(75.8)	(79.7)	(75.8)	(79.7)
Foreign exchange gains/(losses) recognised in finance income/(costs)	9.5; 9.6	-	-	-	-	-	-	-	-	(4.1)	0.4	(4.1)	0.4
Trade and other payables:													
Foreign exchange (gains)/losses recognised in cost of sales	9.1	(9.0)	57.6	-	-	-	-	(9.0)	57.6	-	-	(9.0)	57.6
Foreign exchange (losses) recognised in finance income/(costs)	9.5; 9.6	(0.2)	(0.8)	-	-	-	-	(0.2)	(0.8)	-	-	(0.2)	(0.8)
Other financial liabilities:													
Foreign exchange gains/(losses) on investment liabilities recognised in finance income/(costs)	9.5; 9.6	(6.8)	1.2	-	-	-	-	(6.8)	1.2	-	-	(6.8)	1.2
Total		**(73.3)**	**(116.9)**	**65.7**	**15.8**	**3.0**	**2.6**	**(4.6)**	**(98.5)**	**(79.9)**	**(79.3)**	**(84.5)**	**(177.8)**

27. Objectives and policies of financial risk management

The Group is exposed to financial risks, including:

- market risk (risk of movements in commodity and petroleum product prices, risk of movements in prices of CO_2 allowances, currency risk, interest rate risk),
- liquidity risk,
- credit risk in financial and trade transactions.

The Parent has appropriate units (Finance Management Office, Financial Risk Analysis and Control Office) reporting to the Chief Financial Officer, who coordinates and exercises ongoing supervision of the LOTOS Group's financial risk management processes.

Furthermore, the Price Risk and Trading Committee, appointed by the Management Board, supervises the work on development of policies and procedures, and monitors the implementation of the Group's strategy in the area of its responsibilities. Specifically, the Committee provides opinions on or initiates key price and trading risk management initiatives, issues recommendations, and submits proposals for actions that require the Management Board's approval.

In addition, to ensure effective management of liquidity, debt structure and external finance raising by companies of the LOTOS Group, the Management Board has appointed the Liquidity Optimisation and Financing Coordination Team.

Financial risk management seeks to achieve the following key objectives:

- increase the probability of budget and strategic objectives being met,
- limit cash flow volatility,
- ensure short-term financial liquidity,
- optimise the expected level of cash flows and risk,
- support operating, investment and financial processes, and create value in the long term.

With a view to implementing the above objectives, the Group has put in place appropriate tools and developed a number of documents, approved at the relevant decision-making levels, defining the framework for ensuring effectiveness and safety of the Group's financial activities, including:

- the methodology for quantifying exposures to particular risks,
- the time horizon for hedging a given risk,
- acceptable financial instruments,
- the method of assessing financial risk management,
- limits within risk management,
- the reporting method,
- credit limits,
- documentation and operating standards,
- separation of responsibilities for execution of transactions, risk analysis and control, documentation of and accounting for transactions, and their allocation to different corporate units.

The Parent monitors and reports all managed market risks on an ongoing basis. The Parent uses liquid derivatives which can be measured by applying commonly used valuation models. The valuation of derivative financial instruments is performed based on market inputs provided by reliable sources. Opening positions with respect to risks which do not arise as part of the Group's core business is prohibited.

In July 2019, as part of the refinancing of foreign-currency loans used to finance the 10+ Programme, the existing hedging relationships were terminated and new financing agreements were created to maintain the type of hedge accounting applied (cash flow hedge) and designated as the hedged item for future sales of oil products denominated in USD.

27.1 Risk of movements in commodity and petroleum product prices

The Group considers the risk of movements in commodity and petroleum product prices to be particularly important.

The following risk factors are identified in this area:

- volatility of the refining margin, measured as the difference between liquid indices of a reference petroleum product basket (e.g. aviation fuel, gasoline, diesel oil, fuel oil) and a liquid index of reference commodity (e.g. Urals crude),
- volatility of prices with respect to the commodity and product inventory volumes deviating from the required levels of emergency and operational stocks,
- volatility of differentials between the reference indices and indices used in commercial contracts (e.g. Urals-Brent differential, i.e. the difference between different types of crude oil),
- use of non-standard pricing formulae in trade contracts.

The Parent has in place "Grupa LOTOS S.A.'s commodity and petroleum products price risk management policy", which defines the classification system for transaction portfolios and their business functions, describes how risk is understood and how portfolio exposures are measured, specifies permitted financial instruments and limitations on their use, and transaction execution standards, and also provides guidelines on how to evaluate risk management performance and set relevant limits. Transaction limits falling within the scope of that policy are delegated by the Management Board to lower-level decision-makers.

To support the achievement of the policy objectives, the Company uses a leading Energy Trading and Risk Management system (Allegro).

Under the approved policy, the Company may continue to offer petroleum products at fixed prices. To preserve the original price risk profile, the Group has entered into commodity swaps.

In 2018, the Management Board of Grupa LOTOS S.A. approved the “Market Risk Management Policy for the exploration and production segment of the LOTOS Group”.

Open commodity swaps as at December 31st 2020:

Type of contract	Reference index	Valuation period	Amount in tonnes in the valuation period	Fair value measurement	
				Financial assets	Financial liabilities
Commodity swap	FuelOil 3.5 pct Brg FOB Rrdam	Mar 2021–Nov 2022	196,939	29.6	(2.8)
Commodity swap	Gasoil 0.1 pct Crg CIF NWE_ARA	Mar 2021–Nov 2022	(18,203)	3.4	(2.3)
			Total	**33.0**	**(5.1)**

These swap transactions for a total of 196,939 tonnes based on the 3.5 PCT Barges FOB Rotterdam liquid index in the period from March 2021 to November 2022 and (18,203) tonnes based on the Gasoil 0.1 pct Crg CIF NWE ARA liquid index in the same period were entered into to reverse the risk profile of commodity and petroleum product prices arising from the sale of bitumen components at fixed prices.

Open commodity swaps as at December 31st 2019:

Type of contract	Reference index	Valuation period	Amount in tonnes in the valuation period	Fair value measurement	
				Financial assets	Financial liabilities
Commodity swap	FuelOil 3.5 pct Brg FOB Rrdam	Mar 2020–Sep 2021	171,422	1.1	(14.3)
Commodity swap	Gasoil 0.1 pct Crg CIF NWE_ARA	Mar 2020–Sep 2021	(15,839)	0.5	(1.0)
			Total	**1.6**	**(15.3)**

These swap transactions for a total of 171,422 tonnes based on the 3.5 PCT Barges FOB Rotterdam liquid index in the period from March 2020 to June 2021 and (15,839) tonnes based on the Gasoil 0.1 pct Crg CIF NWE ARA liquid index in the same period were entered into to reverse the risk profile of commodity and petroleum product prices arising from the sale of bitumen components at fixed prices.

