Consolidated annual report of Grupa LOTOS S.A.

Ladies and Gentlemen, Dear Shareholders,

I am pleased to present to you the Annual Report summarising the LOTOS Group's financial performance in the past year, which was a time of constructive changes and hard work, but also many successes.

By competently managing our assets, maximising benefits from the market environment and capitalising on the Polish government's effective action to combat the 'grey market' in domestic fuel trade, we delivered our best ever financial results, which translated into high stock prices. We significantly reduced our debt and paid the first dividend in ten years. Our consolidated revenue rose 15% year on year, topping PLN 24bn. LIFO-based EBITDA reached PLN 3.1bn, its historically highest level, having gone up 18% year on year, and net profit rose 65% to nearly PLN 1.7bn.

Taking advantage of the favourable macroeconomic climate, we continued our debt reduction and optimisation measures and focused on generating higher cash flows from operating activities. At the end of 2017, the Group's consolidated net debt was PLN 2.5bn, having been brought down by PLN 2.3bn, and financial leverage was safe at 23%. We significantly improved cash flows from operating activities, which exceeded PLN 3.1bn and were 18% higher than in 2016 (PLN 2.6bn) and 110% higher than in 2015 (PLN 1.5bn).

These achievements were appreciated by the capital market. The LOTOS share price on the Warsaw Stock Exchange advanced from approximately PLN 37 to PLN 58 at the end of 2017, peaking at its historical high of nearly PLN 69 in autumn. This naturally translated into higher market capitalisation.

Since the beginning of 2017, we have been consistently implementing our new strategy for 2017–2022. Both in 2017 and 2018, we have focused on stabilising cash flows, reducing debt and making progress on our investment projects, on which we spent almost PLN 1.5bn last year. The most important of them is EFRA (deep oil processing), which has entered its final straight now (its completion rate at the end of 2017 was 90%). It will add about 900,000 tonnes of high-margin fuels per year to our product range, generating an additional margin of approximately USD 2 per barrel. The LOTOS Group currently consists of 17 companies and groups (some of them based in Norway and Lithuania), involved in the exploration and production, refining, trade and services. Operating one of the most advanced refineries in Europe, we are Poland's second largest fuel producer, whose share in the domestic fuel market is close to one-third. Last year, we processed more than 9.6 million tonnes of crude oil, optimally utilising our capacities, and we completed the maintenance shutdown, which takes place every four years, within the planned schedule and budget.

As an owner or co-owner of 33 offshore and 10 onshore licences, we extract hydrocarbons in the Polish zone of the Baltic Sea, on the Norwegian Continental Shelf, in Poland, and in Lithuania. In 2017, the 2P recoverable reserves controlled by LOTOS increased to 88.4 million barrels, and our own oil production reached approximately 8.1 million barrels.

As part of the planned upstream segment's reorganisation, in 2017 we established LOTOS Upstream, which in December finalised the acquisition of LOTOS Petrobaltic's foreign assets (i.e. LOTOS Norge and Geonafta). Through LOTOS Upstream, we will manage our international exploration and production business, accounting for approximately 90% of the Group's overall upstream investments.

Our own crude oil production is an element of the strategy to diversify feedstock sources, which aims to reduce the attendant business risk, while significantly enhancing Poland's energy security. In 2017, we succeeded in diversifying the directions of our crude oil supplies, for instance by purchasing oil from Canada and the US, the first such transactions in our 45-year history. In December, we signed the first contract for deliveries of American oil in the history of the Polish oil industry.

The downstream segment reported sales of nearly 11 million tonnes of products and a 19% growth in domestic sales in 2017. Retail sales of non-fuel products and services rose 14% year on year, which – coupled with cost optimisation – ensured a 23% margin growth in the retail segment. In our network of nearly 500 service stations, including 20 Motorway Service Areas, we consistently raised the standards of customer service, while expanding the range and improving the quality of non-fuel products. We are testing quick customer service points, allowing motorists to pay for fuel directly at the pump. With new Cafe Punkt cafeterias and Subway restaurants opened at our service stations, we are expanding our additional offering of food products and services.

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Sąd Rejonowy Gdańsk Północ VII Wydział Gospodarczy KRS, Nr KRS: 0000106150, NIP 583-000-09-60; REGON 190541636
Kapitał zakładowy 184.873.362 PLN wpłacony w całości

LOTOS

The LOTOS network of service stations is also responding to challenges posed by the rapid uptake of electric mobility in Poland. Last year, we selected 50 retail locations where we plan to install electric vehicle chargers. In the second half of this year, as a pilot scheme we will launch the first 12 fast charging points at our service stations along the Warsaw - Tricity route.

Innovative projects, in which we systematically invest more and more funds, are our response to technology challenges and an essential condition of our further development. In addition to key initiatives in the area of electric mobility, we are conducting research into alternative fuels (biofuels, hydrogen), while pursuing our first joint projects with start-ups as part of the Space3AC accelerator programme. We are a co-founder of the Hydrogen and Clean Energy Technologies Cluster and a supporter of the National Innovation League. We are working intensively to launch a Corporate Venture Capital fund and build a team that would manage that area.

We have changed the strategy and objectives, while expanding the scope of operations, of LOTOS LAB, the company entrusted with the role of the LOTOS Group's research and development centre, but also the leader in delivery and commercialisation of innovative projects, the goals it can now pursue with nearly PLN 100m of additional equity, as well as external financing.

We are building a corporate culture that inspires innovation from employees. As part of the *LOTOS Inspires* programme, last year employees of four Group companies submitted nearly 300 projects, several dozen of which are being or will be implemented.

In recent months, we also pursued a number of other activities under our strategy, including in the area of risks and opportunities management at the LOTOS Group, employee safety, which is our absolute priority, as well as cyber security, efficiency improvement and streamlining of processes within the organisation. We have undertaken certain initiatives to optimise HR processes, identify and develop our in-house talent, build a modern management system and enable knowledge sharing. Our commitment to employee matters and professional management of human resources won us recognition in the form of the Top-Quality Human Resources Certificate, which we received from the Polish Human Resources Management Association in 2017 for the third consecutive time.

We pursue our corporate social responsibility strategy, which is focused on education and sports, dedicated in particular to children and youth, road traffic safety and environment protection. In 2017, Grupa LOTOS also continued its collaboration with the United Nations Global Compact. In June 2017, we joined the Partnership for the UN 2030 Sustainable Development Goals. The effectiveness of our CSR activity is confirmed by Grupa LOTOS' presence in the RESPECT Index of top socially responsible companies listed at the Warsaw Stock Exchange, and the high fourth place in the 11th edition of the Responsible Companies Ranking.

The last thing worth noting were our intensive efforts throughout the year to strengthen the recognition and positive perception of the LOTOS brand through media campaigns with our sports ambassadors: the Polish football team (including Kuba Błaszczykowski), Polish ski jumpers, the tennis player Agnieszka Radwańska and multiple European rally champion Kajetan Kajetanowicz. Positive outcomes of our strong financial standing include an expert estimate of the value of the LOTOS brand, which in the latest ranking of Poland's most valuable brands was put at PLN 1.2bn. In the category of non-food products, LOTOS was on the podium, just behind PKN Orlen and PGNiG.

If we were to draw a parallel between business and sports, the **-est** (like in the high**est** quality and b**est** performance) ***does not come from nowhere.*** On behalf of myself and the entire Management Board of Grupa LOTOS S.A., I would like to heartily thank the employees and Supervisory Board for their constructive cooperation, commitment and professionalism. I would also like to thank our customers, who expressed confidence in the LOTOS quality by choosing our products and services, as well as our business and social partners, who supported us in the pursuit of our goals.

Marcin Jastrzębski

Marcin Jastrzębski
President of the Management Board of Grupa LOTOS S.A.

THE LOTOS GROUP
FINANCIAL HIGHLIGHTS

FINANCIAL HIGHLIGHTS - CONSOLIDATED

	PLNm		EURm	
	Year ended Dec 31 2017	**Year ended Dec 31 2016**	**Year ended Dec 31 2017**	**Year ended Dec 31 2016**
	(unaudited)	**(audited)**	**(unaudited)**	**(audited)**
Revenue	24,185.6	20,931.1	5,697.8	4,783.5
Operating profit	2,228.5	1,854.7	525.0	423.9
Pre-tax profit	2,447.7	1,579.4	576.6	361.0
Net profit	1,671.8	1,015.2	393.9	232.0
Net profit attributable to owners of the Parent	1,671.8	1,015.2	393.9	232.0
Net profit/(loss) attributable to non-controlling interests	-	-	-	-
Total comprehensive income/(loss)	2,286.5	898.7	538.7	205.4
Total comprehensive income/(loss) attributable to owners of the Parent	2,286.5	898.7	538.7	205.4
Total comprehensive income/(loss) attributable to non-controlling interests	-	-	-	-
Net cash from operating activities	3,126.5	2,653.9	736.6	606.5
Net cash from investing activities	(1,448.7)	(1,003.2)	(341.3)	(229.3)
Net cash from financing activities	(482.7)	(1,201.4)	(113.7)	(274.6)
Total net cash flow	1,195.1	449.3	281.6	102.7
Basic earnings per share (PLN/EUR)	9.04	5.49	2.13	1.25
Diluted earnings per share (PLN/EUR)	9.04	5.49	2.13	1.25

	PLNm		EURm	
	As at Dec 31 2017	**As at Dec 31 2016**	**As at Dec 31 2017**	**As at Dec 31 2016**
	(unaudited)	**(audited)**	**(unaudited)**	**(audited)**
Total assets	21,171.2	19,326.3	5,075.9	4,368.5
Equity attributable to owners of the Parent	10,712.4	8,610.8	2,568.4	1,946.4
Non-controlling interests	0.1	0.1	-	-
Total equity	10,712.5	8,610.9	2,568.4	1,946.4

Items in the Financial Highlights table have been translated at the following EUR exchange rates:

Items of the statement of financial position have been translated at the mid-exchange rates quoted by the National Bank of Poland for the last day of the reporting period:

As at Dec 31 2017	**As at Dec 31 2016**
1 EUR = 4.1709 PLN	1 EUR = 4.4240 PLN

Items of the statement of comprehensive income and the statement of cash flows have been translated using the arithmetic mean of the mid-exchange rates quoted by the National Bank of Poland for the last day of each month in the reporting period:

For the year ended Dec 31 2017	**For the year ended Dec 31 2016**
1 EUR = 4.2447 PLN	1 EUR = 4.3757 PLN

The LOTOS Group
Consolidated financial statements for 2017

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

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Note	2017	2016
Revenue	8	24,185.6	20,931.1
Cost of sales	9.1	(20,194.1)	(17,215.7)
Gross profit		**3,991.5**	**3,715.4**
Distribution costs	9.1	(1,252.3)	(1,291.1)
Administrative expenses	9.1	(450.0)	(425.9)
Other income	9.3	60.3	107.1
Other expenses	9.4	(121.0)	(250.8)
Operating profit		**2,228.5**	**1,854.7**
Finance income	9.5	450.0	26.6
Finance costs	9.6	(234.0)	(304.8)
Share in net profit/(loss) of equity-accounted joint ventures	14	3.2	2.9
Profit before tax		**2,447.7**	**1,579.4**
Corporate income tax	10.1	(775.9)	(564.2)
Net profit		**1,671.8**	**1,015.2**
Other comprehensive income/(loss)			
Items that may be reclassified to profit or loss:		**614.8**	**(118.2)**
Exchange differences on translating foreign operations		27.2	(6.3)
Cash flow hedges	20	725.4	(138.2)
Corporate income tax relating to cash flow hedges	10.1	(137.8)	26.3
Items that will not be reclassified to profit or loss:			**1.7**
Actuarial gain/(loss) under post-employment benefits		**(0.1)**	2.0
Corporate income tax relating to actuarial gain/(loss) under post-employment benefits	10.1	(1.4)	(0.3)
		1.3	
Other comprehensive income/(loss), net		**614.7**	**(116.5)**
Total comprehensive income/(loss)		**2,286.5**	**898.7**
Net profit attributable to:			
Owners of the Parent	11	1,671.8	1,015.2
Total comprehensive income/(loss) attributable to:			
Owners of the Parent		2,286.5	898.7
Net profit attributable to owners of the Parent per share (PLN)			
Weighted average number of shares (million)	11	184.9	184.9
- basic	11	9.04	5.49
- diluted	11	9.04	5.49

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

	Note	December 31st 2017	December 31st 2016
ASSETS			
Non-current assets			
Property, plant and equipment of the Downstream segment	13	8,761.5	8,261.7
Intangible assets of the Downstream segment	13	163.2	170.0
Property, plant and equipment of the Upstream segment	13	2,404.2	2,390.0
Intangible assets of the Upstream segment	13	304.8	481.8
Equity-accounted joint ventures	14	106.5	98.1
Deferred tax assets	10.3	415.4	596.0
Derivative financial instruments	23	2.7	20.9
Other non-current assets	15	303.8	312.2
Total non-current assets		**12.462.1**	**12,330.7**
Current assets			
Inventories	16	3,559.6	3,333.6
- including emergency stocks		2,098.7	2,008.9
Trade receivables	15	2,677.0	2,251.7
Current tax assets		1.3	8.0
Derivative financial instruments	23	161.8	80.0
Other current assets	15	388.7	577.2
Cash and cash equivalents	17	1,920.7	744.6
Total current assets		**8,709.1**	**6,995.1**
Non-current assets (or disposal groups) held for sale		-	0.5
Total assets		**21,171.2**	**19,326.3**
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	(225.2)	(812.8)
Retained earnings		8,432.2	6,945.4
Translation reserve		92.2	65.0
Equity attributable to owners of the Parent		**10,712.4**	**8,610.8**
Non-controlling interests		0.1	0.1
Total equity		**10,712.5**	**8,610.9**
Non-current liabilities			
Borrowings, other debt instruments and finance lease liabilities	22	2,738.3	3,980.5
Derivative financial instruments	23	6.7	36.3
Deferred tax liabilities	10.3	277.7	57.4
Employee benefit obligations	24	169.3	168.5
Other liabilities and provisions	25	1,072.4	1,201.0
Total non-current liabilities		**4,264.4**	**5,443.7**
Current liabilities			
Borrowings, other debt instruments and finance lease liabilities	22	1,687.6	1,576.7
Derivative financial instruments	23	72.7	172.9
Trade payables	25	2,201.7	1,718.2
Current tax payables		210.0	49.2
Employee benefit obligations	24	145.3	135.6
Other liabilities and provisions	25	1,877.0	1,619.1
Total current liabilities		**6,194.3**	**5,271.7**
Total liabilities		**10,458.7**	**10,715.4**
Total equity and liabilities		**21,171.2**	**19,326.3**

CONSOLIDATED STATEMENT OF CASH FLOWS

(prepared using the indirect method)

	Note	2017	2016
Cash flows from operating activities			
Net profit		**1,671.8**	**1,015.2**
Adjustments:		**1,804.9**	**1,708.8**
Income tax	10.1	775.9	564.2
Share in net profit/(loss) of equity-accounted joint ventures	14	(3.2)	(2.9)
Depreciation and amortisation	9.1	844.3	1,067.9
Foreign exchange (gains)/losses		72.3	37.6
Interest and dividends		146.2	175.0
(Gain)/loss from investing activities		8.6	12.8
Impairment losses on property, plant and equipment and other intangible assets	9.4	83.6	156.4
Settlement and measurement of financial instruments	9.5; 9.6	(314.1)	33.5
(Increase) in trade receivables		(425.3)	(671.9)
Decrease/(Increase) in other assets		160.1	(126.8)
(Increase) in inventories		(230.9)	(126.5)
Increase in trade payables		483.5	457.7
Increase in other liabilities and provisions		194.8	130.1
Increase in employee benefit obligations		9.1	1.7
Income tax paid		(350.2)	(70.1)
Net cash from operating activities		**3,126.5**	**2,653.9**
Cash flows from investing activities			
Dividends received – equity-accounted joint ventures		2.1	-
Dividends received from other entities		1.7	2.0
Interest received		11.3	11.4
Sale of property, plant and equipment and other intangible assets		4.3	28.4
Purchase of property, plant and equipment and other intangible assets		(1,439.2)	(1,243.6)
Cash contributions – equity-accounted joint ventures	14	(5.4)	(24.4)
Cash for the EFRA Project		-	433.4
Deposits		(8.0)	-
Security deposit		25.3	(26.4)
Funds for future costs of decommissioning of oil and gas extraction facilities		(42.9)	(187.2)
Security deposit under EPCM contract for the offshore production unit in the B-8 field		-	10.6
Settlement of derivative financial instruments		2.8	(7.4)
Other cash used in investing activities		(0.7)	-
Net cash from investing activities		**(1,448.7)**	**(1,003.2)**
Cash flows from financing activities			
Proceeds from bank borrowings	22.1	925.8	379.3
Proceeds from non-bank borrowings	22.2	-	1.2
Issue of notes	22.3	296.1	-
Repayment of bank borrowings	22.1	(1,223.4)	(1.499.5)
Repayment of non-bank borrowings	22.2	(12.8)	(11.6)
Redemption of notes	22.3	(160.2)	(19.2)
Interest paid		(203.3)	(203.7)
Dividends paid		(184.9)	-
Decrease in finance lease liabilities	12	(36.8)	(31.2)
Settlement of derivative financial instruments		116.8	183.3
Net cash from financing activities		**(482.7)**	**(1,201.4)**
Total net cash flow		**1,195.1**	**449.3**
Effect of exchange rate fluctuations on cash held		(5.3)	3.4
Change in net cash		**1,189.8**	**452.7**
Cash at beginning of period		**730.8**	**278.1**
Cash at end of period	17	**1,920.6**	**730.8**

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
January 1st 2017		**184.9**	**2,228.3**	**(812.8)**	**6,945.4**	**65.0**	**8,610.8**	**0.1**	**8,610.9**
Net profit	11	-	-	-	1,671.8	-	1,671.8	-	1,671.8
Other comprehensive income/(loss), net		-	-	587.6	(0.1)	27.2	614.7	-	614.7
Total comprehensive income/(loss)		-	-	587.6	1,671.7	27.2	2,286.5	-	2,286.5
Dividend	12	-	-	-	(184.9)	-	(184.9)	-	(184.9)
December 31st 2017		**184.9**	**2,228.3**	**(225.2)**	**8,432.2**	**92.2**	**10,712.4**	**0.1**	**10,712.5**
January 1st 2016		**184.9**	**2,228.3**	**(700.9)**	**5,928.5**	**71.3**	**7,712.1**	**0.1**	**7,712.2**
Net profit	11	-	-	-	1,015.2	-	1,015.2	-	1,015.2
Other comprehensive income/(loss), net		-	-	(111.9)	1.7	(6.3)	(116.5)	-	(116.5)
Total comprehensive income/(loss)		-	-	(111.9)	1,016.9	(6.3)	898.7	-	898.7
December 31st 2016		**184.9**	**2,228.3**	**(812.8)**	**6,945.4**	**65.0**	**8,610.8**	**0.1**	**8,610.9**

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 principal business activity of Grupa LOTOS S.A.'s Group (the "LOTOS Group" or the "Group") consists in the manufacturing 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. 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.