27.1.1 Sensitivity analysis: risk of movements in commodity and petroleum product prices

Below is presented an analysis of the sensitivity of the Group's financial transactions to the risk of movements in commodity and petroleum product prices as at December 31st 2020 and 2019, assuming price increase/decrease corresponding to the implied annual volatility of the reference index:

	Dec 31 2020			Dec 31 2019		
	Carrying amount	Change* + implied volatility	Change* - implied volatility	Carrying amount	Change** + implied volatility	Change** - implied volatility
Financial assets	33.0	67.3	(67.3)	1.6	9.0	(9.0)
Financial liabilities	5.2	(12.1)	12.1	15.3	(54.9)	54.9
Effect on profit/loss		**79.4**	**(79.4)**		**63.9**	**(63.9)**

* With respect to instruments held as at December 31st 2020, the above deviations of reference index prices were calculated based on the implied annual volatility of the reference index for December 31st 2020, as published by SuperDerivatives. The volatility was +/- 44.93% for the 3.5 PCT Barges FOB Rotterdam index and +/- 34.67% for the Gasoil 0.1 pct Crg CIF NWE_ARA index.
** With respect to instruments held as at December 31st 2019, the above deviations of reference index prices were calculated based on the implied annual volatility of the reference index for December 31st 2019, as published on the SuperDerivatives website. The volatility was +/- 45.12% for the 3.5 PCT Barges FOB Rotterdam index and +/- 22.98% for the Gasoil 0.1 pct Crg CIF NWE_ARA index.

The effect of the reference index price changes on the fair value was examined assuming that the currency exchange rates remain unchanged.

27.2 Risk of movements in prices of carbon dioxide (CO_2) emission allowances

The risk of movements in prices of carbon dioxide emission allowances is managed by the Parent on an ongoing basis in line with the assumptions set forth in the strategy for managing the risk approved by the Grupa LOTOS Management Board. The Group balances its future CO_2 emission allowance deficits and surpluses depending on the market situation, within defined limits. In line with the approved strategy and limits, the Parent executes the following transactions for emission units:

- EUA (Emission Unit Allowance) – represents an allowance to emit one tonne of CO_2,
- CER (Certified Emission Reduction unit) – represents one tonne of CO_2 equivalent (tCO_2e) effectively reduced. CERs are obtained in connection with investment projects implemented in developing countries where no CO_2 emission limits have been defined.
- ERU (Emission Reduction Unit) – represents one tonne of CO_2 equivalent (tCO_2e) effectively reduced. ERUs are certified emission units, obtained through investment projects implemented in countries where CO_2 reduction costs are lower.

As at December 31st 2020, the Parent’s deficit of allowances in the 2013–2020 trading period (Phase III) was 954,887 tonnes. However, taking into account derivative transactions for a total of 1,555,000 tonnes, the Parent had surplus emission allowances for 600,113 tonnes, which were purchased in view of the market situation and the strategic nature of the emission allowances deficit expected after 2020.

As at December 31st 2019, the Parent’s deficit of allowances in the 2013–2020 trading period (Phase III) was 1,033,226 tonnes. However, taking into account derivative transactions for a total of 1,595,000 tonnes, the Parent had surplus emission allowances for 561,774 tonnes, which were purchased in view of the market situation and the strategic nature of the emission allowances deficit expected after 2020.

To manage the risk related to carbon dioxide emission allowances, the Group evaluates the risk of deficit of free emission allowances allocated under the National Allocation Plan on a case-by-case basis.

The CO_2 emission allowances for 2013–2020 presented below include allowances granted pursuant to the Regulations of the Council of Ministers, as well as other free allowances allocated by the European Commission.

Number of free CO_2 emission allowances for 2013–2020 and actual CO_2 emissions:

in million tonnes	2013	2014	2015	2016	2017	2018	2019	2020	Total
Allowances allocated under the National Allocation Plan(1)	1.8	1.7	1.6	1.6	1.6	1.5	1.7	1.6	13.1
Actual CO_2 emissions (2)	1.7	1.9	1.9	2.0	1.8	2.0	2.0	2.0	15.3

(1) Number of free CO_2 allowances in 2013–2020 as per the National Allocation Plan (NAP), based on the Regulation of the Polish Council of Ministers of March 31st 2014 (Dz.U. of 2014, item 439) and the Regulation of the Polish Council of Ministers of April 8th 2014 (Dz.U. of 2014, item 472), containing a list of installations covered by the greenhouse gas emission allowance trading scheme along with the number of allowances allocated to them. The figures also account for additional free emission allowances from the European Commission reserve, allocated in connection with the expansion of the refinery's production capacities following from the use of natural gas in hydrogen production.

(2) CO_2 emissions calculated based on the production data for the installations covered by the emissions trading scheme. The data is verified in accordance with Art. 59 of the Act on Trading in Greenhouse Gas Emission Allowances of April 28th 2011.

As at December 31st 2020, considering the proposed amount of allowances to be allocated under the European Union Emissions Trading Scheme for 2020 and the actual volume of emissions, the Group reported a deficit of allocated CO_2 emission allowances, and therefore recognised a liability PLN 142.0m as at December 31st 2020 (December 31st 2019: PLN 71.8m). The PLN 70.2m effect of the provision on EBIT is presented under cost of sales (2019: PLN 30.5m).

If required, futures contracts to purchase carbon dioxide (CO_2) allowances open as at the last day of the reporting period are settled by the Company through physical delivery, with the intention to potentially use the allowances to offset the Company's actual CO_2 emissions. In 2020, unlike in previous years, the measurement of contracts intended to be settled through physical delivery is disclosed under financial assets/liabilities.

Contract position as at December 31st 2020 and 2019:

Open CO_2 allowances contracts as at December 31st 2020:

Type of contract	Contract settlement period	Contract volume (in tonnes)	Phase	Fair value measurement	
				Financial assets	Financial liabilities
EUA Futures	MAR 2021	1,555,000	Phase III	14.8	-

Open CO_2 allowances contracts as at December 31st 2019:

Type of contract	Contract settlement period	Contract volume (in tonnes)	Phase	Fair value measurement*	
				Financial assets	Financial liabilities
EUA Futures	DEC 2020	1,595,000	Phase III	3.3	(1.1)

*Off-balance-sheet value used exclusively for statistical purposes and as part of monitoring in risk management.

27.2.1 Sensitivity analysis: risk of movements in prices of carbon dioxide (CO_2) emission allowances

The sensitivity of the futures fair value as at December 31st 2020 is presented below.

	Dec 31 2020		
	Carrying amount	Change*	
		+ implied volatility	- implied volatility
Financial assets	14.8	109.4	(109.4)
Effect on profit/loss		**109.4**	**(109.4)**

*With respect to instruments held as at December 31st 2020, the above deviations of prices of CO_2 emission allowances were calculated based on the implied annual volatility of EUA futures contracts of December 31st 2020, as published by SuperDerivatives; the implied volatility was 46.79%.

Given that in 2019 the futures contracts for the purchase of CO_2 emission allowances were not recognised as financial assets/liabilities in the financial statements, no sensitivity analysis was performed as at December 31st 2019 for EUA futures instruments then held.

27.3 Currency risk

In its operations the Group is exposed to currency risks related to:
- trading in raw materials, petroleum products and other commodities,
- investment cash flows,
- cash flows from financing activities, including deposits and borrowings,
- valuation of derivative instruments,

indexed to or denominated in a currency other than the functional currency.