Key information on the Group entities and on the Group's ownership interests in those entities is presented below.

Name	Registered office	Description of business	Group's ownership interest	Group's ownership interest
			Dec 31 2017	Dec 31 2016
Parent				
Downstream segment				
● Grupa LOTOS S.A.	Gdańsk	Manufacturing and processing of refined petroleum products (mainly fuels) and their wholesale	Not applicable	Not applicable
Direct fully-consolidated subsidiaries				
Upstream segment				
● LOTOS Upstream Sp. z o.o. (parent of another group: LOTOS Upstream Group) (1)	Gdańsk	Activities of head offices and holdings	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%
Downstream 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	Manufacturing 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) (2)	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 (3)				
● Infrastruktura Kolejowa Sp. z o.o.	Gdańsk	Dormant	100.00%	100.00%
● LOTOS Foundation	Gdańsk	Socially beneficial activity 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%

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

Name	Registered office	Description of business	Group's ownership interest	Group's ownership interest
			Dec 31 2017	Dec 31 2016
Indirect fully-consolidated subsidiaries				
Downstream segment				
GK LOTOS Lab Sp. z o.o.				
● LOTOS Vera Sp. z o.o.	Gdańsk	Manufacture of cars	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%
Upstream segment				
LOTOS Upstream Group				
● LOTOS Exploration and Production Norge AS	Norway, Stavanger	Oil exploration and production on the Norwegian Continental Shelf, provision of services incidental to oil and gas exploration and production	100.00%	99.99%
● 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%	99.99%
● UAB Genciu Nafta	Lithuania, Gargždai	Crude oil exploration and production	100.00%	99.99%
● UAB Manifoldas	Lithuania, Gargždai	Crude oil exploration and production	100.00%	99.99%
LOTOS Petrobaltic Group				
● Aphrodite Offshore Services N.V.	Curaçao	Sea transport services (dormant)	99.99%	99.99%
● 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	Exploration for and production of crude oil and natural gas	99.99%	99.99%
● Miliana Shipholding Company Ltd. (parent of another group: Miliana Shipholding Company Group)	Nicosia, Cyprus	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%
● Miliana Shipmanagement Ltd.	Nicosia, Cyprus	Provision of sea transport and related services	99.99%	99.99%
● Miliana Shipping Group Ltd. (parent of another group: Miliana Shipping Group Group)	Nicosia, Cyprus	Management of own assets	99.99%	99.99%
● Bazalt Navigation Co. Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
● Granit Navigation Company Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
● Kambr Navigation Company Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
● St. Barbara Navigation Company Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
● Petro Icarus Company Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
● Petro Aphrodite Company Ltd.	Nicosia, Cyprus	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) On March 10th 2017, Grupa LOTOS S.A. acquired 100% of shares in LOTOS Upstream Sp. z o.o., for a total price of PLN 6 thousand.
(2) On November 6th 2017, LOTOS Lab Sp. z o.o. acquired 100% of shares in Lucea 3 Sp. z o.o. (currently: LOTOS Vera Sp. Zo.o.), for a total price of PLN 6 thousand.
(3) The companies were excluded from consolidation due to immateriality of the amounts disclosed in their financial statements as at December 31st 2016 (IFRS 10 *Consolidated Financial Statements*).

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

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 2017.

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"):

- IFRS 16 *Leases*, issued on January 13th 2016 (effective for annual periods beginning on or after January 1st 2019),
- Clarifications to IFRS 15 *Revenue from Contracts with Customers*, issued on April 12th 2016 (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IFRS 4: Applying IFRS 9 *Financial Instruments* with IFRS 4 *Insurance Contracts*, issued on September 12th 2016 (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IAS 12: *Recognition of Deferred Tax Assets for Unrealised Losses*, issued on January 19th 2016 (effective for annual periods beginning on or after January 1st 2017),
- Amendments to IAS 7: Disclosure Initiative, issued on January 29th 2016 (effective for annual periods beginning on or after January 1st 2017).

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

- IFRS 17 *Insurance Contracts*, issued on May 18th 2017 (effective for annual periods beginning on or after January 1st 2021),
- IFRIC Interpretation 22 *Foreign Currency Transactions and Advance Consideration*, issued on December 8th 2016 (effective for annual periods beginning on or after January 1st 2018),
- IFRIC Interpretation 23 *Uncertainty over Income Tax Treatments*, issued on June 7th 2017 (effective for annual periods beginning on or after January 1st 2019),
- Amendments to IFRS 2 *Classification and Measurement of Share-Based Payment Transactions*, issued on June 20th 2016 (effective for annual periods beginning on or after January 1st 2018),
- Amendments introduced as part of the Annual Improvements cycle 2014−2016, issued on December 8th 2016 − amendments to IFRS 12 and IFRS 1 (effective for annual periods beginning on or after January 1st 2017), and amendments to IAS 28 (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IAS 40: *Transfer of Investment Property*, issued on December 8th 2016 (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IFRS 9: *Prepayment Features with Negative Compensation*, issued on October 12th 2017 (effective for annual periods beginning on or after January 1st 2019).
- Amendments to IAS 28: *Long-term Interests in Associates and Joint Ventures*, issued on October 12th 2017 (effective for annual periods beginning on or after January 1st 2019).
- Amendments introduced as part of the Annual Improvements cycle 2015−2017 (issued on December 12th 2017), effective for annual periods beginning on or after January 1st 2019,
- Amendments to IAS 19 *Plan Amendment, Curtailment or Settlement*, issued on February 7th 2018 (effective for annual periods beginning on or after January 1st 2019).

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 2017.

The Management Board's analysis and assessment, performed as at December 31st 2017, of the impact of the new and amended standards on the Group's accounting policies and future financial statements covered in particular the effect of the new IFRS 9, IFRS 15 and IFRS 16, as their application may result in changes to the Group's accounting and financial reporting policies in 2018−2019.

IFRS 9 *Financial Instruments*

The new IFRS 9 removes the categories of financial assets under IAS 39 and introduces classification of instruments as measured at fair value (fair value through profit or loss − FVTPL, or fair value through other comprehensive income − FVTOCI) or at amortised cost. IFRS 9 introduces a new impairment model based on expected loss, and new guidelines for hedge accounting, designed to simplify the existing solutions and better reflect risk management rules.	The assessment of financial assets in terms of their classification under IFRS 9 has shown that most assets currently recognised as loans and receivables (including trade receivables and cash) will continue to be measured at amortised cost. The Group also analysed whether a separate business model should be identified with respect to receivables covered by factoring arrangements, which could require that such receivables be measured at FVTPL. This change, if made, is not expected to have any material effect on the valuation of this portfolio at the time of initial application of IFRS 9, that is in the period beginning on January 1st 2018. The Management Board has resolved to apply the simplifications and practical expedients permitted under IFRS 9 in respect of impairment. Preliminary calculations of impairment losses as at December 31st 2017 based on the adopted expected loss model confirmed the absence of any significant impact on retained earnings at the time of initial application of the standard. With respect to hedge accounting, the Management Board believes that the current hedging relationships can be maintained after the new standard is implemented. Since the provisionally estimated impact of IFRS 9 on accounting and reporting is immaterial, the Group does not disclose any related quantitative data in these financial statements.

IFRS 15 *Revenue from Contracts with Customers* and clarifications to IFRS 15

IFRS 15 *Revenue from Contracts with Customers*, which is to replace IAS 18, IAS 11 and the related interpretations, establishes in a systematic way the principles for recognition of revenue from contracts with customers. The standard introduces, among other things, a single five-step model for revenue recognition, applicable to all contracts with customers and based on the identification of performance obligations under a contract and allocation of transaction revenue to such obligations. IFRS 15 also clarifies how variable consideration should be estimated and how to determine whether a contract includes a financing arrangement, and differentiates between recognition of performance obligations under a contract as satisfied over time or satisfied at a certain point in time. The clarifications to IFRS 15 provide additional information and explanations concerning key assumptions adopted in IFRS 15. Besides additional clarifications, exemptions and simplifications for first-time adopters were also introduced.	As at the date of issue of these financial statements, the Company is completing analyses to assess the impact of IFRS 15. Based on existing data, the Management Board intends to implement the standard using the modified retrospective method. The current phase of the IFRS 15 impact assessment (now nearing completion) has included: i) identification of performance obligations (e.g. partnership agreements, fuel and oil supply contracts with wholesalers, comprehensive service contracts for the supply of products and services related to infrastructural and mining projects, or contracts on transport and logistics services), ii) estimation of the variable consideration (e.g. volume rebates, post-sale awards in fuel and oil supply contracts), and iii) separation of lease components from service contracts, and accounting for transactions as sale or exchange of non-cash assets where there is a production imbalance. Based on the analysis so far of transactions in the case of which different revenue recognition may be required under the new regulations, the Group does not expect the implementation of IFRS 15 to have a significant impact on the amount of revenue in the financial statements at the time of its first application, i.e. in the period beginning on January 1st 2018. Since the provisionally estimated impact of IFRS 15 on accounting and reporting is immaterial, the Group does not disclose any related quantitative data in these financial statements.

IFRS 16 *Leases*

The new IFRS 16 *Leases* establishes principles for the recognition, measurement, presentation and disclosure of leases. The new standard will abolish the classification of leases as operating and finance leases under IAS 17, and will provide a single lessee accounting model.	In the Management Board's opinion, as at December 31st 2017, the operating lease, finance lease, lending-for-use, rental and lease contracts to which the Group is party may be classified as leases within the meaning of IFRS 16. These contracts are for: lease of land, warehouse or office space, rental of various vehicles (car fleets, barges and tankers) and fuel terminals, as well as production plan and machinery and office equipment. The Group has performed a general analysis of the contracts that meet the definition of a lease under IFRS 16, and expects an increase in the amounts of lease assets and liabilities in the statement of financial position following application of the new regulations, i.e. after January 1st 2019. It should be noted that such assets and liabilities will be accounted for using a method different from the one currently prescribed under IAS 17 to account for operating leases. At present, lease payments are usually accounted for on a straight-line basis. It is expected that following the changes resulting from implementation of IFRS 16, lease assets presented in the statement of financial position will continue to be accounted for on a straight-line basis, while lease liabilities will be accounted for using the effective interest rate, which will result in increased charges in the period directly following the execution of or amendment to a lease contract, and their reduction over time. The Company is still preparing a detailed simulation of changes to be included in the financial statements in the period of initial application of IFRS 16, that is after January 1st 2019, and is planning to perform further analyses and calculations in 2018.

5. 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 charges on 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 2017 resulted chiefly in a PLN 0.6m decrease in depreciation or amortisation.

Fair value of financial instruments

The fair value of financial instruments for which no active market exists is determined by means of appropriate valuation methods. 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 Note 7.21.

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 Company is required to estimate the recoverable amounts of assets and cash-generating units. While determining the recoverable amount, the Company takes into account such key variables as discount rates, growth rates and price indices.

As at December 31st 2017, 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.

Recognition of revenue from sale of crude oil and natural gas in Norway

In line with the Group's accounting policy, revenue from sale of hydrocarbons produced from the fields on the Norwegian Continental Shelf in which the Group holds interests is recognised using the entitlements method (see Note 7.2), in proportion to the Group's entitlement to production from a given field. Revenue from oil and gas sales disclosed in the statement of comprehensive income for a given reporting period is estimated based on up-to-date data on production from the individual fields in the reporting period. Any differences between the amount of actual revenue from sale of crude oil produced from the Heimdal producing fields: Skirne, Vale, Atla, and Sleipner producing fields: Sleipner Ost, Sleipner Vest, Gungne and Loke, and the Group's revenue estimated based on the contractual share of production from the fields are recognised in the statement of financial position under trade receivables and trade payables, which in 2017 amounted to PLN 81.2m and PLN 36.2m, respectively (2017: PLN 121.1m and PLN 34.0m).

Provision for decommissioning of the upstream 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 2017, see Note 7.25.1 and Note 25.1, respectively.

Professional judgement in accounting

Joint control of an investee or operation

The Group and two or more investors jointly 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 relevant 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 2017, 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 lease contracts

The Group classifies its lease contracts as finance leases or operating leases based on the assessment of the extent to which the risks and rewards incidental to asset ownership have been transferred from the lessor to the lessee. Such assessment is in each case based on the economic substance of a given transaction. At the inception of a lease, the Group assesses all facts, circumstances and conditions, and specifies the objectives and intentions concerning the contract, in order to determine if substantially all the risks and rewards of ownership have been transferred to the lessee. In the event of material amendments to a lease, the Group performs a reassessment of the lease classification, applying the same rules as in the initial classification of the lease contract.

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.

6. Change of information presented in previous reporting periods and change of accounting policies

The Group recorded no material changes of estimated amounts reported in prior periods, where such changes would have a material effect on the current reporting period.

7. Accounting policies

These consolidated financial statements have been prepared in accordance with the historical cost principle, except with respect to derivative financial instruments, which are measured at fair value, and financial liabilities measured at amortised cost.

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 2017.

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 two or more investors jointly 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 7.28).

7.2 Revenue

Revenue is disclosed at the fair value of consideration received or due for the sale of products, merchandise and services, executed in the ordinary course of business, less discounts, value added tax (VAT) and other sales-related taxes (excise duty, fuel charge). Revenue from sale of products and merchandise is recognised at the moment of delivery, when material risks and rewards resulting from the ownership of the products and merchandise have been transferred to the purchaser. Revenue from sale of crude oil and natural gas in Norway is recognised and disclosed using the entitlements (rights) method.

The entitlements method is one of two methods for recognition of revenue commonly applied by oil and gas producers (with the sales method as the alternative) and allowed under IFRS. The Management Board believes that the entitlements method ensures a fair and accurate presentation of the assets, financial performance and profitability of the Group's joint operations in oil and gas producing fields.

For logistical reasons, when hydrocarbons are produced from a field by a number of interest holders there are naturally occurring differences between the volumes actually received by individual interest holders and their respective contractual share of production (to which they are entitled under relevant agreements). Thus, it is necessary to apply a special mechanism to account for such differences. In accordance with the entitlements method applied by the Group, revenue is always recognised in the Group's accounting books in accordance with its entitlement to production from the field. The correct amount of revenue in the financial statements is arrived at in the following manner: the overlift party, i.e. the interest holder which receives hydrocarbons in excess of contractual share of production from a field in a given period, recognises the excess in its accounting books as a liability rather than revenue. Conversely, the underlift party (the party receiving less than its entitlement in a given period) recognises the underlift as a receivable (revenue). In the consolidated statement of financial position, assets and liabilities under the entitlements method are presented as: Trade payables and Trade receivables. For more information on estimates related to the application of the entitlements method, see Note 5.

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), unless its receipt is doubtful. The Group recognises interest income under finance income, which does not follow directly from IAS 18 but is a common 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. The tax charges are calculated based on the tax rates effective for a given financial year.

For the purposes of financial reporting, the Company calculates deferred tax liabilities 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 as 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, at the time of the transaction, affects neither accounting pre-tax profit nor taxable income (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 the reversal of the 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 the extent that 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, at the time of the transaction, affects neither accounting pre-tax profit nor taxable income (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 calculated 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 on items posted directly to equity is recognised in equity through other comprehensive income.

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 (VAT), excise duty and fuel charge

Revenue, expenses, assets and liabilities are recognised net of the VAT, excise duty and fuel charge:

- except where the value-added tax (VAT) paid on the purchase of 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
- except in the case of receivables and payables which are recognised inclusive of the value-added tax, excise duty and fuel charge.

The net amount of value-added tax, excise duty and fuel 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 effective for 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:	December 31st 2017 [(1)]	December 31st 2016 [(2)]
USD	3.4813	4.1793
EUR	4.1709	4.4240
NOK	0.4239	0.4868

[(1)] NBP's mid rates table, effective for December 31st 2017.
[(2)] NBP's mid rates table, effective for December 31st 2016.

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	2017 [(1)]	2016 [(2)]
USD	3.7439	3.9680
EUR	4.2447	4.3757
NOK	0.4538	0.4725

[(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 2017.
[(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 2016.

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 advanced, 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. In the case of perpetual usufruct rights to land, cost is understood to mean the amount paid for the right to a third party. Perpetual usufruct rights to land obtained free of charge are carried at fair value in the accounting books.

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 7.20).

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. Then, starting from the new financial year, the revised depreciation rate is applied (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.

	Amortisation method	Amortisation period /useful life
Land (excluding perpetual usufruct rights)	Not amortised	
Property, plant and equipment under construction	Not amortised	
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 7.25.1). 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 e.g. 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. 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. Then, starting from the new financial year, the revised amortisation rate is applied.

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 Company is not capitalised but is charged to expenses in the period in which it was incurred.

	Amortisation method	Amortisation period /useful life
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).
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.

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 the 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.

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 (appraisal) of mineral resources means the search for crude oil and natural gas resources, and 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 eof 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 7.25.1). 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 e.g. 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

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of the leased asset onto the lessee. All other lease agreements are treated by the Group as operating 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

Assets used under a finance lease are recognised as assets of the Group and are measured at fair value as at the acquisition date or, if lower, the present value of the minimum lease payments. The resultant obligation towards the lessor is presented in the statement of financial position under finance lease liabilities. Lease payments are broken down into the interest component and the principal component so as to produce a constant rate of interest on the remaining balance of the liability. Finance costs are recognised in the statement of comprehensive income.

Operating lease payments are recognised in the statement of comprehensive income on a straight-line basis over the lease term.

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 production cost and net realisable value, in accordance with IAS 2. Write-downs of stored materials due to their impairment are charged to production costs.

If the reason for making an inventory write-down no longer exists, the value of the inventory item is increased by an equivalent of 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 downstream segment, emergency stocks are maintained mainly by the Parent.

7.15 Trade and other receivables, prepayments and accrued income

Trade receivables, which typically become due and payable in 7 to 60 days, are recognised and carried at amounts initially invoiced, less impairment losses on doubtful receivables. Impairment losses on receivables are estimated when the collection of the full amount of receivables is no longer probable. Uncollectible receivables are written off through the statement of comprehensive income when recognised as unrecoverable accounts.

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. If the discount method is applied, an increase in receivables over time is recognised as finance income.

The Group recognises prepayments where costs relate to future reporting periods. Prepayments are recognised under other non-financial assets.

7.16 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.

7.17 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.

7.18 Borrowings and other debt instruments

All borrowings and other debt instruments are initially recognised at cost, equal to the fair value, less cost of obtaining the financing.

Following initial recognition, borrowings and other debt instruments 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 impairment losses, gains or losses are recognised in the statement of comprehensive income.

7.19 Employee benefit obligations

7.19.1 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 rules set forth in the Polish Labour Code. The Group calculates the cost of employee holidays on an accrual basis using the liability method. The value of compensation for unused holidays is recognised in the Group's accounting records based on the difference between the balance of holidays actually used and the balance of holidays used established proportionately to the passage of time, and disclosed in the financial statements as, respectively, current or non-current liabilities under other employee benefits during employment.

Obligations under other employee benefits during employment 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 pension plans operated by the Group's foreign companies – LOTOS Exploration and Production Norge AS and the companies of the AB LOTOS Geonafta Group – 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.

7.19.2 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 Company's 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.

7.20 Borrowing costs

Borrowing costs (i.e. interest and other costs incurred in connection with borrowings) are expensed in the period in which they were incurred, except costs which relate directly to the acquisition, construction or production of an asset being completed (including foreign exchange losses on interest, and foreign exchange losses on fees and commissions), which are capitalised as part of the cost of such asset (an asset being completed is an asset whose preparation for use or sale requires a significant amount of time).

To the extent that funds are borrowed specifically for the purpose of acquiring the asset being completed, 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 an asset being completed, the amount of the borrowing costs which may be capitalised is determined by applying the capitalisation rate to the expenditure on that asset.

7.21 Financial assets and liabilities

Financial assets and liabilities are classified into the following categories:

- financial assets held to maturity,
- financial assets and liabilities at fair value through profit or loss,
- Loans and receivables,
- Financial assets available for sale,
- financial liabilities at amortised cost

Financial assets held to maturity

Financial assets held to maturity are non-derivative financial assets with fixed or determinable payments and fixed maturities, which are quoted on an active market and which the Group has the positive intention and ability to hold to maturity, other than those:

- designated at fair value through profit or loss upon initial recognition,
- designated as available for sale,
- which qualify as loans and receivables.

Financial assets held to maturity are measured at amortised cost using the effective interest rate method.

Financial assets held to maturity are classified as non-current assets if they mature more than 12 months after the reporting period.

Financial assets and liabilities at fair value through profit or loss

A financial asset at fair value through profit or loss is a financial asset that meets either of the following conditions:

a) it is classified as held for trading. Financial assets are classified as held for trading if they:
    - have been acquired principally for the purpose of being sold in the near future,
    - are part of a portfolio of identified financial instruments that are managed together and for which there is probability of profit-taking in the near future,
    - are derivative instruments, except for a derivative that is a financial guarantee contract or a hedging instrument,

b) it has been assigned to this category in accordance with IAS 39 *Financial Instruments: recognition and measurement* upon initial recognition.

Measurement of financial assets at fair value through profit or loss consists in recognition of such assets at fair value by reference to their market value as at the end of the reporting period, without reflecting sale transaction costs. Any changes in the value of such instruments are recognised in the statement of comprehensive income as finance income or finance costs.

An entire contract can be designated as a financial asset at fair value through profit or loss if it contains one or more embedded derivatives. The above does not apply when an embedded derivative has no significant impact on the cash flows generated under the contract or when it is clear that if a similar hybrid instrument was first considered, separation of the embedded derivative would be prohibited under IFRS.

Financial assets may be designated as financial assets at fair value through profit or loss on initial recognition if the following criteria are met:

(i) such designation eliminates or significantly reduces a measurement or recognition inconsistency (an accounting mismatch); or
(ii) the assets are part of a group of financial assets that are managed and measured based on fair value, according to a well-documented risk management strategy; or
(iii) the assets contain embedded derivatives which should be presented separately.

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities initially designated as financial liabilities at fair value through profit or loss. Financial liabilities are classified as held for trading if they were acquired for the purpose of being sold in the near future. Derivative financial instruments, including separated embedded instruments, are also classified as held for trading unless they are considered as effective hedges.

Financial liabilities may be designated as financial liabilities at fair value through profit or loss on initial recognition if the following criteria are met:

(i) such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring liabilities or recognising the gains and losses on them on different bases, or
(ii) the liabilities are part of a group of financial liabilities that are managed and measured based on fair value, according to a well-documented risk management strategy; or
(iii) the liabilities contain embedded derivatives which should be presented separately.

Financial liabilities classified as financial liabilities at fair value through profit or loss are measured based on their market value as at the end of the reporting period, without reflecting sale transaction costs. Changes in the fair value of such instruments are recognised in profit or loss as finance income or costs.

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).

The Group discloses derivative transactions with positive fair values under financial assets held for trading. Derivative transactions with negative fair values are disclosed under financial liabilities held for trading.

The Group’s financial assets and liabilities held for trading include the following types of derivatives: options, forward contracts (in particular forward rate agreements), futures contracts, swaps (in particular interest-rate swaps) and spot contracts. All the above types of forward transactions classified as derivatives are executed by the Group as part of its risk management policy (see below).

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).

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 currency forwards 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 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. and AB LOTOS Geonafta is presented based on the information provided by the banks which are counterparties to those transactions (Level 2 in the fair value hierarchy).

To manage 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 Group enters into EUA, CER and ERU futures contracts. The fair value of the contracts is estimated based on the difference between the market price of a contract as quoted on the valuation date by the Intercontinental Exchange (ICE) and the actual transaction price (Level 1 in the fair value hierarchy).
If required, futures contracts to purchase carbon dioxide emission allowances open as at the last day of the reporting period are settled by the Group through physical delivery, with the intention to potentially use the allowances to offset the Company’s actual CO_2 emissions. The valuation of futures contracts to purchase carbon dioxide emission allowances that are planned to be settled through physical delivery is not disclosed under financial assets/liabilities in the financial statements. However, the Group internally monitors and performs the valuation of its open futures positions as part of an overall assessment of the effectiveness of its CO_2 risk management (off the balance sheet).

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.

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.

In the statement of financial position, derivative financial instruments are recognised under a separate item or, if their value is immaterial, under other assets and liabilities.

For more information on recognition and measurement of financial derivatives and hedge accounting, see Notes 7.23 and 7.24.

Loans and receivables

Loans advanced and receivables are financial assets with fixed or determinable payments not classified as derivatives and not traded on any active market. They are disclosed under current assets if they mature within 12 months from the end of the reporting period. Loans and receivables with maturities exceeding 12 months from the end of the reporting period are classified as non-current assets.

The category includes the following classes of financial instruments: trade receivables, cash and cash equivalents, deposits, security deposits, investment receivables, security deposits receivable, finance lease receivables and other. In the statement of financial position, these are recognised under: Trade receivables, cash and cash equivalents, other current and non-current assets. For information on their recognition and measurement, see Notes 7.12, 7.15 and 7.16.

Financial assets available for sale

Financial assets available for sale are recognised at fair value plus transaction costs which may be directly attributed to the acquisition or issue of a financial asset. If quoted market prices from an active market are not available and the fair value cannot be reliably measured using alternative methods, available-for-sale financial assets are measured at cost less impairment. The positive or negative differences between the fair value of available-for-sale financial assets (if they have a market price derived from an active market or their fair value can be established in any other reliable manner) and their cost are recognised net of deferred tax in other comprehensive income. Impairment losses on available-for-sale financial assets are recognised in finance costs.

Any purchase or sale of financial assets is recognised at the transaction date. On initial recognition, financial assets are recognised at fair value including – in the case of financial assets other than those at fair value through profit or loss – transaction costs directly attributable to the purchase.

A financial asset is removed from the statement of financial position when the Group loses control over the contractual rights embodied in the financial instrument. This usually takes place when the instrument is sold or when all cash flows generated by the instrument are transferred to a non-related third party.

This category includes shares in other entities; in the statement of financial position they are posted under other financial assets.

Financial liabilities at amortised cost

Financial liabilities other than classified as financial liabilities at fair value through profit or loss are carried at amortised cost using the effective interest rate method.

Financial liabilities at amortised cost include bank and non-bank borrowings, bonds/notes, finance lease liabilities, trade payables, investment commitments, and other liabilities. They are recognised in the statement of financial position under: Borrowings, other debt instruments and finance lease liabilities, trade payables, other liabilities and provisions. For information on recognition and measurement of the above classes in this category of instruments, see Notes 7.12, 7.18, 7.25 and 7.26.

7.22 Impairment of financial assets

As at the end of the reporting period the Group determines whether there is an objective indication of impairment of a financial asset or a group of financial assets.

Assets carried at amortised cost

If there is an objective indication that the value of loans and receivables measured at amortised cost has been impaired, the impairment loss is recognised in the amount equal to the difference between the carrying amount of the financial asset and the present value of estimated future cash flows (excluding future losses relating to irrecoverable receivables, which have not yet been incurred), discounted at the initial effective interest rate (i.e. the interest rate used at the time of initial recognition). The carrying amount of an asset is reduced directly or through a provision. The amount of loss is recognised in the statement of comprehensive income.

The Group first determines whether there exists an objective indication of impairment with respect to each financial asset that is deemed material, and with respect to financial assets that are not deemed material individually. If the analysis shows that there exists no objective indication of impairment of an individually tested asset, regardless of whether it is material or not, the Group includes the asset into the group of financial assets with similar credit risk profile and tests such group for impairment as a whole. Assets which are tested for impairment individually, and with respect to which an impairment loss has been recognised or a previously recognised loss is deemed to remain unchanged, are not taken into account when a group of assets are jointly tested for impairment.

If an impairment loss decreases in the next period, and the decrease may be objectively associated with an event that occurred subsequent to the impairment loss recognition, the recognised impairment loss is reversed. The subsequent reversal of an impairment loss is recognised in the statement of comprehensive income to the extent that the carrying amount of the asset does not exceed its amortised cost as at the reversal date.

Financial assets available for sale

If there exists an objective indication of impairment of a financial asset classified as an asset available for sale, the amount of the difference between (A) the cost of that asset (less any principal payments and depreciation/amortisation charges) and its (B) current fair value, reduced by any impairment losses previously recognised in the statement of comprehensive income, (A – B) is derecognised from equity and charged to the statement of comprehensive income. Reversal of impairment losses concerning equity financial instruments classified as available for sale may not be recognised in the statement of comprehensive income. If the fair value of a debt instrument available for sale increases in the next period, and the increase may be objectively associated with an event that occurred subsequent to the impairment loss recognition in the statement of comprehensive income, the amount of the reversed impairment loss is recognised in the statement of comprehensive income.

Financial assets carried at cost

If there exists an objective indication of impairment of a non-traded equity instrument which is not carried at fair value since such value cannot be reliably determined, or of a related derivative instrument which must be settled by delivery of such non-traded equity instrument, the amount of impairment loss is established as the difference between the carrying amount of the financial asset and the present value of estimated future cash flows discounted with the market rate applicable to similar financial assets prevailing at a given time.

Impairment losses on financial assets and their reversals are recognised on a net basis as gains or losses under other income/expenses or finance income/costs, depending on the class of financial instruments.

7.23 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 raw material 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 discussed above in the section devoted to financial asset and liability measurement policies. Derivative instruments are recognised as assets if their value is positive and as liabilities if their value is negative. Gains or losses resulting from changes in the fair value of a derivative which does not qualify for hedge accounting are charged directly to the net profit or loss for the financial year.

In the statement of financial position, financial instruments are presented as either current or non-current, depending on the expected time of realisation of assets and liabilities classified as held for trading.

7.24 Hedge accounting

As of January 1st 2011, the Parent commenced cash flow hedge accounting with respect to a USD-denominated credit facility designated as a hedge of future USD-denominated sales transactions. In the second half of 2012, the scope of application of cash flow hedge accounting was extended to include new hedging relationships established with respect to foreign-currency facilities contracted to finance the 10+ Programme, designated as hedges of future USD-denominated petroleum product sales transactions.

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 derivative 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 Company 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.

7.25 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 lapse 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.

7.25.1 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 under property, plant 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. The Company is required to deposit the contributions in a separate bank account until decommissioning start date.

7.26 Trade and other payables, and accruals 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 accruals and deferred income under other non-financial liabilities or, if they refer to employee benefits, under employee benefit obligations.

7.27 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.

7.28 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 downstream segment, and the following entities operating in the upstream 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 upstream 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.

7.29 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:

- upstream segment – comprising activities related to the acquisition of crude oil and natural gas reserves, and crude oil and natural gas production,
- downstream 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 downstream 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.

7.30 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.

7.31 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 Company 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.