Currency risk is managed by the Parent in line with the assumptions of the Grupa LOTOS S.A. Currency Risk Management Policy. Under the policy, exposure is understood as material positions exposed to currency risk, affecting liquidity within the management horizon when the risk arises. The central risk metric is Cash-Flow-at-Risk (CFaR), computed based on the CorporateMetrics™ methodology, with the CFaR value limit and the maximum hedge ratio being the key limits.
The exposure management horizon is linked with the budget forecast horizon, which varies from three to six consecutive quarters depending on the time of the year.

The Group actively manages its currency exposure by optimising the expected values of cash flows and risk within applicable limits, taking into account expected market developments.

As USD is used in market price quotations for crude oil and petroleum products, it was decided that USD is the most appropriate currency for contracting and repaying long-term credit facilities as this would reduce the structural long position and, consequently, also the strategic currency risk.

The Group has a structural long position in USD (it benefits from a rise in the USD/PLN exchange rate) as its cash inflows dependent on the USD exchange rate (mainly revenue from sale of petroleum products) are higher than the corresponding cash outflows (e.g. on purchase of crude oil, credit facility repayments), and it has a short position in EUR resulting mainly from feedstock purchases and payments related to investing activities.

Open currency contracts as at December 31st 2020:

Type of contract	Purchase/sale	Contract settlement period	Currency pair (base/floating)	Amount in base currency	Fair value measurement	
					Financial assets	Financial liabilities
Currency spot	Purchase	JAN 2021	USD/PLN	29.5	1.0	-
Currency spot	Purchase	JAN 2021	EUR/PLN	0.4	0.0	-
Currency forward	Sales	APR 2021	USD/PLN	(0.5)	0.0	-
Currency swap	Sales	JAN–MAY 2021	USD/PLN	(192.8)	18.3	(3.0)
Currency swap	Sales	JAN–FEB 2021	EUR/PLN	(19.8)	-	(3.2)
				Total	**19.3**	**(6.2)**

Open currency contracts as at December 31st 2019:

Type of contract	Purchase/sale	Contract settlement period	Currency pair (base/floating)	Amount in base currency	Fair value measurement	
					Financial assets	Financial liabilities
Currency spot	Purchase	JAN 2020	USD/PLN	20.8	-	-
Currency spot	Sales	JAN 2020	EUR/PLN	(0.1)	-	-
Currency forward	Purchase	JUN 2020	EUR/USD	17.0	0.3	-
Currency forward	Sales	JAN − APR 2020	USD/PLN	(130.0)	12.9	-
Currency swap	Purchase	JAN − MAR 2020	EUR/USD	87.5	1.3	-
Currency swap	Sales	JAN − APR 2020	USD/PLN	(226.3)	8.6	-
Currency swap	Sales	JAN − MAR 2020	EUR/PLN	(19.5)	0.5	-
				Total	**23.6**	**-**

27.3.1 Sensitivity analysis: currency risk

Currency structure of selected financial instruments as at December 31st 2020

Dec 31 2020	USDm	USD translated into PLN	EURm	EUR translated into PLN	Carrying amount in foreign currency translated into PLN as at the reporting date
Financial assets					
Trade receivables	44.5	167.4	6.3	29.0	196.4
Cash and cash equivalents	77.6	294.7	44.6	207.8	502.5
Other financial assets:	22.4	84.1	3.7	16.7	100.8
Loans to related entities	19.7	74.1	-	-	74.1
Security deposits (margins)	-	-	3.4	15.6	15.6
Other	2.7	10.0	0.3	1.1	11.1
Total	**144.5**	**546.2**	**54.6**	**253.5**	**799.7**
Financial liabilities					
Bank and non-bank borrowings	645.8	2,392.1	5.9	27.0	2,419.1
Notes	61.6	231.7	-	-	231.7
Leases	-	-	11.2	51.8	51.8
Trade payables	315.9	1,187.3	17.1	78.9	1,266.2
Other financial liabilities	7.5	28.1	16.7	76.8	104.9
Total	**1,030.8**	**3,839.2**	**50.9**	**234.5**	**4,073.7**

Currency structure of selected financial instruments as at December 31st 2019

Dec 31 2019	USDm	USD translated into PLN	EURm	EUR translated into PLN	Carrying amount in foreign currency translated into PLN as at the reporting date
Financial assets					
Trade receivables	64.3	244.2	5.9	25.1	269.3
Cash and cash equivalents	79.1	300.6	29.2	125.0	425.6
Other financial assets:	21.1	80.1	4.1	17.3	97.4
Loans to related entities	18.9	71.8	-	-	71.8
Security deposits (margins)	-	-	4.1	17.3	17.3
Other	2.2	8.3	-	-	8.3
Total	**164.5**	**624.9**	**39.2**	**167.4**	**792.3**
Financial liabilities					
Bank and non-bank borrowings	722.1	2,689.8	-	-	2,689.8
Notes	61.0	231.8	-	-	231.8
Leases	-	-	9.7	41.4	41.4
Trade payables	382.9	1,454.1	15.8	67.2	1,521.3
Other financial liabilities	8.4	31.9	40.8	173.7	205.6
Total	**1,174.4**	**4,407.6**	**66.3**	**282.3**	**4,689.9**

For the purposes of sensitivity analysis, the currency structure presented above also accounts for intercompany foreign currency transactions sensitive to changes in foreign exchange rates, which affect the Group's currency risk in accordance with IAS 21 The Effects of Changes in Foreign Exchange Rates with respect to recognition of relevant foreign exchange gains or losses in the Group's net profit or loss.

Apart from currency spots, forwards and swaps, the Group held foreign-currency derivatives, including commodity swaps, commodity options, interest-rate swaps and futures. Depending on the type of derivative, the Group applies appropriate methods of fair value measurement, which also determine the method of calculating the effect of changes of foreign exchange rates on the value of individual derivatives (for more detailed information on the derivative measurement methods, see Note 7.22). The tables below, presenting sensitivity of financial instruments to currency risk as at December 31st 2020 and December 31st 2019, also present the effect of currency exchange rate movements on the carrying amounts of the derivative financial instruments.

Analysis of the sensitivity to currency risk as at December 31st 2020, showing the effect of a +/- 9.188% change in the USD/PLN exchange rate and a +/- 5.475% change in the EUR/PLN exchange rate on net profit or loss

Dec 31 2020	Effect of exchange rate increase/decrease on net profit/loss for the year in 2020			
	+9.188% USD	+5.475% EUR	-9.188% USD	-5.475% EUR
Financial assets				
Derivative financial instruments	(21.8)	0.9	21.8	(0.9)
Trade receivables	15.4	1.6	(15.4)	(1.6)
Cash and cash equivalents	27.1	11.4	(27.1)	(11.4)
Other financial assets:	7.7	1.0	(7.7)	(1.0)
Loans to related entities	6.8	-	(6.8)	-
Security deposits (margins)	-	0.9	-	(0.9)
Other	0.9	0.1	(0.9)	(0.1)
Total financial assets	**28.4**	**14.9**	**(28.4)**	**(14.9)**
Financial liabilities				
Bank and non-bank borrowings	109.3 (1)	1.5	(109.3) (1)	(1.5)
Notes	21.3	-	(21.3)	-
Leases	-	2.8	-	(2.8)
Derivative financial instruments	33.2	5.0	(33.2)	(5.0)
Trade payables	109.1	4.3	(109.1)	(4.3)
Other financial liabilities	2.6	4.2	(2.6)	(4.2)
Total financial liabilities	**275.5**	**17.8**	**(275.5)**	**(17.8)**
Total	**(247.1)**	**(2.9)**	**247.1**	**2.9**

(1) The calculation of the effect of an exchange rate movement on the balance-sheet item takes into account the effect of cash flow hedge accounting. Assuming a 9.188% change of the USD/PLN exchange rate, the effect of cash flow hedge accounting would potentially lead to a change of PLN (110.5)m/PLN 110.5m in the fair value of borrowings.