8. Business segments

	Upstream segment		Downstream segment		Consolidation adjustments		Consolidated	
	2017	2016	2017	2016	2017	2016	2017	2016
Revenue:	**1,358.7**	**1,228.5**	**23,326.4**	**20,120.7**	**(499.5)**	**(418.1)**	**24,185.6**	**20,931.1**
Intersegment sales	442.5	364.6	57,0	53.5	(499.5)	(418.1)	-	-
External sales	916.2	863.9	23,269.4	20,067.2	-	-	24,185.6	20,931.1
Operating profit/(loss) (**EBIT**)	**507.2**	**17.8**	**1,730.7**	**1,834.7**	**(9.4)**	**2.2**	**2,228.5**	**1,854.7**
Depreciation and amortisation	307.4	582.0	537.9	487.4	(1.0)	(1.5)	844.3	1,067.9
Operating profit/(loss) before depreciation and amortisation (**EBITDA**)	**814.6**	**599.8**	**2,268.6**	**2,322.1**	**(10.4)**	**0.7**	**3,072.8**	**2,922.6**
Total assets as at the end of the reporting period	**4,267.1**	**4,200.0**	**18,744.6**	**16,798.8**	**(1,840.5)**	**(1,672.5)**	**21,171.2**	**19,326.3**

Geographical structure of sales

	Upstream segment		Downstream segment		Consolidated	
	2017	2016	2017	2016	2017	2016
Domestic sales:	**5.5**	**4.7**	**19,085.0**	**14,535.4**	**19,090.5**	**14,540.1**
products and services	5.2	4.6	17,711.1	13,687.7	17,716.3	13,692.3
merchandise and materials	0.3	0.1	1,373.9	847.7	1,374.2	847.8
Export sales:	**910.7**	**859.2**	**4,184.4**	**5,531.8**	**5,095.1**	**6,391.0**
products and services	910.6	858.9	3,943.7	5,299.6	4,854.3	6,158.5
merchandise and materials	0.1	0.3	240.7	232.2	240.8	232.5
Total	**916.2**	**863.9**	**23,269.4**	**20,067.2**	**24,185.6**	**20,931.1**

Sales by products, merchandise and services

	Upstream segment		Downstream segment		Consolidated	
	2017	2016	2017	2016	2017	2016
Gasolines	-	-	3,682.2	3,257.8	3,682.2	3,257.8
Naphtha	-	-	859.6	803.9	859.6	803.9
Diesel oils	-	-	11,864.5	9,776.7	11,864.5	9,776.7
Bunker fuel	-	-	121.3	111.3	121.3	111.3
Light fuel oil	-	-	646.9	530.8	646.9	530.8
Heavy fuel oil	-	-	1,335.9	1,209.0	1,335.9	1,209.0
Aviation fuel	-	-	913.1	1,151.4	913.1	1,151.4
Lubricants	-	-	297.3	276.9	297.3	276.9
Base oils	-	-	488.6	502.1	488.6	502.1
Bitumens	-	-	978.9	625.0	978.9	625.0
LPG	-	-	496.1	428.0	496.1	428.0
Crude oil	252.2	270.4	432.6	247.1	684.8	517.5
Natural gas	574.4	529.3	0.3	0.1	574.7	529.4
Reformate	-	-	15.7	78.8	15.7	78.8
Other refinery products, merchandise and materials	-	-	424.8	403.4	424.8	403.4
Other products, merchandise and materials	5.5	4.7	457.7	397.1	463.2	401.8
Services	84.1	59.5	404.4	379.5	488.5	439.0
Effect of cash flow hedge accounting	-	-	(150.5)	(111.7)	(150.5)	(111.7)
Total	**916.2**	**863.9**	**23,269.4**	**20,067.2**	**24,185.6**	**20,931.1**

In 2017, there were no customers with a share in excess of 10% of the LOTOS Group's total revenue.

9. Income and expenses

9.1 Expenses by nature

	Note	2017	2016
Depreciation and amortisation	8	844.3	1,067.9
Raw materials and consumables used [1]		16,933.1	14,469.8
Services		1,527.8	1,503.9
Taxes and charges		506.7	456.8
Employee benefits expense	9.2	736.2	689.0
Other expenses by nature		254.4	247.7
Merchandise and materials sold		1,386.1	859.9
Total expenses by nature		**22,188.6**	**19,295.0**
Change in products and adjustments to cost of sales		(292.2)	(362.3)
Total		**21,896.4**	**18,932.7**
including:			
Cost of sales		20,194.1	17,215.7
Distribution costs		1,252.3	1,291.1
Administrative expenses		450.0	425.9

[1] Including PLN 4.8m of foreign exchange losses related to operating activities, recognised as cost of sales (2016: PLN 2.7m of foreign exchange gains), see Note 26.2.

9.2 Employee benefits expense

	Note	2017	2016
Current salaries and wages		560.7	526.1
Social security and other employee benefits		166.2	157.4
Length-of-service awards, retirement and other post-employment benefits	24.2	9.3	5.5
Total employee benefits expense	**9.1**	**736.2**	**689.0**
Change in products and adjustments to cost of sales		(3.1)	(2.4)
Total		**733.1**	**686.6**
including:			
Cost of sales		439.0	414.9
Distribution costs		33.3	32.2
Administrative expenses		260.8	239.5

9.3 Other income

	Note	2017	2016
Gain on disposal of non-financial non-current assets and certificates of origin for electricity from cogeneration		**-**	**13.2**
Grants	25.2	**16.8**	**5.7**
Provisions:		**24.6**	**59.6**
- remeasurement of provision for costs of decommissioning of the offshore oil and gas extraction facilities in the Heimdal field		13.1	40.9
- remeasurement of provision for costs of decommissioning of the offshore oil and gas extraction facilities in the B-3 field		3.1	8.3
- remeasurement of provision for contingent payments − Sleipner assets acquisition agreement		0.3	27.7
- revaluation of estimated provision for future cost of removal of MOPU from the YME field		-	(8.9)
- provision for deficit in CO_2 emission allowances	27.2	(4.6)	(8.7)
- other provisions		12.7	0.3
Compensation		**9.9**	**17.7**
Reimbursed excise duty		**1.6**	**3.7**
Other		**7.4**	**7.2**
Total		**60.3**	**107.1**

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	2017	2016
Impairment loss on property, plant and equipment and intangible assets:		**83.6**	**156.4**
Impairment losses		**85.8**	**170.5**
• oil and gas exploration and evaluation assets:	13.2.1	**23.7**	**138.2**
- Poland: Kamień Pomorski area		23.7	-
- Poland: the Gaz Południe licence area, including the B-21 field		-	64.8
- Norway: PL797 licence		-	5.8
- Norway: Utgard field assets		-	67.6
• oil and gas production assets: Lithuania: Girkalai, Auksoras, Vėžaičiai, Kretinga, Ablinga and Ližai fields	13.2.2	**32.9**	**12.4**
• refinery and other non-current assets:		**29.2**	**19.9**
- service stations	13.1.1	26.2	13.1
- ships		0.8	5.3
- other assets		2.2	1.5
Reversal of impairment losses:		**(2.2)**	**(14.1)**
•oil and gas production assets:	13.2.2	**-**	**(11.9)**
- Norway: Heimdal production assets		-	(4.4)
- Lithuania: Girkalai field		-	(7.5)
• refinery and other non-current assets:		**(2.2)**	**(2.2)**
- service stations		(1.9)	(2.0)
- other assets		(0.3)	(0.2)
Gain on disposal of non-financial non-current assets		**0.9**	**-**
Loss on discontinued projects		**0.7**	**12.7**
- Norway: PL643, PL655 exploration licences	13.2.1	-	12.3
- Poland: Słupsk area	13.2.1	-	0.1
- other assets		0.7	0.3
Impairment losses on receivables:	15.1	**2.0**	**1.6**
- impairment losses		5.5	3.5
- reversal of impairment losses		(3.5)	(1.9)
Fines and compensation		**8.0**	**1.2**
Damage to property arising in ordinary course of business		**1.6**	**2.1**
Costs relating to the Polish National Foundation		**-**	**29.0**
Charitable donations		**7.3**	**5.3**
VAT expense	29.1	**-**	**39.4**
Other		**16.9**	**3.1**
Total		**121.0**	**250.8**

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.

9.5 Finance income

	Note	2017	2016
Dividends		**4.2**	**2.4**
Interest:		**20.8**	**15.4**
- on deposits	26.2	14.3	11.9
- on trade receivables	26.2	2.6	2.3
- other		3.9	1.2
Exchange differences:		**107.9**	**7.8**
- on bank borrowings	26.2	180.7	(73.5)
- on translation of intercompany loans [(1)]	26.2	(99.2)	64.7
- on realised foreign-currency transactions in bank accounts	26.2	35.5	12.2
- on intercompany notes [(1)]	26.2	(6.0)	15.2
- on deposits and other cash	26.2	(7.1)	(11.3)
- other		4.0	0.5
Revaluation of financial assets:		**314.1**	**-**
- measurement of derivative financial instruments	26.2	196.7	-
- settlement of derivative financial instruments	26.2	117.4	-
Other		**3.0**	**1.0**
Total		**450.0**	**26.6**

[(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.

9.6 Finance costs

	Note	2017	2016
Interest:		**203.8**	**241.1**
- on bank borrowings	26.2	114.2	150.4
- on non-bank borrowings	26.2	3.5	4.0
- on notes	26.2	15.6	4.2
- on finance lease liabilities	26.2	18.4	20.8
- discount related to provisions for oil production facilities and for site restoration, and other provisions	25.1	43.1	49.1
- cost of discount on employee benefit obligations	24.1; 24.2	5.8	5.1
- on liabilities to the state budget	29.1	1.7	6.3
- other		1.5	1.2
Revaluation of financial assets, including:		**-**	33.5
- measurement of derivative financial instruments	26.2	-	206.6
- settlement of derivative financial instruments	26.2	-	(173.1)
Bank fees		**18.0**	**19.2**
Bank guarantees		**0.1**	**5.7**
Other		**12.1**	**5.3**
Total		**234.0**	**304.8**

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.

10. Income tax

10.1 Tax expense

	Note	2017	2016
Current tax		567.7	115.4
Deferred tax	10.3	208.2	448.8
Total income tax charged to net profit or loss	**10.2**	**775.9**	**564.2**
Tax expense recognised in other comprehensive income (net), including:		136.5	(26.0)
- cash flow hedging	20	137.8	(26.3)
- actuarial gain/(loss) relating to post-employment benefits		(1.3)	0.3

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 (24% tax rate) and the petroleum tax system (additional tax rate of 54%). In 2018, the tax rates will be 23% under the corporate income tax regime and 55% under the petroleum tax regime, which affects the amount of deferred income tax recognised in the current reporting period.

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 pre-tax profit to taxable income

	2017	2016
Pre-tax profit	2,447.7	1,579.4
Income tax at 19%	**465.1**	**300.1**
Permanent differences:	43.8	15.1
- VAT expense	-	7.5
- interest on past-due public charges	1.3	1.2
- other permanent differences	42.5	6.4
Tax effect of tax losses deducted in the period	-	(0.4)
Tax effect of share in profit of equity-accounted entities	(0.6)	(0.6)
Adjustments disclosed in current year related to tax for previous years	(0.5)	(1.0)
Difference resulting from the application of tax rates other than 19%:	267.9	252.9
- Norway	266.0	249.1 [1]
- Lithuania	2.1	1.1
- Cyprus	(0.2)	2.7
Other differences	0.2	(1.9)
Income tax	**775.9**	**564.2**

[1] Including the tax effect of a PLN 80.9m reduction in deferred tax assets related to the tax investigation at LOTOS Exploration and Production Norge AS.

10.3 Deferred income tax

	Note	Statement of financial position		Change
		December 31st 2017	December 31st 2016	
Deferred tax assets		415.4	596.0	(180.6)
Deferred tax liabilities		(277.7)	(57.4)	(220.3)
Net deferred tax assets/(liabilities)	**10.3.1**	**137.7**	**538.6**	**(400.9)**
Exchange differences on translating deferred tax of foreign operations				56.2
Deferred tax disclosed under other comprehensive income/(loss), net	10.1			136.5
Deferred tax expense charged to net profit or loss	**10.1**			**(208.2)**

Taxable temporary differences are expected to expire in 2018–2083.

As at December 31st 2017, unrecognised tax assets on account of tax losses were PLN 0.2m (December 31st 2016: PLN 0.3m).

10.3.1 Deferred tax assets and liabilities

	Note	December 31st 2016	Deferred tax disclosed under net profit or loss	Deferred tax disclosed under other comprehensive income/(loss)	Exchange differences on translating deferred tax of foreign operations	Dec 31 2017
Deferred tax assets						
Employee benefit obligations		56.7	1.6	1.3	(0.5)	59.1
Inventory write-downs		0.5	0.4	-	-	0.9
Impairment losses on property, plant and equipment and other intangible assets		344.5	6.1	-	(48.9)	301.7
Negative fair value of derivative financial instruments		14.3	(8.3)	-	-	6.0
Exchange differences on revaluation of foreign-currency items		2.6	(2.6)	-	-	-
Impairment losses on receivables		16.4	(8.5)	-	-	7.9
Finance lease liabilities		33.1	(6.7)	-	-	26.4
Provisions for/assets related to decommissioning of oil and gas extraction facilities and site restoration		474.4	89.0	-	(64.0)	499.4
Unrealised margin assets		5.6	1.1	-	-	6.7
Tax losses carried forward		344.2	(328.9)	-	(13.0)	2.3
Other provisions		11.1	(1.9)	-	-	9.2
Cash flow hedge accounting		190.7	-	(137.8)	-	52.9
Other		18.2	(3.6)	-	0.6	15.2
		1,512.3	**(262.3)**	**(136.5)**	**(125.8)**	**987.7**
Deferred tax liabilities						
Difference between current tax base and carrying amount of property, plant and equipment and other intangible assets		767.2	7.9	-	(61.1)	714.0
Difference between current tax value and carrying amount of settlements under joint operations (Norwegian fields)		53.9	(33.6)	-	(4.8)	15.5
Positive fair value of derivative financial instruments		11.9	(3.5)	-	-	8.4
Exchange differences on revaluation of foreign-currency items		-	2.3	-	-	2.3
Tax liabilities associated with acquired exploration and production licences in Lithuania		17.9	(1.5)	-	(1.0)	15.4
Accrued interest		84.3	(37.7)	-	-	46.6
Other		38.5	12.0	-	(2.7)	47.8
		973.7	**(54.1)**	**-**	**(69.6)**	**850.0**
Net deferred tax assets/(liabilities)	10.3	**538.6**	**(208.2)**	**(136.5)**	**(56.2)**	**137.7**

11. Earnings per share

	2017	2016
Net profit attributable to owners of the Parent (PLNm) (A)	1,671.8	1,015.2
Weighted average number of shares (million) (B)	184.9	184.9
Earnings per share (PLN) (A/B)	**9.04**	**5.49**

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

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

12. Dividends

As at December 31st 2017 and December 31st 2016, Grupa LOTOS S.A. was restricted in its ability to make distributions in the form of dividends. The restrictions followed from the credit facility agreement executed on June 27th 2008 for the financing of the 10+ Programme, Whereby dividend payment and amounts are subject to certain conditions, including generation of sufficient free cash and achievement of certain levels of financial ratios.

On June 14th 2017, the General Meeting of Grupa LOTOS S.A. passed a resolution on distribution of the Company's net profit for 2016. Under the resolution, the 2016 net profit of PLN 1,160.8m was applied towards:

- partial coverage of the 2014 net loss – PLN 975.9m,
- dividend payment – PLN 184.9m.

Dividend was paid on September 29th 2017. The dividend per share was PLN 1, gross.

13. Property, plant and equipment and intangible assets

	Note	December 31st 2017	December 31st 2016
Non-current assets of the Downstream segment	**13.1**	**8,924.7**	**8,431.7**
Property, plant and equipment	13.1.1	8,761.5	8,261.7
Intangible assets, including:		163.2	170.0
Goodwill	13.1.2	45.6	45.6
Other intangible assets	13.1.3	117.6	124.4
Non-current assets of the Upstream segment	**13.2**	**2,709.0**	**2,871.8**
Property, plant and equipment		2,404.2	2,390.0
Intangible assets, including:		304.8	481.8
Goodwill		1.1	1.1
Other intangible assets		303.7	480.7
Total property, plant and equipment and intangible assets		**11,633.7**	**11,303.5**
including:			
Property, plant and equipment		11,165.7	10,651.7
Intangible assets		468.0	651.8

13.1 Non-current assets of the Downstream segment

13.1.1 Property, plant and equipment of the Downstream segment

	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Total
Gross carrying amount Jan 1 2017	**517.4**	**4,562.4**	**5,593.3**	**667.2**	**1,092.0**	**12,432.3**
Purchase	-	-	-	20.7	999.2	1,019.9 [(1)]
Transfer from property, plant and equipment under construction	6.3	47.2	150.8	34.6	(238.9)	-
Borrowing costs	-	-	-	-	37.1	37.1
Expenditure written off due to project discontinuation	-	-	-	-	(13.3)	(13.3)
Sale	-	(1.1)	(32.2) [(2)]	(5.4)	-	(38.7)
Other	-	-	(0.8)	(3.0)	(1.7)	(5.5)
Gross carrying amount Dec 31 2017	**523.7**	**4,608.5**	**5,711.1**	**714.1**	**1,874.4**	**13,431.8**
Accumulated depreciation Jan 1 2017	**16.1**	**1,609.4**	**2,148.6**	**319.4**	**-**	**4,093.5**
Depreciation	1.7	177.5	252.7	92.3	-	524.2
Sale	-	(1.1)	(31.7) [(2)]	(5.6)	-	(38.4)
Other	-	-	0.3	0.9	-	1.2
Accumulated depreciation/amortisation Dec 31 2017	**17.8**	**1,785.8**	**2,369.9**	**407.0**	**-**	**4,580.5**
Impairment losses Jan 1 2017	**1.5**	**51.4**	**6.5**	**4.1**	**13.6**	**77.1**
Recognised	-	23.8	2.6	1.5	0.6	28.5
Used/Reversed	-	(1.7)	(0.1)	(0.9)	-	(2.7)
Other	-	-	-	-	(13.1)	(13.1)
Impairment losses Dec 31 2017	**1.5**	**73.6**	**8.9**	**4.7**	**1.1**	**89.8**
Net carrying amount Dec 31 2017	**504.4**	**2,749.1**	**3,332.3**	**302.4**	**1,873.3**	**8,761.5**

(1) Capital expenditure included chiefly expenditure on the construction of a delayed coking unit with auxiliary infrastructure of the EFRA Project (PLN 821.9m), purchase of catalysts (PLN 96.9m) and spare parts (PLN 20.8m), as well as expansion of the service station chain (PLN 32.8m), and construction of a hydrogen recovery unit (PLN 19.5m).

(2) Including retirement of spent catalysts in Grupa LOTOS S.A. for an amount of (PLN 19.0m).

	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Total
Gross carrying amount Jan 1 2016	**510.2**	**4,474.6**	**5,556.4**	**620.2**	**395.9**	**11,557.3**
Purchase	-	-	-	20.4	903.1	923.5 [1]
Transfer from property, plant and equipment under construction	12.8	93.0	53.4	49.5	(208.7)	-
Borrowing costs	-	-	-	-	4.8	4.8
Reclassification to non-current assets (or disposal group) held for sale	-	-	-	(2.1)	-	(2.1)
Sale	(5.6)	(5.6)	(15.3)	(12.1)	(0.4)	(39.0)
Other	-	0.4	(1.2)	(8.7)	(2.7)	(12.2)
Gross carrying amount Dec 31 2016	**517.4**	**4,562.4**	**5,593.3**	**667.2**	**1,092.0**	**12,432.3**
Accumulated depreciation Jan 1 2016	**14.8**	**1,436.8**	**1,926.4**	**266.7**	**-**	**3,644.7**
Depreciation	1.7	174.9	236.1	61.6	-	474.3
Reclassification to non-current assets (or disposal group) held for sale	-	-	-	(1.4)	-	(1.4)
Sale	(0.4)	(2.6)	(14.5)	(9.1)	-	(26.6)
Other	-	0.3	0.6	1.6	-	2.5
Accumulated depreciation/amortisation Dec 31 2016	**16.1**	**1,609.4**	**2,148.6**	**319.4**	**-**	**4,093.5**
Impairment losses Jan 1 2016	**1.2**	**44.4**	**5.7**	**2.6**	**13.6**	**67.5**
Recognised	0.3	11.3	1.0	2.0	-	14.6
Used/Reversed	-	(4.3)	(0.2)	(0.5)	-	(5.0)
Impairment losses Dec 31 2016	**1.5**	**51.4**	**6.5**	**4.1**	**13.6**	**77.1**
Net carrying amount Dec 31 2016	**499.8**	**2,901.6**	**3,438.2**	**343.7**	**1,078.4**	**8,261.7**

[1] Capital expenditure included chiefly expenditure on the construction of a delayed coking unit with auxiliary infrastructure of the EFRA Project (PLN 672.3m), as well as expansion of the service station chain (PLN 105.5m) and construction of a hydrogen recovery unit (PLN 55.6m).

Property, plant and equipment of the downstream segment include chiefly Group's assets related to refining and marketing activities, such as the refinery infrastructure, service station network, rolling stock, storage depots, and land on which the production plants, production units, and office buildings are located.

Impairment losses on service stations

In 2017, LOTOS Paliwa Sp. z o.o. recognised an impairment loss on service station assets totalling PLN 26.2m (2016: PLN 13.1m), see Note 9.4. 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 budget projections for 2018 (in 2016: for 2017) and the cash inflow and outflow plan for subsequent years, based on the 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 8.01% (2016: 8.22%).

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 in the period preceding the budget period (a 2.5% average year-on-year margin increase was assumed),
- discount rates, reflecting risks typical to the cash-generating unit (the median for five-year PLN-denominated notes quoted by Reuters in November 2015 was adopted),
- volumes based on fuel consumption growth rate (a 1.5% increase was assumed),
- market share in the budget period (a stable market share was assumed),
- growth rate used to extrapolate cash-flow projections beyond the budget period (0.0%).

13.1.2 Goodwill of the downstream segment

Goodwill is allocated to cash-generating units, as presented in the table below:

	December 31st 2017	December 31st 2016
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 2017 and as at December 31st 2016 , 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 8.01% (2016: 8.22%).

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 downstream segment

	Patents, trademarks and licences	Other	Intangible assets under development		Total
Gross carrying amount Jan 1 2017	**205.3**	**37.1**	**17.3**		**259.7**
Purchase	-	0.1	7.2		7.3
Transfer from intangible assets under development	3.5	0.5	(4.0)		-
Expenditure written off due to project discontinuation	-	-	(9.0)	(1)	(9.0)
Other	(1.9)	(0.3)	(1.1)		(3.3)
Gross carrying amount Dec 31 2017	**206.9**	**37.4**	**10.4**		**254.7**
Accumulated depreciation/amortisation Jan 1 2017	**111.3**	**15.0**	**-**		**126.3**
Amortisation	11.4	1.4	-		12.8
Other	(1.9)	(0.1)	-		(2.0)
Accumulated depreciation/amortisation Dec 31 2017	**120.8**	**16.3**	**-**		**137.1**
Impairment losses Jan 1 2017	-	-	**9.0**		9.0
Recognised	-	-	**-**		-
Used/Reversed	-	-	(9.0)	(1)	(9.0)
Impairment losses Dec 31 2017	**-**	**-**	**-**		**-**
Net carrying amount Dec 31 2017	**86.1**	**21.1**	**10.4**		**117.6**
Gross carrying amount Jan 1 2016	**197.9**	**36.3**	**18.8**		**253.0**
Purchase	-	0.2	7.0		7.2
Transfer from intangible assets under development	7.6	0.9	(8.5)		-
Other	(0.2)	(0.3)	-		(0.5)
Gross carrying amount Dec 31 2016	**205.3**	**37.1**	**17.3**		**259.7**
Accumulated depreciation/amortisation Jan 1 2016	**100.9**	**13.9**	**-**		**114.8**
Amortisation	10.4	1.2	-		11.6
Other	-	(0.1)	-		(0.1)
Accumulated amortisation Dec 31 2016	**111.3**	**15.0**	**-**		**126.3**
Impairment losses Jan 1 2016	**-**	**-**	**9.0**		**9.0**
Recognised	-	-	**-**		-
Used/Reversed	-	-	**-**		-
Impairment losses Dec 31 2016	**-**	**-**	**9.0**		**9.0**
Net carrying amount Dec 31 2016	**94.0**	**22.1**	**8.3**		**124.4**

(1) Refining units (no effect on net profit or loss).

Intangible assets of the downstream 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 of the Upstream segment

	Note	December 31st 2017	December 31st 2016
Oil and gas exploration and evaluation assets	**13.2.1**	**256.9**	**396.7**
Property, plant and equipment		52.2	55.7
Intangible assets		204.7	341.0
Oil and gas development and production assets	**13.2.2**	**2,103.4**	**2,098.2**
Property, plant and equipment		2,018.0	1,966.9
Intangible assets		85.4	131.3
Other non-current assets of the upstream segment	**13.2.3**	**348.7**	**376.9**
Property, plant and equipment		334.0	367.4
Intangible assets		14.7	9.5
Total non-current assets of the upstream segment		**2,709.0**	**2,871.8**
including:			
Property, plant and equipment		2,404.2	2,390.0
Intangible assets		304.8	481.8

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 2017		**167.6**	**9.4**	**429.6**	**10.6**	**617.2**
Purchase		20.2	4.3	32.9	-	57.4
Exchange differences on translating foreign operations		-	-	(44.4)	(0.6)	(45.0)
Reclassification to development assets		-	-	(200.8) [2]	-	(200.8)
Gross carrying amount Dec 31 2017		**187.8**	**13.7**	**217.3**	**10.0**	**428.8**
Accumulated depreciation/amortisation Jan 1 2017		**-**	**8.9**	**-**	**-**	**8.9**
Depreciation and amortisation		-	0.5	-	-	0.5
Accumulated depreciation/amortisation Dec 31 2017		**-**	**9.4**	**-**	**-**	**9.4**
Impairment losses Jan 1 2017		**111.9**	**-**	**89.1**	**10.6**	**211.6**
Recognised	9.4	23.7 [1]	-	-	-	23.7
Exchange differences on translating foreign operations		-	-	(7.3)	(0.6)	(7.9)
Reclassification to development assets		-	-	(64.9) [2]	-	(64.9)
Impairment losses Dec 31 2017		**135.6**	**-**	**16.9**	**10.0**	**162.5**
Net carrying amount Dec 31 2017		**52.2**	**4.3**	**200.4**	**-**	**256.9**

[1] Expenditure on exploration and evaluation work on the Kamień Pomorski area (of PLN 23.7m).
[2] Utgard (formerly Alfa Sentral) licences forming part of the acquired Sleipner assets in Norway.

	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 2016		**167.8**		**9.9**		**467.2**		**10.2**	**655.1**
Purchase		1.7		0.3		52.0	(2)	-	54.0
Exchange differences on translating foreign operations		-		-		43.6		0.4	44.0
Expenditure written off due to project discontinuation	9.4	(1.9)	(1)	(0.9)	(1)	(133.1)	(3)	-	(135.9)
Gross carrying amount Dec 31 2016		**167.6**		**9.3**		**429.7**		**10.6**	**617.2**
Accumulated depreciation/amortisation Jan 1 2016		**-**		**8.0**		**-**		**-**	**8.0**
Depreciation and amortisation		-		1.6		-		-	1.6
Expenditure written off due to project discontinuation	9.4	-		(0.7)	(1)	-		-	(0.7)
Accumulated depreciation/amortisation Dec 31 2016		**-**		**8.9**		**-**		**-**	**8.9**
Impairment losses Jan 1 2016		**49.0**		**0.2**		**125.5**		**10.2**	**184.9**
Recognised	9.4	64.8	(1)	-		73.4	(4)	-	138.2
Exchange differences on translating foreign operations		-		-		10.9		0.4	11.3
Used/Reversed	9.4	(1.9)	(1)	(0.2)	(1)	(120.7)	(3)	-	(122.8)
Impairment losses Dec 31 2016		**111.9**		**-**		**89.1**		**10.6**	**211.6**
Net carrying amount Dec 31 2016		**55.7**		**0.4**		**340.6**		**-**	**396.7**

(1) Expenditure on exploration and evaluation work related to the Słupsk area (decision to abandon the project) and the Gaz Południe area (a PLN 64.8m write-off of expenditure on seismic surveys).
(2) Including expenditure on Sleipner assets (PLN 18.7m) and Heimdal assets (PLN 31.2m).
(3) Capitalised expenditures related to PL643 and PL655 licences (effect on the Group's profit/(loss): PLN 12.3m).
(4) Including the Utgard (formerly Alfa Sentral) field assets of PLN 67.6m and PL797 licence of PLN 5.8m.

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.

Impairment of assets of the Sleipner gas field in Norway

As at December 31st 2017 and December 31st 2016, the Group tested the Utgard (previously Alfa Sentral) field at a pre-development stage for impairment. The test was performed based on the following assumptions, equivalent to those adopted for development and production assets:

- the cash flow projection period was assumed to equal the asset's planned life,
- the discount rate was assumed to equal the weighted average cost, at 8.17% (2016: 7.63% 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 assumptions were adopted for the estimates as part of the impairment test as at December 31st 2017:
- for crude oil in USD/bbl (per barrel):
  - 2018–2022 – prices in line with the price assumptions for the available market scenarios,
  - 2023 and beyond − prices remaining stable in the long term on par with the 2022 level, adjusted for inflation;

- for natural gas in p/th (pence/thermal units):
  - 2018–2022 – prices in line with the price assumptions for the available market scenarios,
  - 2023 and beyond − prices remaining stable in the long term on par with the 2022 level, adjusted for inflation;

The following assumptions were adopted for the estimates as part of the impairment test as at December 31st 2016:
- for crude oil in USD/bbl (per barrel of oil equivalent):
  - 2017–2019 – prices in line with the price assumptions for the available market scenarios,
  - 2020 and beyond − prices remaining stable in the long term on par with the 2019 level, adjusted for inflation.

- for natural gas in p/th (pence/thermal units):
  - 2017–2019 – prices in line with the price assumptions for the available market scenarios,
  - 2020 and beyond − prices remaining stable in the long term on par with the 2019 level, adjusted for inflation,

The USD/NOK exchange rate used for the purposes of the impairment test is a rate calculated based on forward curves.

Remeasurement of the recoverable amount performed as at December 31st 2017 showed no need to recognise an impairment loss on those assets.

Remeasurement of the recoverable amount performed as at December 31st 2016 showed the need to recognise an impairment loss on those assets in the amount of PLN 67.6m (NOK 143,1m), see Note 9.4.

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 Utgard 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 price, -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. The table below presents the estimated changes in impairment losses following changes in the key assumptions:

Factor	**Change**	**Impact on impairment losses (PLNm)**	
Crude oil and gas prices	+/- 15%	64.9	- 20.3
Production volume	+/- 15%	64.9	- 8.0
USD/NOK exchange rate	+/- 15%	64.9	- 11.8
Discount rate	+/- 0.5 pp	-	4.9

13.2.2 Oil and gas development and production assets

	Note	Oil and gas development assets			Oil and gas production assets				Total
		Poland	Norway	Total	Poland	Norway	Lithuania	Total	
Gross carrying amount Jan 1 2017		**-**	**1,592.1**	**1,592.1**	**1,650.4**	**1,603.4**	**659.8**	**3,913.6**	**5,505.7**
Purchase		-	82.0 [1]	82.0	154.8 [2]	47.7	2.7	205.2	287.2
Exchange differences on translating foreign operations		-	(224.4)	(224.4)	-	(208.1)	(37.8)	(245.9)	(470.3)
Estimated costs of decommissioning of oil and gas extraction facilities		-	-	-	6.6	(35.6)	-	(29.0)	(29.0)
Reclassification of refining and other assets to oil and gas development and production assets		-	-	-	0.1	-	-	0.1	0.1
Reclassification of exploration and evaluation assets		-	200.8 [3]	200.8	-	-	-	-	200.8
Borrowing costs		-	-	-	12.5	-	-	12.5	12.5
Expenditure written off due to project discontinuation		-	-	-	(0.5)	-	-	(0.5)	(0.5)
Other		-	-	-	-	-	1.7	1.7	1.7
Gross carrying amount Dec 31 2017		**-**	**1,650.5**	**1,650.5**	**1,823.9**	**1,407.4**	**626.4**	**3,857.7**	**5,508.2**
Accumulated depreciation/amortisation Jan 1 2017		-	**-**	**-**	**461.0**	**827.0**	**293.0**	**1,581.0**	**1,581.0**
Depreciation and amortisation		-	-	-	38.4	206.4	18.2	263.0	263.0
Exchange differences on translating foreign operations		-	-	-	-	(120.5)	(17.1)	(137.6)	(137.6)
Reclassification to production assets		-	-	-	0.1	-	-	0.1	0.1
Accumulated depreciation/amortisation Dec 31 2017		**-**	**-**	**-**	**499.5**	**912.9**	**294.1**	**1,706.5**	**1,706.5**
Impairment losses Jan 1 2017		**-**	**1,579.7**	**1,579.7**	**-**	**40.1**	**206.7**	**246.8**	**1,826.5**
Recognised	9.4	-	-	-	-	-	32.9	32.9	32.9
Exchange differences on translating foreign operations		-	(208.4)	(208.4)	-	(5.2)	(12.4)	(17.6)	(226.0)
Reclassification of exploration and evaluation assets		-	64.9 [3]	64.9	-	-	-	-	64.9
Impairment losses Dec 31 2017		**-**	**1,436.2**	**1,436.2**	**-**	**34.9**	**227.2**	**262.1**	**1,698.3**
Net carrying amount Dec 31 2017		**-**	**214.3**	**214.3**	**1,324.4**	**459.6**	**105.1**	**1,889.1**	**2,103.4**

(1) Expenditures on YME (PLN 47.2m) and Sleipner (PLN 34.9m) assets.

(2) Expenditure on the B8 field.

(3) Utgard (formerly Alfa Sentral) licence forming part of the acquired Sleipner assets in Norway.