The above deviations of carrying amounts in the złoty that are dependent on currency exchange rates were calculated on the basis of the implied annual exchange rate volatility for December 31st 2020, which was 9.188% for USD/PLN and 5.475% for EUR/PLN, as published by Reuters. The sensitivity analysis was performed with reference to the balance of instruments held as at December 31st 2020.

Analysis of the sensitivity to currency risk as at December 31st 2019, showing the effect of a +/- 7.088% change in the USD/PLN exchange rate and a +/- 3.975% change in the EUR/PLN exchange rate on net profit or loss

Dec 31 2019	Effect of exchange rate increase/decrease on net profit/loss for the year in 2019			
	+7.088% USD	+3.975% EUR	-7.088% USD	-3.975% EUR
Financial assets				
Derivative financial instruments	(121.4)	16.2	121.4	(16.2)
Trade receivables	17.3	1.0	(17.3)	(1.0)
Cash and cash equivalents	21.3	5.0	(21.3)	(5.0)
Other financial assets:	5.7	0.7	(5.7)	(0.7)
Loans to related entities	5.1	-	(5.1)	-
Security deposits (margins)	-	0.7	-	(0.7)
Other	0.6	-	(0.6)	-
Total financial assets	**(77.1)**	**22.9**	**77.1**	**(22.9)**
Financial liabilities				
Bank and non-bank borrowings	83.0 (1)	-	(83.0) (1)	-
Notes	16.4	-	(16.4)	-
Leases	-	1.6	-	(1.6)
Derivative financial instruments	1.5	1.8	(1.5)	(1.8)
Trade payables	103.1	2.7	(103.1)	(2.7)
Other financial liabilities	2.3	6.9	(2.3)	(6.9)
Total financial liabilities	**206.3**	**13.0**	**(206.3)**	**(13.0)**
Total	**(283.4)**	**9.9**	**283.4**	**(9.9)**

(1) The calculation of the effect of an exchange rate movement on the balance-sheet item takes into account the effect of cash flow hedge accounting. Assuming a 7.088% change of the USD/PLN exchange rate, the effect of cash flow hedge accounting would potentially lead to a change of PLN (107.7)m/PLN 107.7m in the fair value of borrowings.

The above deviations of carrying amounts in the złoty that are dependent on currency exchange rates were calculated on the basis of the implied annual exchange rate volatility for December 31st 2019, which was 7.088% for USD/PLN and 3.975% for EUR/PLN, as published by Reuters. The sensitivity analysis was performed with reference to the balance of instruments held as at December 31st 2019.

27.4 Interest rate risk

The Group is exposed to the risk of changes in cash flows caused by interest rate movements, as interest income and expense related to certain assets and liabilities accrues based on floating interest rates. This is driven primarily by the expected facility repayment schedules, as well as the amount of interest computed by reference to the floating LIBOR USD rate. The Group manages the interest rate risk within the set limits using interest rate swaps.

Open interest rate contracts as at December 31st 2020:

Type of contract	Period	Notional amount (USDm)	Company receives	Financial assets	Financial liabilities
Interest rate swap (IRS)	SEP 2016 − DEC 2021	115.0	3M LIBOR	-	(8.2)
			Total	**-**	**(8.2)**

Open interest rate contracts as at December 31st 2019:

Type of contract	Period	Notional amount (USDm)	Company receives	Financial assets	Financial liabilities
Interest rate swap (IRS)	SEP 2016 − DEC 2021	211.0	3M LIBOR	-	(6.6)
			Total	**-**	**(6.6)**

In the tables above, IRS contracts are aggregated according to the currency of the notional amount and the reference rate. The 'Period' column shows the earliest start date and the latest end date of the period for contracts classified in a given group.

In connection with the ongoing reform of inter-bank offered rates (IBOR), which will result in cessation of the currently applied interest rates (including the planned discontinuation of LIBOR at the end of 2021) and their replacement with other benchmarks, the Parent is actively monitoring the progress of the reform to the extent applicable to the Company and takes all necessary decisions and steps to prepare for the transition to new interest rates.

In 2021, the Parent plans to hold talks with its financial partners so that relevant clauses relating to new interest rate benchmarks are included in its existing agreements in or before the fourth quarter of 2021.

The Parent may continue to use the interest rate benchmarks previously applied in its hedge accounting calculations until the uncertainty arising from the interest rate benchmark reform no longer exists (pursuant to Annex 'Interest Rate Benchmark Reform' to Commission Regulation (EU) 2020/34 of January 15th 2020, describing temporary exceptions from applying specific hedge accounting requirements), and it intends to transition to new benchmarks as soon as the conditions set out in the Regulation are met.

27.4.1 Sensitivity analysis: interest rate risk

Analysis of the Group's sensitivity to interest rate risk as at December 31st 2020, assuming a +/- 0.11% change in interest rates

Dec 31 2020	Note	Carrying amount	Change +0.11%	Change -0.11%
Classes of financial instruments				
Financial assets				
Cash and cash equivalents	17	2,145.6	2.4	(2.4)
Other financial assets:		323.5	0.3	(0.3)
Loans	15	195.9	0.2	(0.2)
Oil and Gas Extraction Facility Decommissioning Fund	15	43.8	0.0	(0.0)
Cash pledged as security for contractual obligations related to future asset decommissioning	15	67.8	0.1	(0.1)
Security deposits		16.0	0.0	(0.0)
Total		**2,469.1**	**2.7**	**(2.7)**
Financial liabilities				
Bank borrowings	22.1	2,559.8	2.9 (1)	(2.9) (1)
Non-bank borrowings	22.2	35.6	0.0	(0.0)
Notes	22.3	231.7	0.3	(0.3)
Leases	22.4	1,246.4	1.4	(1.4)
Derivative financial instruments (2)	23	8.2	(0.4)	0.4
Total		**4,081.7**	**4.2**	**(4.2)**

(1) Net of paid arrangement fees reducing liabilities under borrowings.

(2) Interest rate swap (IRS). The difference between the change in the valuation amount, when the interest rate curve moves up or down 0.11%, arises at the time of calculating and discounting future cash flows (relating to the contract settlement) as at the valuation date. The cash flows are discounted at different interest rates (in the first case the interest rate curve movement increases the interest rate by 0.11%, in the second case it reduces the interest rate by 0.11%).

Analysis of the Group's sensitivity to interest rate risk as at December 31st 2020, assuming a +/- 0.37% change in interest rates

Dec 31 2019	Note	Carrying amount	Change +0.37%	Change -0.37%
Financial assets				
Cash and cash equivalents	17	1,516.6	5.6	(5.6)
Other financial assets:		97.7	0.4	(0.4)
Oil and Gas Extraction Facility Decommissioning Fund	15	41.1	0.2	(0.2)
Cash pledged as security for contractual obligations related to future asset decommissioning	15	38.9	0.1	(0.1)
Security deposits		17.7	0.1	(0.1)
Total		**1,614.3**	**6.0**	**(6.0)**
Financial liabilities				
Bank borrowings	22.1	2,865.2	10.8 [(1)]	(10.8) [(1)]
Non-bank borrowings	22.2	43.4	0.2	(0.2)
Notes	22.3	231.8	0.9	(0.9)
Leases	22.4	1,276.0	4.7	(4.7)
Derivative financial instruments [(2)]	23	6.6	(2.8)	2.8
Total		**4,423.0**	**13.8**	**(13.8)**

[(1)] Net of fixed-rate borrowings and paid arrangement fees reducing liabilities under borrowings.

[(2)] Interest rate swap (IRS). The difference between the change in the valuation amount, when the interest rate curve moves up or down 0.37%, arises at the time of calculating and discounting future cash flows (relating to the contract settlement) as at the valuation date. The cash flows are discounted at different interest rates (in the first case the interest rate curve movement increases the interest rate by 0.37%, in the second case it reduces the interest rate by 0.37%).

The sensitivity analysis was performed for the instruments held as at December 31st 2020 and December 31st 2019. The effect of the interest rate changes on the fair value was examined assuming that the currency exchange rates remain unchanged. In the case of derivative instruments held as at December 31st 2020 and December 31st 2019, for the purpose of interest rate sensitivity analysis the interest rate curve was moved up or down by the historical annual volatility for December 31st 2020 and December 31st 2019, calculated based on historical volatility data for interest rates on interest rate swaps expiring in one year, as published by Reuters.

27.5 Liquidity risk

The liquidity risk management process at the Group consists in monitoring projected cash flows and the portfolio of financial assets and liabilities, matching maturities of the assets and liabilities, analysing working capital, and optimising cash flows within the Group. This process requires that units operating in different business areas closely cooperate in activities undertaken in order to ensure safe and effective allocation of the liquidity.

The majority of the Group's Polish subsidiaries participate in a physical cash pooling arrangement, whereby the Parent manages the structure on an on-going basis to optimise liquidity and interest balances.

In the period covered by the budget, liquidity is monitored on an ongoing basis across the Group as part of financial risk management. In the mid- and long term, it is monitored as part of the planning process, which helps to develop a long-term financial strategy.

In the area of financial risk, in addition to active management of market risk, the Group observes the following liquidity management rules:

- no margins in derivative financial instrument trading on the OTC market,
- limited possibility of early termination of financial transactions,
- limits for low-liquidity spot financial instruments,
- credit risk limits for counterparties in financial and trade transactions,
- ensuring adequate availability of diversified sources of funding of appropriate structure and quality,
- internal control processes and organisational efficiency facilitating prompt contingency response.

Below are presented contractual maturities of financial liabilities as at December 31st 2020 and December 31st 2019:

Contractual maturities of financial liabilities:

Dec 31 2020	Note	Carrying amount	Contractual cash flows	Up to 6 months	6–12 months	1–2 years	2–5 years	Over 5 years
Bank borrowings (other than overdraft facilities)	22.1	2,337.6	2,493.6	450.6	290.3	897.2	855.5	-
Overdraft facilities	22.1	222.2	222.2	222.2	-	-	-	-
Non-bank borrowings	22.2	35.6	38.1	4.6	4.6	9.3	19.6	-
Notes	22.3	231.7	236.3	59.3	177.0	-	-	-
Leases	22.4	1,246.4	2,138.8	118.9	103.6	206.3	364.0	1,346.0
Trade payables	25	1,636.0	1,636.0	1,635.4	0.6	-	-	-
Other financial liabilities	25	286.0	286.0	263.8	2.9	3.2	8.8	7.3
Total		**5,995.5**	**7,051.0**	**2,754.8**	**579.0**	**1,116.0**	**1,247.9**	**1,353.3**
Dec 31 2019								
Bank borrowings (other than overdraft facilities)	22.1	2,865.2	3,231.7	447.4	337.3	922.1	1,519.6	5.3
Non-bank borrowings	22.2	43.4	48.7	4.8	4.8	9.7	29.4	-
Notes	22.3	231.8	244.9	244.9	-	-	-	-
Leases	22.4	1,276.0	2,295.0	171.3	164.4	272.1	442.3	1,244.9
Trade payables	25	1,940.8	1,940.8	1,940.6	-	0.2	-	-
Other financial liabilities	25	365.5	365.5	253.5	89.1	3.3	10.1	9.5
Total		**6,722.7**	**8,126.6**	**3,062.5**	**595.6**	**1,207.4**	**2,001.4**	**1,259.7**

Contractual maturities of derivative financial instruments:

Dec 31 2020	Note	Carrying amount*	Contractual cash flows	Up to 6 months	6–12 months	1–2 years	2–5 years	Over 5 years
Commodity swap	23	27.9	27.9	7.5	20.3	0.1	-	-
Currency forward and spot contracts		1.0	1.0	1.0	-	-	-	-
Interest rate swap (IRS)		(8.2)	(8.2)	(4.0)	(4.2)	-	-	-
Currency swap		12.1	12.1	12.1	-	-	-	-
Futures (CO_2 emissions)		14.8	14.8	14.8	-	-	-	-
Total		**47.6**	**47.6**	**31.4**	**16.1**	**0.1**	**-**	**-**
Dec 31 2019								
Commodity swap	23	(13.7)	(13.9)	(2.8)	(8.1)	(3.0)	-	-
Currency forward and spot contracts		13.2	13.2	13.2	-	-	-	-
Interest rate swap (IRS)		(6.6)	(6.7)	(3.6)	(0.9)	(2.2)	-	-
Currency swap		10.4	10.4	10.4	-	-	-	-
Total		**3.3**	**3.0**	**17.2**	**(9.0)**	**(5.2)**	**-**	**-**

* Carrying amount (fair value gains on derivative financial instruments plus fair value losses on derivative financial instruments) represents the fair value of derivative financial instruments disclosed in the statement of financial position.

27.6 Credit risk

Management of credit risk in financial transactions consists in the verification of creditworthiness of the current and potential counterparties and monitoring of credit exposures against the granted limits.
Credit exposure includes bank deposits, cash balances in bank accounts, measurement of derivative financial instruments, and granted security.

The counterparties must have an appropriate credit rating assigned by leading rating agencies or hold guarantees from institutions meeting the minimum acceptable rating requirement. The Group enters into financial transactions with reputable firms with sound credit standing, and diversifies the group of institutions with which it maintains relationships.