(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 2016		**-**	**1,452.4**	**1,452.4**	**1,384.7**	**1,497.2**	**636.1**	**3,518.0**	**4,970.4**
Purchase		-	12.0 [1]	12.0	213.2 [2]	46.3 [5]	0.1	259.6	271.6
Exchange differences on translating foreign operations		-	127.7	127.7	-	146.4	24.3	170.7	298.4
Estimated costs of decommissioning of oil and gas extraction facilities		-	-	-	(2.9)	(87.9)	(0.4)	(91.2)	(91.2)
Reclassification to oil and gas production assets		-	-	-	58.5 [3]	-	-	58.5	58.5
Expenditure written off due to project discontinuation		-	-	-	(3.3) [4]	-	-	(3.3)	(3.3)
Other		-	-	-	0.2	1.4	(0.3)	1.3	1.3
Gross carrying amount Dec 31 2016		**-**	**1,592.1**	**1,592.1**	**1,650.4**	**1,603.4**	**659.8**	**3,913.6**	**5,505.7**
Accumulated depreciation/amortisation Jan 1 2016		-	**-**	**-**	**398.4**	**310.3**	**258.1**	**966.8**	**966.8**
Depreciation and amortisation		-	-	-	38.8	471.8	25.1	535.7	535.7
Exchange differences on translating foreign operations		-	-	-	-	44.9	10.1	55.0	55.0
Reclassification to oil and gas production assets		-	-	-	27.1 [3]	-	-	27.1	27.1
Expenditure written off due to project discontinuation		-	-	-	(3.3) [4]	-	-	(3.3)	(3.3)
Other		-	-	-	-	-	(0.3)	(0.3)	(0.3)
Accumulated depreciation/amortisation Dec 31 2016		**-**	**-**	**-**	**461.0**	**827.0**	**293.0**	**1,581.0**	**1,581.0**
Impairment losses Jan 1 2016		**-**	**1,452.4**	**1,452.4**	**-**	**40.6**	**194.3**	**234.9**	**1,687.3**
Recognised	9.4	-	-	-	-	-	12.4 [7]	12.4	12.4
Exchange differences on translating foreign operations		-	127.3	127.3	-	3.9	7.5	11.4	138.7
Used/Reversed		-	-	-	-	(4.4) [6]	(7.5) [8]	(11.9)	(11.9)
Impairment losses Dec 31 2016		**-**	**1,579.7**	**1,579.7**	**-**	**40.1**	**206.7**	**246.8**	**1,826.5**
Net carrying amount Dec 31 2016		**-**	**12.4**	**12.4**	**1,189.4**	**736.3**	**160.1**	**2,085.8**	**2,098.2**

(1) Expenditure on the YME field.
(2) Expenditure on development of the B-8 field (PLN 212.4m) and the B-3 field (PLN 0.8m).
(3) Offshore gas pipeline from the B-3 field.
(4) Expenditure related to the Piła area (no effect on the LOTOS Group's profit/(loss)).
(5) Expenditure on Sleipner assets (PLN 42.5m) and Heimdal assets (PLN 3.6m).
(6) Expenditure on Heimdal assets.
(7) Production infrastructure on the: Auksoras, Vėžaičiai, Kretinga, Ablinga and Ližiai fields.
(8) Girkaliai field.

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

In connection with an update of the project budget and schedule as well as the profile of production from the B-8 field, as at December 31st 2017 (and December 31st 2016) the Group carried out impairment tests for assets related to the field.
Key assumptions underlying computation of the recoverable amount of the tested assets:

- the cash flow projection period was assumed to equal the asset's planned life,
- the discount rate was assumed to equal the weighted average cost, at 10.46% (2016: 10.07% after taxation with the 19% marginal tax rate,
- production volumes in line with current forecasts, including 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 following price assumptions were adopted for the estimates as part of the impairment test as at December 31st 2017:
- for crude oil in USD/bbl (per barrel of oil equivalent):

- 2018–2022 – prices in line with the price assumptions for the available market scenarios,
- 2023 and beyond − prices remaining stable in the long term on par with the 2022 level, adjusted for inflation.

The following assumptions were adopted for the estimates as part of the impairment test as at December 31st 2016:
- for crude oil in USD/bbl (per barrel of oil equivalent):

- 2017–2022 – prices in line with the price assumptions for the available market scenarios,
- 2023 and beyond − prices remaining stable in the long term on par with the 2022 level, adjusted for inflation.

The impairment test of the B-8 field's development assets indicated no need to recognise impairment losses on the assets.

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.

It was shown that the changes in the key assumptions had no effect on the impairment losses on the B-8 field's assets.

Progress of the YME field development project in Norway

Due to significant delays in the implementation of the YME project, cost overruns, and defects of the MOPU (Mobile Offshore Production Unit) to be used in production operations in the field, in previous years the Group recognised impairment losses on the YME assets until they were fully written off in 2014.

On August 22nd 2016, the YME project partners completed activities to remove the defective MOPU from the field, financed with funds raised by the consortium members (the Group has a 20% interest in the project) under an agreement with the supplier of the MOPU (see Note 25.1). The amount of expected further costs related to the arrangement (most of which have been already contracted) was reflected in these financial statements by updating relevant provisions in accordance with the best current knowledge of the Management Board as at the date of these statements (see Note 25.1).

As part of the YME field development project, on October 27th 2017 the licence partners approved the Plan for Development and Operation. On December 19th 2017, Repsol Norge AS, on behalf of the YME field licence partners, submitted the PDO for approval to the Norwegian Ministry of Petroleum and Energy. In November 2017, Repsol Norge AS, acting as the YME licence and development project operator, signed a contract with Maersk Drilling for delivery of the Mærsk Inspirer production and drilling rig, which will serve as a production hub on the Yme field. Commercial production of hydrocarbons from the field is to be launched at the end of 2019/beginning of 2020. The Group's share of the YME field's recoverable reserves are approximately 12-15m bbl of crude oil.

In the Group's opinion, the amount of the provision for decommissioning of the YME field infrastructure (see Note 25.1) reflects the Group's necessary commitment if the complete decommissioning scenario materialises by 2032. This is a consequence of implementation of the revised field development plan and the YME field infrastructure decommissioning plan, which were adopted by the consortium with the votes of the majority of its members and reflected in the project budget, taking into account a reduction in the decommissioning cost estimate for 2028−2032. The cost estimate was reduced by an amount corresponding to a portion of the conditional budget in connection with a drop in the market cost of related services in Norway following a decline in market prices of hydrocarbons and no forecasts of a possible material change in their levels in the period covered by the analysis.

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

As at December 31st 2017 and as at December 31st 2016, the Group tested for impairment the production assets of each centre generating cash flows from the producing Heimdal fields (Atla, Vale, Skirne, Heimdal) and Sleipner field. The impairment test indicated no need to recognise impairment losses on the assets.

As part of impairment testing of the Norwegian production assets, their recoverable amount was determined at 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 asset's planned life,
- the discount rate was assumed to equal the weighted average cost, at 8.17% (2016: 7.63% 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 2017:
- for crude oil in USD/bbl (per barrel):
  - 2018–2022 – prices in line with the price assumptions for the available market scenarios,
  - 2023 and beyond − prices remaining stable in the long term on par with the 2022 level, adjusted for inflation;

- for natural gas in USD/boe (per barrel of oil equivalent):
  - 2018–2022 − prices in line with the price assumptions for the available market scenarios, and in 2023 and beyond − prices remaining stable in the long term on par with the 2022 level, adjusted for inflation.

The following assumptions were adopted for the estimates as part of the impairment tests as at December 31st 2016:
- for crude oil in USD/bbl (per barrel):
  - 2017–2019 – prices in line with the price assumptions for the available market scenarios,
  - 2020 and beyond − prices remaining stable in the long term on par with the 2019 level, adjusted for inflation,

- for natural gas in USD/boe (per barrel of oil equivalent):
  - 2017–2019 − prices in line with the price assumptions for the available market scenarios, and in 2020 and beyond − prices remaining stable in the long term on par with the 2019 level, adjusted for inflation.

The USD/NOK exchange rate used for the purposes of the impairment test is a rate calculated based on forward curves.

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 .

The table below presents the estimated changes in potential impairment losses on the tested Heimdal and Sleipner assets following changes in the key assumptions:

Factor	Change	Impact on impairment losses (PLNm)	
Crude oil and gas prices	+/- 15%	20.7	- 12.8
Production volume	+/- 15%	19.5	- 11.6
USD/NOK exchange rate	+/- 15%	20.4	- 12.5
Discount rate	+/- 0.5 pp	-	4.9

Impairment testing of onshore oil and gas extraction facilities in Lithuania

As a result of impairment tests performed for the resources and production infrastructure in Lithuania, as at December 31st 2017 the Group recognised an impairment loss of PLN 2.7m on production assets associated with the Girkaliai field, and an impairment loss of PLN 30.1m on production assets associated with the Vėžaičiai field, and an impairment loss of PLN 0.1m on production assets associated with the Ližiai field. As at December 31st 2016, the Group recognised an impairment loss of PLN 0.1m on production assets associated with the Kretinga field, and an impairment loss of PLN 12.3m on property, plant and equipment comprising production infrastructure associated with the Auksoras, Vėžaičiai, Kretinga, Ablinga and Ližiai fields (see Note 9.4).

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 asset's planned life,
- the discount rate was assumed to equal the weighted average cost, at 9.62% (2016: 9%),
- 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 2017:
- 2018–2022 – prices in line with the price assumptions for the available market scenarios,
- 2023 and beyond − prices remaining stable in the long term on par with the 2022 level, adjusted for inflation.

Crude oil price assumptions (USD/bbl) adopted for the purposes of the estimates as at December 31st 2016:
- 2017–2022 – prices in line with the price assumptions for the available market scenarios,
- 2023 and beyond − prices remaining stable in the long term on par with the 2022 level, adjusted for inflation.

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 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.

The table below presents the estimated changes in impairment losses on the Lithuanian assets referred to above following changes in the key assumptions:

Factor	Change	Impact on impairment losses (PLNm)	
Crude oil and gas prices	+/- 15%	32.3	-32.6
Production volume	+/- 15%	26.0	-26.2
USD/EUR exchange rate	+/- 15%	24.0	-24.2
Discount rate	+/- 0.5 pp	-2.9	2.9

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.

(PLNm)

	Oil and gas development assets	Oil and gas production assets				Total
	Norway	Poland	Norway	Lithuania	Total	
Gross carrying amount Jan 1 2017	**134.9**	**107.4**	**821.1**	**1.7**	**930.2**	**1,065.1**
Estimated costs of decommissioning of oil and gas extraction facilities	-	6.6	(35.7)	-	(29.1)	(29.1)
Exchange differences on translating foreign operations	(17.4)	-	(103.8)	(0.1)	(103.9)	(121.3)
Gross carrying amount Dec 31 2017	**117.5**	**114.0**	**681.6**	**1.6**	**797.2**	**914.7**
Accumulated depreciation/amortisation Jan 1 2017	**-**	**80.1**	**405.8**	**1.6**	**487.5**	**487.5**
Depreciation and amortisation	-	1.2	100.0	-	101.2	101.2
Exchange differences on translating foreign operations	-	-	(59.0)	-	(59.0)	(59.0)
Accumulated depreciation/amortisation December 31st 2017	**-**	**81.3**	**446.8**	**1.6**	**529.7**	**529.7**
Impairment losses Jan 1 2017	**134.9**	**-**	**33.1**	**-**	**33.1**	**168.0**
Recognised	-	-	-	-	-	-
Exchange differences on translating foreign operations	(17.4)	-	(4.2)	(0.1)	(4.3)	(21.7)
Used/Reversed	-	-	-	-	-	-
Impairment losses Dec 31 2017	**117.5**	**-**	**28.9**	**(0.1)**	**28.8**	**146.3**
Net carrying amount Dec 31 2017	**-**	**32.7**	**205.9**	**0.1**	**238.7**	**238.7**

	Oil and gas development assets	Oil and gas production assets				Total
	Norway	Poland	Norway	Lithuania	Total	
Gross carrying amount Jan 1 2016	**122.8**	**108.1**	**829.8**	**2.0**	**939.9**	**1,062.7**
Estimated costs of decommissioning of oil and gas extraction facilities	-	(2.9)	(87.9)	(0.4)	(91.2)	(91.2)
Exchange differences on translating foreign operations	12.1	-	79.2	0.1	79.3	91.4
Reclassification to oil and gas development and production assets	-	2.2 (1)	-	-	2.2	2.2
Gross carrying amount Dec 31 2016	**134.9**	**107.4**	**821.1**	**1.7**	**930.2**	**1,065.1**
Accumulated depreciation/amortisation Jan 1 2016	**-**	**76.6**	**124.0**	**1.3**	**201.9**	**201.9**
Depreciation and amortisation	-	1.3	261.6	0.2	263.1	263.1
Exchange differences on translating foreign operations	-	-	20.2	0.1	20.3	20.3
Reclassification of development assets to production assets	-	2.2 (1)	-	-	2.2	2.2
Accumulated depreciation/amortisation Dec 31 2016	**-**	**80.1**	**405.8**	**1.6**	**487.5**	**487.5**
Impairment losses Jan 1 2016	**122.8**	**-**	**32.0**	**-**	**32.0**	**154.8**
Recognised	-	-	-	-	-	-
Exchange differences on translating foreign operations	12.1	-	3.1	-	3.1	15.2
Used/Reversed	-	-	(2.0)	-	(2.0)	(2.0)
Impairment losses Dec 31 2016	**134.9**	**-**	**33.1**	**-**	**33.1**	**168.0**
Net carrying amount Dec 31 2016	**-**	**27.3**	**382.2**	**0.1**	**409.6**	**409.6**

(1) Offshore gas pipeline from the B-3 field.

13.2.3 Other non-current assets of the upstream segment

	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Intangible assets	Total
Gross carrying amount Jan 1 2017	**11.4**	**53.1**	**69.1**	**560.4**	**15.3**	**31.1**	**740.4**
Purchase	-	-	0.5	0.1	12.5	9.9	23.0
Transfer from property, plant and equipment under construction	-	-	0.3	13.6	(13.9)	-	-
Exchange differences on translating foreign operations	-	-	(2.0)	(30.5)	(0.2)	(3.2)	(35.9)
Reclassification of refining and other assets to production assets	-	-	-	(0.1)	-	-	(0.1)
Other	-	-	0.9	-	-	-	0.9
Sale	-	-	(0.1)	(44.1)	(0.1)	-	(44.3)
Gross carrying amount Dec 31 2017	**11.4**	**53.1**	**68.7**	**499.4**	**13.6**	**37.8**	**684.0**
Accumulated depreciation/amortisation Jan 1 2017	**4.2**	**20.0**	**39.1**	**272.8**	**-**	**21.6**	**357.7**
Depreciation and amortisation	0.3	1.8	3.1	35.4	-	3.2	43.8
Exchange differences on translating foreign operations	-	-	(1.5)	(25.9)	-	(1.7)	(29.1)
Reclassification of refining and other assets to production assets	-	-	-	(0.1)	-	-	(0.1)
Sale	-	-	(0.1)	(39.7)	-	-	(39.8)
Other	-	-	-	0.3	-	-	0.3
Accumulated depreciation/amortisation Dec 31 2017	**4.5**	**21.8**	**40.6**	**242.8**	**-**	**23.1**	**332.8**
Impairment losses January 1st 2017	**-**	**-**	**0.6**	**5.1**	**0.1**	**-**	**5.8**
Recognised	-	-	-	0.8	-	-	0.8
Exchange differences on translating foreign operations	-	-	-	(0.5)	-	-	(0.5)
Used/Reversed	-	-	-	(3.5)	(0.1)	-	(3.6)
Impairment losses Dec 31 2017	**-**	**-**	**0.6**	**1.9**	**-**	**-**	**2.5**
Net carrying amount Dec 31 2017	**6.9**	**31.3**	**27.5**	**254.7**	**13.6**	**14.7**	**348.7**

	Land	Buildings, structures	Plant and equipment	Vehicles, other	Property, plant and equipment under construction	Intangible assets	Total
Gross carrying amount Jan 1 2016	**11.4**	**96.3**	**84.6**	**539.1**	**15.1**	**29.5**	**776.0**
Purchase	-	-	0.3	11.6	12.3	0.2	24.4
Transfer from property, plant and equipment under construction	-	-	0.1	10.6	(10.7)	-	-
Exchange differences on translating foreign operations	-	0.1	0.7	12.8	-	1.7	15.3
Reclassification of refining and other assets to production assets	-	(42.4) [1]	(16.1) [1]	-	-	-	(58.5)
Expenditure written off due to project discontinuation	-	-	-	-	-	-	-
Sale	-	-	(0.5)	(13.7)	-	(0.3)	(14.5)
Other	-	(0.9)	-	-	(1.4)	-	(2.3)
Gross carrying amount Dec 31 2016	**11.4**	**53.1**	**69.1**	**560.4**	**15.3**	**31.1**	**740.4**
Accumulated depreciation/amortisation Jan 1 2016	**3.9**	**34.4**	**45.5**	**235.1**	**-**	**16.6**	**335.5**
Depreciation and amortisation	0.3	2.3	4.0	33.7	-	4.4	44.7
Exchange differences on translating foreign operations	-	-	0.6	11.2	-	0.9	12.7
Reclassification of refining and other assets to production assets	-	(16.5) [1]	(10.6) [1]	-	-	-	(27.1)
Sale	-	-	(0.4)	(7.2)	-	(0.3)	(7.9)
Other	-	(0.2)	-	-	-	-	(0.2)
Accumulated depreciation/amortisation Dec 31 2016	**4.2**	**20.0**	**39.1**	**272.8**	**-**	**21.6**	**357.7**
Impairment losses January 1st 2016	**-**	**-**	**0.6**	**5.3**	**0.1**	**-**	**6.0**
Recognised	-	-	-	5.4 [2]	-	-	5.4
Exchange differences on translating foreign operations	-	-	-	0.3	-	-	0.3
Used/Reversed	-	-	-	(5.9)	-	-	(5.9)
Impairment losses Dec 31 2016	**-**	**-**	**0.6**	**5.1**	**0.1**	**-**	**5.8**
Net carrying amount Dec 31 2016	**7.2**	**33.1**	**29.4**	**282.5**	**15.2**	**9.5**	**376.9**

[1] Offshore gas pipeline from the B-3 field.
[2] Including ships valued at PLN 5.3m, see Note 9.4.