As at December 31st 2020 and December 31st 2019, the concentration of credit risk exposure to any single counterparty in the Group's financial transactions did not exceed PLN 577.5m and PLN 399.0m, respectively (6.11% and 3.86% of the Parent's equity, respectively).

As regards management of counterparty risk in non-financial transactions, all customers who request trading on credit terms are subject to credit assessment, whose results determine the level of possible credit limits. The Parent uses an internal rating model to support the process of assigning limits to trading partners. The Parent defines guidelines for managing counterparty risk in non-financial transactions to ensure that appropriate standards of credit analysis and operational security are observed across the entire Group.

As at December 31st 2020 and December 31st 2019, the concentration of credit risk exposure to any single counterparty in the Group's trade transactions did not exceed PLN 206.8m and PLN 531.0m, respectively (2.19% and 5.14% of the Parent's equity, respectively).

Credit risk is measured by the maximum exposure to risk of each class of financial assets. Carrying amounts of financial assets represent the maximum credit risk exposure.

Maximum credit risk exposure of financial assets	Note	Dec 31 2020	Dec 31 2019
Derivative financial instruments	23	67.1	25.2
Trade receivables	15	1,693.9	2,609.1
Cash and cash equivalents	17	2,145.6	1,516.6
Other financial assets	15	714.3	177.3
Total		**4,620.9**	**4,328.2**

In the Management Board's opinion, the risk related to non-performing financial assets is reflected in the recognised impairment losses. For information on impairment of financial assets, see Notes 9.7 and 15.1.

For discussion of credit risk concentrations for trade receivables, see Note 15.1.
For ageing of trade receivables and expected credit losses, see Note 15.1.
For ageing of receivables past due but not impaired, see Note 15.1.

28. Capital management

The objective of the LOTOS Group financial policy is to maintain long-term liquidity, while using an appropriate level of financial leverage to support the achievement of the principal objective of maximising the return on equity for shareholders.

This is achieved through constant effort to develop the desired capital structure at the Group level.

The LOTOS Group uses the debt-to-equity ratio, calculated as net debt to equity, to monitor its financing structure.

Net debt comprises bank and non-bank borrowings, notes and lease liabilities less cash and cash equivalents. Equity includes equity attributable to owners of the Parent plus non-controlling interests.

	Note	Dec 31 2020	Dec 31 2019
Non-current liabilities			
Bank borrowings	22.1	1,641.4	2,100.5
Non-bank borrowings	22.2	27.4	35.7
Notes	22.3	-	-
Leases	22.4	1,048.9	1,006.4
Total		**2,717.7**	**3,142.6**
Current liabilities			
Bank borrowings	22.1	918.4	764.7
Non-bank borrowings	22.2	8.2	7.7
Notes	22.3	231.7	231.8
Leases	22.4	197.5	269.6
Total		**1,355.8**	**1,273.8**
Cash and cash equivalents	17	(2,145.6)	(1,516.6)
Net debt		**1,927.9**	**2,899.8**
Equity attributable to owners of the Parent		11,573.7	12,715.3
Non-controlling interests		0.1	0.1
Total equity		11,573.8	12,715.4
Net debt to equity		**0.17**	**0.23**

29. Contingent liabilities and assets

29.1 Material court, arbitration and administrative proceedings and other risks to the Parent or its subsidiaries

Material court proceedings to which the Parent is a party

Tax settlements

The Company's tax settlements are subject to customs and tax inspections carried out by competent authorities. As at December 31st 2020, the Company disclosed a provision for tax risk, recognised in connection with such proceedings, of PLN 87.3m (see Note 25.1).

In connection with a judgment by the Court of Justice of the European Union of October 16th 2019 in Case C-189/18 Glencore, on January 15th 2020 the Company filed a petition for resumption of proceedings in which the following decisions had been issued:

- decision by the Director of the Tax Chamber in Gdańsk, dated December 29th 2015, upholding the decision by the Director of the Tax Audit Office in Bydgoszcz, dated September 28th 2015, assessing the Company's VAT liabilities for individual months of 2010 at a total amount of PLN 48.4m,
- decision by the Director of the Tax Chamber in Gdańsk, dated February 29th 2016, upholding the decision by the Director of the Tax Audit Office in Bydgoszcz, dated September 28th 2015, assessing the Company's VAT liabilities for individual months of 2011 at a total amount of PLN 112.5m,
- decision by the Director of the Tax Administration Chamber in Gdańsk, dated October 25th 2018, upholding the decision by the Head of the Gdańsk Province Customs and Tax Office in Gdynia, dated January 19th 2018, assessing the Company's VAT liabilities for January 2012 at a total amount of PLN 7.3m,

and after resumption of the proceedings, for:

- reversal of the decisions by the tax authorities of both instances and discontinuation of the tax proceedings – with respect to the proceedings for 2010–2011;
- suspension of the proceedings until final conclusion of the court proceedings – with respect to the proceedings for 2012, in connection with proceedings pending before the Supreme Administrative Court, initiated by the Company's cassation complaint.

On October 8th 2020, the Head of the Tax Administration Chamber in Gdańsk upheld the decisions of the Head of the Tax Chamber in Gdańsk, dated December 29th 2015 and February 29th 2016. On November 23rd 2020, the Company appealed against the unfavourable decisions of the Head of the Tax Administration Chamber in Gdańsk. On December 23rd 2020, the Head of the Tax Administration Chamber in Gdańsk issued decisions refusing to revoke its decision of October 8th 2020, against which the Company filed complaints with the Provincial Administrative Court in Gdańsk.

Court proceedings instigated by or against companies of the LOTOS Group

Proceedings to which LOTOS Petrobaltic S.A. is party

In March 2013, LOTOS Petrobaltic S.A. received a call for payment from AGR Subsea Ltd. ("AGR") for approximately GBP 6.5 million as the contract sum payable to AGR for dredging the Baltic Beta rig's legs. LOTOS Petrobaltic S.A. challenged the amount claimed by AGR and proposed that its liability to AGR be set at PLN 16 million (i.e. GBP 3.2 million at the mid-rate quoted by the National Bank of Poland for December 31st 2012). The dispute between the parties concerns the nature of the contract, reasons for its delayed and incomplete performance, validity of its termination by LOTOS Petrobaltic S.A., as well as the demand for reimbursement of costs incurred to employ the replacement contractor engaged by LOTOS Petrobaltic S.A. to complete the work. AGR Subsea Ltd. did not accept the terms of the settlement proposed by LOTOS Petrobaltic S.A. and took its claim to court. The court decided to refer the case for mediation, to which LOTOS Petrobaltic S.A. agreed. The mediation, initiated in April 2014, was extended on several occasions. Under the Regional Court's decision of February 2016, the case was consolidated for joint examination with LOTOS Petrobaltic S.A.'s claim against AGR, described below.

In October 2013, an action for payment of GBP 5.6 million for replacement performance was brought against AGR by LOTOS Petrobaltic S.A. before the Regional Court of Gdańsk. In March 2014, the Regional Court of Gdańsk, 9th Commercial Division, issued an order of payment in writ-of-execution proceedings, against which AGR appealed. In April 2015, the Court referred the parties to mediation, but LOTOS Petrobaltic S.A. did not agree to take part in the mediation process. Pursuant to the Regional Court's decision of February 2016, LOTOS Petrobaltic S.A.'s claim will be consolidated for joint examination with AGR's claim against LOTOS Petrobaltic S.A. On December 16th 2019, a court expert's opinion was delivered stating that no allegation of failure to exercise due care may be raised against AGR for its selecting the dredging equipment. In its pleading, LOTOS Petrobaltic S.A. raised objections to the opinion and requested that a new opinion be prepared; however, the request was dismissed by the Court.

On November 27th 2020, a court hearing was held during which the case was closed and the date of entry of the Court's decision was set. On December 11th 2020, the Court issued a judgment awarding the full claimed amount to AGR, i.e. GBP 6.5 million increased by default interest, court expenses and legal representation costs, and dismissed LOTOS Petrobaltic S.A.'s claim.

As the notice stating the date of the Court's hearing closing the case and announcement of the judgment was not effectively served upon LOTOS Petrobaltic S.A.'s attorney, the attorney, without his fault, did not participate in the hearing closing the case held on November 27th 2020, did not become aware of the date of entry of the judgment issued on December 11th 2020, was absent on the date of entry of the judgment, and did not read its content. Therefore, on January 7th 2021 a request was submitted to reinstate the deadline for submitting a request to prepare and deliver the statement of reasons for the judgment. The Company's attorney is of the opinion that the judgment is not final and that the Court will not be able to confirm the final nature of its judgment until a decision regarding reinstatement of the deadline becomes final.

On March 23rd 2021, a Court session was held to examine the request for deadline reinstatement, at which the Court took the relevent procedural steps, including hearing of the witnesses named in LOTOS Petrobaltic S.A.'s motion. Furthermore, in view of certain information of which LOTOS Petrobaltic S.A. had become aware, objections were raised to the Court regarding AGR's capacity to sue and be sued, its entitlement to participate in the proceedings and proper authorisation of its attorneys. These doubts arose in March 2021 as LOTOS Petrobaltic S.A. became aware of the announcement (on May 25th 2015) of a Winding-up procedure with respect to AGR and appointment of a Liquidator to administer and represent AGR. In view of the objections, the Court ordered AGR to address these doubts. The case was adjourned to a date set by the Court. In connection with the formal objections raised by LOTOS Petrobaltic S.A. regarding ADR's capacity to sue and be sued and its proper representation, the Court should take relevant steps to examine these doubts, which it is required to do *ex officio.* Such examination will certainly delay the time when the judgment becomes final. Given various procedures available for the Court to examine these doubts, it is not possible to give an expected date of the Court session or its decision on the requested deadline reinstatement.

In view of the above, as at December 31st 2020 LOTOS Petrobaltic S.A. recognised a provision for disputed claims of PLN 49.7m (see Note 25.1), including a PLN 32.1m principal receivable (see Note 9.4) and interest of PLN 17.6m (see Note 9.6).

Tax settlements of LOTOS Exploration and Production Norge AS

Given the COVID-19 pandemic crisis and sharp declines in commodity prices, the company applied to tax authorities for postponement of the deadline for responding to a preliminary decision of the Oil Taxation Office (OTO) concerning thin capitalisation in 2015–2016, challenging the company's ability to include in its tax-deductible expenses all debt service costs and exchange differences on debt financing due to its equity being too low in the stated period. On September 30th 2020, the company submitted its position on the draft decision for 2015–2016, along with its response to the 'deviation notice' for the following years 2017 and 2018. In the first case, the expected tax surcharge for 2015 and 2016 is NOK 172m. The estimated amount to be paid for 2017 and 2018 is NOK 19m, with the proviso that the letter pertaining to this period has not yet received the status of a tax decision. The company was creditworthy during the period and, therefore, no provision was recognised for the stated amount. Furthermore, in its tax returns for 2017 and 2019 the company did not include in its taxable income finance income arising from foreign exchange gains realised on loans in the case of which the OTO had previously questioned the deductibility of related finance costs. Tax deductions made on this account totalled NOK 86m. As at the date of these financial statements, the company received no information concerning the issuance of a final tax decision by the OTO for 2015 and 2016. As at December 31st 2020, the total amount of the provision for thin capitalisation liabilities was NOK 259m (PLN 114m).

In the twelve months ended December 31st 2020, there were no material settlements under court or other proceedings, save for those presented above.

29.2 Other contingent liabilities

In the period between the end of the previous financial year, i.e. December 31st 2019, and the date of issue of these financial statements, there were no changes in the Company's or its subsidiaries' other material contingent liabilities.

30. Related parties

30.1 Entity having control of the Group

As at December 31st 2020 and December 31st 2019, the State Treasury held a 53.19% interest in Grupa LOTOS S.A.

In connection with measures introduced to control the COVID-19 pandemic, in 2020 Grupa LOTOS S.A., acting in compliance with an order issued by the Polish Prime Minister pursuant to Art. 11.2 of the Act on Special Measures Related to Preventing, Counteracting and Combating COVID-19, Other Infectious Diseases and Related Crisis Situations of March 2nd 2020 (Dz. U. of 2020, item 1842), purchased personal protection equipment against COVID-19 and delivered it to the Material Reserves Agency. Therefore, under an agreement concluded on April 16th 2020 between the Polish State Treasury represented by the Prime Minister and Grupa LOTOS S.A., the Company has disclosed sale transactions for PLN 37.2m (see Note 9.3). As at December 31st 2020, the outstanding balance of receivables from the State Treasury under these transactions totalled PLN 45.8m.

In addition, by way of an administrative decision, Grupa LOTOS S.A. was ordered to build a temporary hospital as another form of support for the society provided by state-controlled entities. Costs incurred in 2020 in connection with Grupa LOTOS S.A.'s involvement in constructing, equipping and operating the hospital, guaranteed for reimbursement by the State Treasury, were PLN 0.7m (see Note 15).

No transactions were concluded between Grupa LOTOS S.A. and the State Treasury in 2019.

30.1.1 Transactions with related entities of which the State Treasury has control or joint control or on which the State Treasury has significant influence

In 2020 and 2019, the Group executed transactions with parties related to it through the State Treasury, the aggregate value of which was material. The Group identified transactions with related parties with the State Treasury on the basis of "List of companies with State Treasury share" from the website of the Republic of Poland. They were concluded on an arm's length basis in the course of the Group's day-to-day operations and involved mainly purchase and sale of fuels and natural gas, purchase of crude oil and energy and transport services.

	2020	2019
Sales	1,373.0	765.8
Purchases	1,595.7	1,633.7
Property compensation received	3.0	-
	Dec 31 2020	**Dec 31 2019**
Receivables	123.0	97.9
Liabilities	239.0	294.5

In addition, the Group had liabilities under bank and non-bank borrowings, notes and leases towards banks and institutions of which the State Treasury has control or joint control or over which it exercises significant influence. These entities include PKO BP S.A., PEKAO S.A., Bank Gospodarstwa Krajowego, and Agencja Rozwoju Przemysłu S.A.