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

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

	Property, plant and equipment used under finance lease	
	December 31st 2017	December 31st 2016
Gross carrying amount	323.1	312.3
Accumulated depreciation	141.5	103.7
Impairment losses	-	0.8
Net carrying amount	181.6	207.8

The Group uses finance leases to finance primarily rolling stock assets (downstream segment); see also Note 22.4.

Allocation of depreciation	2017	2016
Cost of sales	716.6	936.3
Distribution costs	77.8	87.5
Administrative expenses	37.1	35.6
Change in products and adjustments to cost of sales	12.8	8.5
Total	**844.3**	**1,067.9**

In 2017, the Group capitalised finance costs of PLN 49.8mas property, plant and equipment under construction and intangible assets under development (2016: PLN 4.8m) (see Notes 13.1.1 and 13.1.3). As at December 31st2017, finance costs capitalised as property, plant and equipment under construction and intangible assets under development, as well as property, plant and equipment related to oil and gas production totalled PLN 248.9m (December 31st 2016: PLN 13.1m).

As at December 31st 2017, property, plant and equipment as well as intangible assets serving as collateral for the Group's liabilities totalled PLN 8,569.6m (December 31st 2016: PLN 6,232.7m).

As at December 31st 2017 , the Group's future contractual commitments related to purchases of property, plant and equipment and intangible assets, undisclosed in the statement of financial position, were PLN 395.0m PLN 1,366.7m). The contracted expenditure is related, among other things, to the EFRA Project, the B-8 field development, preparation of engineering plans and specifications for the production of high-quality hydrocracked base oils, the Hydrogen Recovery Unit (HRU), upgrade of the unit for solvent-based removal of paraffins, as well as modernisation of locomotives.

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	Description of business	The Group's ownership interest of shares		Carrying amount (PLNm)	
			December 31st 2017	December 31st 2016	December 31st 2017	December 31st 2016
Downstream segment						
LOTOS - Air BP Polska Sp. z o.o.	Gdańsk	Sale of aviation fuel and logistics services	50.00%	50.00%	23.2	19.5
Upstream segment						
Baltic Gas Sp. z o.o.	Gdańsk	Oil and gas production (support activities for oil and gas production)	49.99%	49.99%	-	-
Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp.k. [(1)]	Gdańsk	Crude oil and gas production	44.78%	44.90%	83.3	78.6
UAB Minijos Nafta	Lithuania, Gargždai	Crude oil exploration and production	49.99%	49.99%	-	-
Total					**106.5**	**98.1**

[(1)] The ownership interests as at December 31st 2017 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 2016: 0.001%),
- LOTOS Petrobaltic S.A. (limited partner) 44.786% (December 31st 2016: 44.908%),
- CalEnergy Resources Poland Sp. z o.o. ("CalEnergy") (limited partner) 55.214% (December 31st 2016: 55.091%).

The Group's indirect ownership interest in Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp. k. (jointly-controlled entity) is 44.78% (December 31st 2016: 44.90%).

In 2017, CalEnergy Resources Poland Sp. z o.o. and LOTOS Petrobaltic S.A. made the agreed cash contributions to Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp. k. of PLN 7,1m and PLN 5,4m, respectively, which changed the Group's ownership interest in the company. The expenditure representing the cash contributions made by LOTOS Petrobaltic S.A. to these companies, was disclosed 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	
	2017	2016
Downstream segment		
LOTOS-Air BP Polska Sp. z o.o.	3.7	3.3
Upstream segment		
Baltic Gas spółka z ograniczoną odpowiedzialnością i wspólnicy sp.k. (1)	(0.5)	(0.4)
UAB Minijos Nafta	-	-
Total	**3.2**	**2.9**

(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 Petrobaltic S.A. holds a 50.9995% share in profit and
- 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
	2017		
Revenue	470.6	-	29.1
Cost of sales	(427.5)	(0.6)	(23.3)
Gross profit/(loss)	**43.1**	**(0.6)**	**5.8**
Distribution costs	(32.1)	-	(0.7)
Administrative expenses	(4.1)	(0.4)	(4.0)
Net other income/(expenses)	-	-	-
Operating profit/(loss)	**6.9**	**(1.0)**	**1.1**
Net finance income/(costs)	2.3	-	(0.8)
Pre-tax profit/(loss)	**9.2**	**(1.0)**	**0.3**
Income tax	(1.8)	-	-
Net profit/(loss)	**7.4**	**(1.0)**	**0.3**
Other comprehensive income/(loss), net	-	-	-
Total comprehensive income/(loss)	**7.4**	**(1.0)**	**0.3**
Depreciation and amortisation	(1.2)	(0.6)	(5.0)

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
	2016		
Revenue	240.3	-	28.7
Cost of sales	(206.8)	(0.6)	(25.2)
Gross profit/(loss)	**33.5**	**(0.6)**	**3.5**
Distribution costs	(20.5)	-	(0.9)
Administrative expenses	(4.3)	(0.3)	(4.8)
Net other income/(expenses)	-	-	0.1
Operating profit/(loss)	**8.7**	**(0.9)**	**(2.1)**
Net finance income/(costs)	(0.4)	-	(0.2)
Pre-tax profit/(loss)	**8.3**	**(0.9)**	**(2.3)**
Income tax	(1.6)	-	-
Net profit/(loss)	**6.7**	**(0.9)**	**(2.3)**
Other comprehensive income/(loss), net	-	-	-
Total comprehensive income/(loss)	**6.7**	**(0.9)**	**(2.3)**
Depreciation and amortisation	(0.9)	(0.6)	(6.9)

(PLNm)

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
		December 31st 2017		
Non-current assets		11.5	186.6	16.7
Current assets, including:		67.8	4.6	19.6
Cash and cash equivalents		19.4	3.2	10.6
Total assets		**79.3**	**191.2**	**36.3**
Non-current liabilities		4.5	-	14.3
Current liabilities		41.4	4.7	4.9
Total liabilities		**45.9**	**4.7**	**19.2**
Net assets		**33.4**	**186.5**	**17.1**
		50.00%	*	49.99%
Share of net assets		16.7	83.3	8.5
Fair value measurement		6.7 (1)	-	(8.5)
Elimination of intercompany transactions		(0.2)	-	-
Interest in joint ventures	14	**23.2**	**83.3**	**-**

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
		December 31st 2016		
Non-current assets		12.6	173.3	22.7
Current assets, including:		41.4	10.2	18.0
Cash and cash equivalents		16.2	8.7	10.1
Total assets		**54.0**	**183.5**	**40.7**
Non-current liabilities		5.5	-	16.6
Current liabilities		22.6	8.5	4.1
Total liabilities		**28.1**	**8.5**	**20.7**
Net assets		**25.9**	**175.0**	**20.0**
		50.00%	*	49.99%
Share of net assets		13.0	78.5	10.0
Fair value measurement		6.7 (1)	-	(10.0)
Elimination of intercompany transactions		(0.2)	-	-
Interest in joint ventures	14	**19.5**	**78.5**	**-**

* 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 1; 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.

For information on transactions with joint ventures in which the Group holds interests, see Note 30.1.

15. Trade receivables and other assets

	Note	December 31st 2017	December 31st 2016
Non-current financial assets:		**293.2**	**307.0**
Security deposits receivable		18.0	17.0
Finance lease receivables	15.2	12.8	14.6
Oil and Gas Extraction Facility Decommissioning Fund (1)		34.1	33.2
Cash securing contractual obligations related to future decommissioning of assets		207.9	192.0
Security deposit – ICE Futures		-	19.6
Security deposits related to licensed activities		10.6	20.7
Shares		9.8	9.8
Other receivables		-	0.1
Current financial assets:		**2,843.4**	**2,569.6**
Trade receivables		2,677.0	2,251.7
including from related entities	30.1	34.5	16.1
Security deposits receivable		26.3	14.6
Deposits		37.0	189.2
Cash for removal of the MOPU from the YME field (2)		55.1	75.3
Settlements under joint operations (Norwegian fields) (3)		-	1.4
Security deposits related to the use of gas fuel distribution and transmission system		16.0	14.4
Receivables under payment cards (service stations)		14.6	9.1
Finance lease receivables	15.2	7.1	7.1
Other receivables		10.3	6.8
Financial assets		**3,136.6**	**2,876.6**
Non-current non-financial assets		**10.6**	**5.2**
Borrowing costs		6.1	-
Prepayments for rebates		2.8	2.1
Other		1.7	3.1
Current non-financial assets:		**222.3**	**259.3**
Value-added tax receivable		78.4	110.3
Property and other insurance		20.9	25.6
Settlements under joint operations (Norwegian fields) (3)		58.9	68.0
Excise duty on inter-warehouse transfers		46.6	34.7
Prepaid deliveries		4.6	8.5
Prepayments for IT services		5.3	5.4
Other		7.6	6.8
Non-financial assets		**232.9**	**264.5**
Total		**3,369.5**	**3,141.1**
including:			
non-current		303.8	312.2
current:		3,065.7	2,828.9
- trade receivables		2,677.0	2,251.7
- other		388.7	577.2

(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 29.1.
(2) Cash held in an escrow account associated with the agreement concluded between the parties involved in the YME project in Norway (for more details on the agreement, see Note 29.1).
(3) Receivables of LOTOS Exploration and Production Norge AS (LOTOS Petrobaltic Group, the upstream segment) under mutual settlements between the operator and consortium members concerning specific Norwegian fields.

As at December 31st 2017 and December 31st 2016, depositscomprised deposits securing payment of interest on credit facilities contracted to finance the 10+ Programme and to finance or refinance inventories.

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

As at December 31st 2017, the Group's receivables of PLN 44.7m were assigned by way of security for the Group's liabilities (December 31st 2016: PLN 23.3m).

For description of financial instruments, see Note 7.21.For description of 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

	2017	2016
At beginning of period	**165.3**	**171.6**
Recognised	7.5	4.1
Used	(64.7)	(7.9)
Reversed	(3.9)	(2.5)
At end of period	**104.2**	**165.3**

The amounts resulting from recognition or reversal of impairment losses on receivables are presented under other income or other expenses (the principal portion) and under finance income or finance costs (the default interest portion). In the statement of comprehensive income, recognised and reversed impairment losses on receivables are presented on a net basis under: Other income/expenses (in accordance with the adopted accounting policy the Group offsets corresponding items of other income and other expenses in line with paragraph 34 and 35 of IAS 1 *Presentation of Financial Statements*).

Recognition included PLN 6.9m in respect of the principal amount (2016: PLN 3.5m) and PLN 0.6m in respect of interest (2016: PLN 0.5m).

Reversal included PLN 3.5m in respect of the principal amount (2016: PLN 1.9m) and PLN 0.4m in respect of interest (2016: PLN 0.6m).

In 2017, the Group disclosed recognised and reversed impairment losses on the principal portion of receivables under other expenses, in the amount of PLN 2m, including: PLN 5.5m under recognised impairment losses, and PLN 3.5m under reversed impairment losses (see Note 9.4).

In 2016, the Group disclosed recognised and reversed impairment losses on the principal portion of receivables under other expenses, in the amount of PLN 1.6m, including: PLN 3.5m under recognised impairment losses, and PLN 1.9m under reversed impairment losses (see Note 9.4).

Ageing of unimpaired past due receivables:	December 31st 2017	December 31st 2016
Up to 1 month	34.1	75.7
From 1 to 3 months	1.9	1.2
From 3 to 6 months	0.7	-
From 6 months to 1 year	0.2	-
Over 1 year	2.8	4.1
Total	**39.7**	**81.0**

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 2017, the share of trade receivables from the Group's five largest customers as at the end of the reporting period was 48% (December 31st 2016: 32%) of total trade receivables (individually: 0%–25%). 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.

	Minimum lease payments		Present value of minimum lease payments	
	December 31st 2017	December 31st 2016	December 31st 2017	December 31st 2016
Up to 1 year	7.2	7.2	7.1	7.1
From 1 to 5 years	12.9	14.7	12.8	14.6
Total	**20.1**	**21.9**	**19.9**	**21.7**
Less unrealised finance income	(0.2)	(0.2)	-	-
Present value of minimum lease payments	**19.9**	**21.7**	**19.9**	**21.7**
including:				
non-current			12.8	14.6
current			7.1	7.1

16. Inventories

	December 31st 2017	December 31st 2016
Finished goods	903.3	833.6
Semi-finished products and work in progress	488.7	431.7
Merchandise	133.6	149.2
Materials	2,034.0	1,919.1
Total	**3,559.6**	**3,333.6**
including inventories measured at:		
cost	3,553.0	3,309.6
net realisable value	6.6	24.0

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

As at December 31st 2017, inventories securing liabilities under bank borrowings were valued at PLN 3,165.9m (December 31st 2016: PLN 2,801.2m).

16.1 Change in inventory write-downs

	2017	2016
At beginning of period	**2.1**	**267.7**
Recognised	11.4	18.6
Used	(0.1)	(1.3)
Reversed	(9.4)	(282.9)
At end of period	**4.0**	**2.1**

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

17. Cash and cash equivalents

	December 31st 2017	December 31st 2016
Cash and cash equivalents in the statement of financial position	1,920.7	744.6
Overdraft facilities	(0.1)	(13.8)
Total cash and cash equivalents in the statement of cash flows	1,920.6	730.8

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 2017, the amount of undrawn funds available to the Group under working-capital facilities in respect of which all conditions precedent had been fulfilled was PLN 891.3m (December 31st 2016: PLN 1,101.0m).

As at December 31st 2017, cash in bank accounts serving as security for the Group's liabilities was PLN 302.2m (December 31st 2016: PLN 45.4m).

18. Share capital

	December 31st 2017	December 31st 2016
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 2017 and December 31st 2016, 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 as at December 31st 2017 and December 31st 2016 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

Cash flow hedging reserve 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	2017	2016
At beginning of period		**(812.8)**	**(700.9)**
Valuation of cash flow hedging instruments	26.2	725.4	(138.2)
- effective portion		724.7	(138.8)
- ineffective portion		0.7	0.6
Income tax on valuation of cash flow hedging instruments	10.1	(137.8)	26.3
At end of period		**(225.2)**	**(812.8)**

21. Retained earnings

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

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

As at December 31st 2017 and December 31st 2016, Grupa LOTOS S.A. was restricted in its ability to distribute dividends, as described in detail in Note 12.

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

In 2017 and 2016, the ability of subsidiaries of the LOTOS Group 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 until the first repayment is made, with its due date scheduled for 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.

The dividend restrictions were binding as at December 31st 2017 and December 31st 2016. Furthermore, the prohibition on declaring and paying dividends at LOTOS Petrobaltic S.A. was lifted after the redemption of all notes.

22. Borrowings, other debt instruments and finance lease liabilities

	Note	December 31st 2017	December 31st 2016
Bank borrowings	22.1	3,903.0	5,082.9
Non-bank borrowings	22.2	68.3	81.8
Notes	22.3	313.0	213.0
Finance lease liabilities	22.4	141.6	179.5
Total		**4,425.9**	**5,557.2**
including:			
non-current		2,738.3	3,980.5
current		1,687.6	1,576.7

	2017	2016
At beginning of period	**5,557.2**	**6,999.3**
Proceeds from borrowings	925.8	380.5
Issue of notes	296.1	-
Repayment of borrowings	(1,236.2)	(1,511.1)
Redemption of notes	(160.2)	(19.2)
Decrease in finance lease liabilities	(36.8)	(31.2)
Interest, fees and commissions paid	(203.3)	(203.7)
Interest, fees and commissions accrued	204.7	186.1
Prepayments and accruals	13.6	(35.0)
Exchange differences:	(906.7)	387.5
Change in overdraft facilities	(13.8)	(567.8)
Change in deposits securing payment of interest and principal	(15.8)	(26.5)
Other	1.3	(1.7)
At end of period	**4,425.9**	**5,557.2**

22.1 Bank borrowings

	December 31st 2017	December 31st 2016
Investment facilities	3,426.9	4,429.1
Working-capital facilities	139.4	161.8
Inventory financing and refinancing facility	696.8	836.3
Funds in bank deposits securing payment of interest and principal*	(360.1)	(344.3)
Total	**3,903.0**	**5,082.9**
including:		
non-current	2,633.6	3,769.8
current	1,269.4	1,313.1

* In accordance with IAS 32, Grupa LOTOS S.A. offsets the financial asset (cash reserved for repayment of the facilities) against financial liabilities under the facilities as it has a legally enforceable title to set off the amounts and intends to realise the asset and settle the liability simultaneously. Accumulation of funds for the repayment of credit facilities is expressly provided for in the documentation relating to the investment facilities obtained to finance the 10+ Programme, as well as the inventory financing and refinancing facility. The Company is required to set aside and maintain funds for repayment of principal and interest due over the next six months. The purpose of adopting the net-basis presentation approach in the statement of financial position is to reflect the expected future cash flows from the settlement of two or more financial instruments.