	Dec 31 2020	Dec 31 2019
Bank borrowings	1,137.3	1,190.4
Non-bank borrowings	35.6	43.4
Notes	231.7	231.8
Leases	7.6	11.0
Total	**1,412.2**	**1,476.6**

In 2020, the Parent acquired shares in Grupa Azoty Polyolefins S.A. for a total amount of PLN 300m and advanced a PLN 200.0m loan to Grupa Azoty Polyolefins S.A. (see Note 15).

30.2 Remuneration of members of the Company's governing bodies and its key management staff

Remuneration paid to members of the Company's Management and Supervisory Boards	2020		2019	
Management Board				
Short-term employee benefits (wages):	**5.39**		**6.42**	
Zofia Paryła	0.85		0.24	
Piotr Walczak	0.17		-	
Artur Cieślik	0.20		-	
Marian Krzemiński	0.84		0.22	
Jarosław Wittstock	0.71		0.81	
Paweł Majewski	0.60		-	
Jarosław Kawula	0.94	(1)	1.42	
Mateusz Bonca	0.47	(2)	1.63	(3)
Patryk Demski	0.18	(2)	0.97	(1)
Robert Sobków	0.26	(2)	0.75	(1)
Mariusz Machajewski	0.17		-	
Marcin Jastrzębski	-		0.38	
Supervisory Board				
Short-term employee benefits (wages):	**0.55**		**0.66**	
Piotr Ciach	0.08		0.08	
Dariusz Figura	0.08		0.08	
Mariusz Golecki	-		0.07	
Beata Kozłowska-Chyła	0.10		0.10	
Katarzyna Lewandowska	0.08		0.08	
Adam Lewandowski	0.08		0.08	
Grzegorz Rybicki	0.08		0.08	
Agnieszka Szklarczyk-Mierzwa	0.05		0.09	
Total (4)	**5.94**		**7.08**	
including variable remuneration paid:	**1.34**		**2.17**	
Management Board				
Zofia Paryła	0.12		-	
Marian Krzemiński	0.12		-	
Jarosław Wittstock	-		0.12	
Jarosław Kawula	0.28		0.73	
Mateusz Bonca	0.28		0.70	
Patryk Demski	0.15		0.24	
Robert Sobków	0.22		-	
Mariusz Machajewski	0.17		-	
Marcin Jastrzębski	-		0.38	

Other employee benefits	Dec 31 2020		Dec 31 2019	
Management Board				
Short-term variable remuneration payable (5):	**2.91**	(6)	**2.87**	(7)
Zofia Paryła	0.46		0.22	
Marian Krzemiński	0.42		0.22	
Piotr Walczak	0.17		-	
Artur Cieślik	0.21		-	
Jarosław Wittstock	0.70		0.51	
Paweł Majewski	0.38		-	
Jarosław Kawula	0.30		0.51	
Mateusz Bonca	-		0.50	
Patryk Demski	-		0.27	
Robert Sobków	0.27		0.47	
Mariusz Machajewski	-		0.17	
Total	**2.91**		**2.87**	

(1) Including a severance pay for termination of the management service contract and non-compete compensation.
(2) Including non-compete compensation paid.
(3) Including a severance pay for termination of the management service contract.
(4) The amount reflects changes in the composition of the Company's Management and Supervisory Boards.
(5) Pursuant to the Act on Rules of Remunerating Persons Who Manage Certain Companies. Payment of variable remuneration is conditional on the achievement of targets set for the Management Board members and consent of the Supervisory Board.
(6) The amount includes short-term variable remuneration payable for 2019.
(7) The amount includes short-term variable remuneration payable for 2018.

In 2019 and 2020, the Group did not enter into any material transactions with any Management Board or Supervisory Board members, did not advance any loans, make any advance payments, issue any guarantees to or conclude any other agreements with any Management Board or Supervisory Board member which would be advanced, made, issued or concluded otherwise than on an arm's length basis or which would have material bearing on these financial statements.

Based on representations submitted by members of the Parent's Management and Supervisory Boards, in 2019 and 2020 Grupa LOTOS S.A was not aware of any transactions concluded with the Company or other LOTOS Group companies by the spouses, relatives, or relatives by affinity in the direct line up to the second degree, of members of the Management and Supervisory Boards or persons related to them through guardianship or adoption or other persons with whom they have personal relationships.

30.3 Remuneration paid or payable to other members of key management staff

Remuneration paid to members of key management staff (other than members of the Parent's Management Board)	2020	2019
Short-term employee benefits (salaries)[1], including:	34.4	44.7
- annual bonus paid	6.4 [2]	5.4 [3]
- length-of-service award paid	0.1	0.5
Other employee benefits	Dec 31 2020	Dec 31 2019
Post-employment benefits, length-of-service awards and other benefits	10.2	8.6
Current liabilities under annual bonus	15.8	17.8
Total	**26.0**	**26.4**

[1] The amount of remuneration reflects changes in the Company's Collective Bargaining Agreement.
[2] Payment of the annual bonus for 2019.
[3] Payment of the annual bonus for 2018.

The Group did not advance any loans or similar benefits to its key management staff in 2020 or 2019.

30.4 Transactions with related parties of members of the Management Board and the Supervisory Board

Transactions with parties related to the Group through members of the Parent's Supervisory Board	2020
Sales	9.5
Purchases	93.2
Property compensation received	2.3
	Dec 31 2020
Receivables	4.2
Liabilities	0.1

The transactions entered into by the Group in 2020 were related mainly to the purchase of civil-law and property insurance (PLN 84.5m), purchase of transport services associated with the purchase of personal protective equipment (PLN 6.4m), purchase of chemicals (PLN 1.4m) and sale of fuels (PLN 9.5m).

As at December 31st 2020, the Group disclosed borrowings from banks and financial institutions related to it through a Supervisory Board member, totalling PLN 659.9m.

All transactions with parties related to the Group through Supervisory Board members were executed on an arm's length basis.

In 2019, the Group executed transactions with parties related to it through a member of the Supervisory Board of the Parent, amounting to PLN 3.0m. The transactions were related mainly to the purchase of civil law and property insurance.

The Group did not execute any material transactions with parties related to it through members of the Parent's Management Board in 2020 or 2019.

AUTHORISATION OF THE CONSOLIDATED FINANCIAL STATEMENTS FOR ISSUE

These consolidated financial statements were authorised for issue by the Management Board on April 2nd 2021.

Signatures of the Management Board members and the person responsible for keeping the accounting books of Grupa LOTOS S.A.

President of the Management Board

Zofia Paryła

Vice President of the Management Board,
Chief Investment and Innovation Officer

Jarosław Piotr Wróbel

Vice President of the Management Board,
Chief Refining and Marketing Officer

Piotr Aleksander Walczak

Vice President of the Management Board,
Corporate Affairs

Jarosław Wittstock

Vice President of the Management Board,
Mergers and Acquisitions

Krzysztof Nowicki

Finance and Accounting Centre Director –
Chief Accountant

Tomasz Południewski

(This is a translation of a document originally issued in Polish)