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, 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 and the right to compensation from the State Treasury payable in the event that the Group is required to sell emergency stocks below market price,
- 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 oil supply agreements,
- assignment by way of security of rights under a conditional loan agreement,
- representation on voluntary submission to enforcement.

Bank borrowings by currency

	Currency of credit facility advanced to the Group		
	USD	PLN	Total
December 31st 2017	3,627.9	275.1	**3,903.0**
December 31st 2016	4,745.4	337.5	**5,082.9**

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,
- O/N, 1M or 3M WIBOR - in the case of PLN-denominated facilities.

The bank margins on the contracted facilities are within the range of 0.85pp. – 4.0pp.

As at December 31st 2017, the average effective interest rate for the credit facilities denominated in USD was approximately 3.50% (December 31st 2016: 2.85%). The average effective interest rate for PLN-denominated facilities (excluding the syndicated facilities contracted by the Parent) was approximately 3.60% (December 31st 2016: 3.55%).

For sensitivity analysis of borrowings with respect to currency and interest rate risks, see Notes 27.3.1 and 27.4.1 respectively. For analysis of contractual maturities of the borrowings, see Note 27.5.

In connection with its investment credit facilities and the credit facility incurred to finance and refinance inventories, the Parent is required to maintain its Tangible Consolidated Net Worth (TCNW) at the level specified in the facility agreements. Under the facility agreement for refinancing and financing of inventories, the Company is also required to comply with the covenant requiring it to maintain the Loan to Pledged Inventory Value Ratio at or below the level specified in the facility agreement. As at December 31st 2017 and December 31st 2016, the Company complied with this requirement.

Proceeds from and repayment of bank borrowings

In 2017, proceeds from the Group's bank borrowings were PLN 925.8m (2016: PLN 379.3m), while cash outflows on repayment of borrowings were PLN 1,223.4m (2016: PLN 1,499.5m). 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 borrowings, respectively.

In 2017, proceeds from bank borrowings related to:

- investment facilities for the financing of the EFRA Project (PLN 625.1m),
- working capital facilities of LOTOS Asfalt Sp. o.o. (PLN 139.4m),
- working capital facilities of AB LOTOS Geonafta (PLN 161.3m).

In 2017, repayments of bank borrowings related mainly to:

- the Parent's investment facilities for the financing of the 10+ Project (PLN 807.1m),
- working capital facilities of LOTOS Asfalt Sp. o.o. (PLN 102.5m),
- LOTOS Paliwa Sp. z o.o.'s investment credit facilities for the financing and refinancing of the purchase of service stations (PLN 33.7m),
- credit facilities of LOTOS Exploration and Production Norge AS (PLN 96.8m),
- credit facilities of AB LOTOS Geonafta (PLN 167m),
- SPV Baltic Sp. z o.o.'s investment facility for the purchase of the company's multi-purpose platform (PLN 11.2m).

In 2017 and 2016, there were no defaults under the facilities.

As one of the covenants under an investment credit facility agreement concluded by SPV Baltic Sp. z o.o. with PKO BP was not complied with, the non-current portion of liabilities under the facility of PLN 51.1m was presented under current liabilities. As at December 31st 2017, the bank did not accelerate the facilities. As at the date of preparation of the financial statements, the company had a letter from the bank stating that the bank waived its right to treat the non-compliance with the covenant as an event of default.

In addition, as one of the covenants under credit facility agreements of AB LOTOS Geonafta was not complied with, the long-term portion of liabilities under those credit facilities of PLN 8.5m was presented under current liabilities. As at December 31st 2017, the bank did not accelerate the facilities. As at the date of preparation of the financial statements, the company had a letter from the bank stating that the bank waived its right to treat the non-compliance with the covenant as an event of default.

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 2017.

22.2 Non-bank borrowings

	December 31st 2017	December 31st 2016
Provincial Fund for Environmental Protection and Water Management in Gdańsk (WFOŚiGW)	5.2	7.7
Agencja Rozwoju Przemysłu S.A.	63.1	74.1
Total	**68.3**	**81.8**
including:		
non-current	4.4	69.3
current	63.9	12.5

The loan advanced by Agencja Rozwoju Przemysłu S.A. was intended for the financing of a purchase of a drilling rig; the other loans were taken out to partly finance upgrade of locomotives and a rail tank car cleaning facility, as well as upgrade of the dust removal unit at a CHP plant.

Repayment of the loans is 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 2017, the average effective interest rate for the loans was approximately 4.61% (December 31st 2016: 4.56%).

For interest rate risk sensitivity analysis of the loans, see Note 27.4.1.
For analysis of contractual maturities of the loans, see Note 27.5.

Proceeds from and repayment of non-bank borrowings

In 2017, the Group did not contract any non-bank borrowings (in 2016: PLN 1.2m), whereas repayments of non-bank borrowings were PLN 12.8m (2016: PLN 11.6m). These amounts are presented in the consolidated statement of cash flows as cash flows from financing activities under Proceeds from non-bank borrowings and Repayment of non-bank borrowings, respectively.

As one of the covenants under the loan agreement concluded by SPV Baltic Sp. z o.o. with Agencja Rozwoju Przemysłu was not complied with, the non-current portion of liabilities under the loan of PLN 51.1m was presented under current liabilities. As at December 31st 2017, the lender did not accelerate the loan. As at the date of preparation of the financial statements, the company had a letter from Agencja Rozwoju Przemysłu stating that it waived its right to treat the non-compliance with the covenant as an event of default.

22.3 Notes

In 2013, LOTOS Petrobaltic S.A. (upstream segment) issued medium-term notes under an agreement with Bank Pekao S.A. of October 29th 2013. As at December 31st 2017, the liability under LOTOS Petrobaltic S.A.'s outstanding notes, net of issue costs, was PLN 111.7m (December 31st 2016: PLN 213.0m).

The security created in respect of the note issue programme comprises:
- assignment by way of security,
- power of attorney over bank accounts,
- blank promissory note,
- representation on voluntary submission to enforcement,
- mortgage,
- assignment by way of security of claims under property insurance agreements and agreement for drilling rig services.

In 2016, the SPV B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A. (upstream segment) concluded agreements with Bank Gospodarstwa Krajowego S.A. and Polski Fundusz Rozwoju S.A. (the Polish Development Fund, PFR) (Fundusz Inwestycji Infrastrukturalnych – Dłużny Fundusz Inwestycyjny Zamknięty Aktywów Niepublicznych) for financing the development of the B8 oil field in the Baltic Sea, including senior notes and subordinated notes programme agreements. As at December 31st 2017, the liability under the outstanding notes issued by B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A., net of issue costs, was PLN 201.3m. As at December 31st 2017, due to an event of default under the terms and conditions of the notes, there were grounds for their early redemption at the option of PFR and BGK. As at the date of these consolidated financial statements, the financing entities had not notified the Group of their intention to avail themselves of that option. The final redemption date of all the notes issued under the programme, in accordance with the annexes changing their maturities, falls on March 31st 2018.

Security under the above agreements includes:
- pledges over shares,
- pledge over bank accounts,
- pledge over receivables,
- pledge over assets.

Proceeds from and payments under notes

On February 15th 2017, the Group received a confirmation of fulfilment of the conditions precedent to disbursement of financing under the subordinated and senior notes programme agreements. On March 1st 2017, the first tranche of notes was issued. The proceeds of PLN 296.1m were presented by the Group in cash flows from financing activities under Issue of notes.

In addition, in 2017 the notes issued by upstream companies under the above-mentioned agreements were partially redeemed. The related payments of PLN 160.2m were presented in the Group's statement of cash flows from financing activities, under Redemption of notes (2016: PLN 19.2m).

For sensitivity analysis of the notes with respect to currency and interest rate risks, see Notes 27.3.1 and 27.4.1, and for analysis of their contractual maturities see Note 27.5.

22.4 Finance lease liabilities

	Minimum lease payments		Present value of minimum lease payments	
	December 31st 2017	December 31st 2016	December 31st 2017	December 31st 2016
Up to 1 year	57.4	57.8	41.3	38.1
From 1 to 5 years	121.6	173.7	100.3	137.3
Over 5 years	-	4.3	-	4.1
Total	**179.0**	**235.8**	**141.6**	**179.5**
Less finance costs	(37.4)	(56.3)	-	-
Present value of minimum lease payments	**141.6**	**179.5**	**141.6**	**179.5**
including:				
non-current			100.3	141.4
current			41.3	38.1

The Group uses finance leases primarily to finance rolling stock assets.

For sensitivity analysis of finance lease liabilities with respect to currency and interest rate risks, see Notes 27.3.1 and 27.4.1, and for analysis of their maturities, see Note 27.5.

22.4.1 Undisclosed liabilities under operating lease agreements

As at December 31st 2017 and December 31st 2016, future minimum lease payments under non-cancellable operating leases were as follows:

	December 31st 2017	December 31st 2016
Up to 1 year	100.6	110.5
From 1 to 5 years	233.2	339.4
Over 5 years	-	3.8
Total	**333.8**	**453.7**

The Group uses operating leases primarily to finance rolling stock assets.

23. Derivative financial instruments

	Note	December 31st 2017	December 31st 2016
Non-current financial assets:		**2.7**	**20.9**
Commodity swaps (raw materials and petroleum products)		0.7	17.2
Interest rate swap (IRS)		2.0	3.7
Current financial assets:		**161.8**	**80.0**
Commodity swaps (raw materials and petroleum products)		34.0	41.5
Currency forward and spot contracts		13.1	8.7
Interest rate swap (IRS)		7.3	-
Options		-	0.4
Currency swap		107.4	29.4
Financial assets	**26.1**	**164.5**	**100.9**
Non-current financial liabilities:		**6.7**	**36.3**
Commodity swaps (raw materials and petroleum products)		0.1	2.2
Currency forward and spot contracts		-	2.8
Interest rate swap (IRS)		6.6	31.3
Current financial liabilities:		**72.7**	**172.9**
Commodity swaps (raw materials and petroleum products)		3.7	16.2
Currency forward and spot contracts		9.5	98.8
Interest rate swap (IRS)		21.2	23.8
Currency swap		38.3	34.1
Financial liabilities	**26.1**	**79.4**	**209.2**

For description of the derivative financial instruments, see Note 7.23. For description of objectives and policies of financial risk management, see Note 27. For classification of derivative financial instruments by fair value hierarchy, see Note 23.1.

For sensitivity analysis of derivative financial instruments in terms of market risk related to changes in raw material and petroleum product prices, see Note 27.1.1.

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

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

For information on contractual maturities of derivative financial instruments, see Note 27.5.
For information on maximum credit risk exposure of derivative financial instruments (financial assets), see Note 27.6.

23.1 Fair value hierarchy

	December 31st 2017	December 31st 2016
	Level 2	
Financial assets		
Commodity swap	34.7	58.7
Commodity options	-	0.4
Currency forward and spot contracts	13.1	8.7
Interest rate swap (IRS)	9.3	3.7
Currency swap	107.4	29.4
Total	**164.5**	**100.9**
Financial liabilities		
Commodity swap	3.8	18.4
Currency forward and spot contracts	9.5	101.6
Interest rate swap (IRS)	27.8	55.1
Currency swap	38.3	34.1
Total	**79.4**	**209.2**

24. Employee benefit obligations

	Note	December 31st 2017	December 31st 2016
Non-current liabilities:	**24.1**	**169.3**	**168.5**
Post-employment benefits	24.1	41.8	40.2
Length-of-service awards and other benefits	24.1	127.5	128.3
Current liabilities:	**24.1**	**145.3**	**135.6**
Post-employment benefits	24.1	8.2	7.1
Length-of-service awards and other benefits	24.1	13.0	14.2
Bonuses, awards and unused holidays		93.5	85.2
Salaries and wages payable		30.6	29.1
Total		**314.6**	**304.1**

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
January 1st 2017		**45.3**	**142.5**	**187.8**
Current service cost	24.2	2.6	10.8	13.4
Cost of discount	24.2; 9.6	1.3	4.5	5.8
Benefits paid		(2.5)	(13.1)	(15.6)
Actuarial (gain)/loss under profit or loss	24.2	-	(4.2)	(4.2)
Actuarial (gain)/loss under other comprehensive income	24.2	(0.3)	-	(0.3)
December 31st 2017		**46.4**	**140.5**	**186.9**
including:				
non-current		38.5	127.5	166.0
current		7.9	13.0	20.9
Obligations under length-of-service awards and post-employment benefits at foreign companies (1)		3.6	-	3.6
December 31st 2017		**50.0**	**140.5**	**190.5**
including:				
non-current		41.8	127.5	169.3
current		8.2	13.0	21.2

	Note	Post-employment benefits	Length-of-service awards and other benefits	Total
January 1st 2016		**40.5**	**156.0**	**196.5**
Current service cost	24.2	2.4	12.1	14.5
Cost of discount	24.2; 9.6	1.0	4.1	5.1
Past service cost	24.2	5.7	(15.9)	(10.2)
Benefits paid		(2.1)	(11.8)	(13.9)
Actuarial (gain)/loss under profit or loss	24.2	-	(2.0)	(2.0)
Actuarial (gain)/loss under other comprehensive income	24.2	(2.2)	-	(2.2)
December 31st 2016		**45.3**	**142.5**	**187.8**
including:				
non-current		38.5	128.3	166.8
current		6.8	14.2	21.0
Obligations under length-of-service awards and post-employment benefits at foreign companies (1)		2.0	-	2.0
December 31st 2016		**47.3**	**142.5**	**189.8**
including:				
non-current		40.2	128.3	168.5
current		7.1	14.2	21.3

(1) Given the different nature of pension plans operated by the Group's foreign companies – LOTOS Exploration and Production Norge AS and the companies of the AB LOTOS Geonafta Group – and their immaterial effect on the Group's total 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	2017	2016
Items recognised in profit or loss:		**15.1**	**10.6**
Length-of-service awards, retirement and other post-employment benefits	9.2	9.3	5.5
- current service cost	24.1	13.4	14.5
- past service cost	24.1	-	(10.2)
- effect of foreign operations		0.1	3.2
- actuarial (gain)/loss	24.1	(4.2)	(2.0)
Cost of discount	24.1; 9.6	5.8	5.1
Items recognised in other comprehensive income:		**1.5**	**(2.0)**
Actuarial (gain)/loss	24.1	(0.3)	(2.2)
Effect of foreign operations		1.8	0.2
Total comprehensive income		**16.6**	**8.6**

24.3 Actuarial assumptions

Key assumptions adopted by the actuary	December 31st 2017	December 31st 2016
Discount rate (%)	3.30%	3.50%
Expected inflation rate (%)	2.50%	2.50%
Employee turnover ratio (%)	2.41%	2.33%
Expected growth rate of salaries and wages (%) in the following year	0.00%	2.00%
Expected growth rate of salaries and wages (%) in the following 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 employee attrition in the industry. The employee turnover ratios applied by the actuary were determined separately for men and women and broken down into nine age categories. 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 2016, published by the Polish Central Statistics Office (GUS), and assume that the Company's employee population is representative of the average Polish population in terms of mortality (December 31st 2016: Life Expectancy Tables of Poland for 2015).
- 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.
- Based on the historical data, it was assumed that in 60% of cases death benefit payments represent half of the full death benefit amount.
- The discount rate on future benefits was assumed at 3.3%, i.e. reflecting the assumption made at the corporate level (December 31st 2016: 3.5%, i.e. reflecting the assumption made at the corporate level).

24.4 Termination benefits

In 2017, termination benefits and compensation payable in respect of the non-compete obligation totalled PLN 8.5m (2016: PLN 5.0m).

In 2017, provisions for termination benefits totalled PLN 0.4m (2016: PLN 0.4m).

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

Salaries and wages growth rate	Discount rate	Length-of-service awards	Old-age and disability retirement severance payments	Death benefits	Social benefits fund	Total [(1)]
base	base	129.5	41.0	7.6	10.0	188.1
base + 1%	base	140.3	45.1	8.3	11.9	205.6
base - 1%	base	120.2	37.5	7.0	8.5	173.2
base	base + 0.5%	124.2	39.0	7.2	9.2	179.6
base	base - 0.5%	135.4	43.1	8.0	10.9	197.4

[(1)] Given the different nature of pension plans operated by the Group's foreign companies – LOTOS Exploration and Production Norge AS and the companies of the AB LOTOS Geonafta Group – and their negligible effect on the Group's obligations under length-of-service awards and post-employment benefits, such companies' obligations were not presented in the review.

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

Current service cost projected for 2018

Salaries and wages growth rate	Discount rate	Length-of-service awards	Old-age and disability retirement severance payments	Death benefits	Social benefits fund	Total [(1)]
base	base	10.2	2.3	0.6	0.4	13.5
base + 1%	base	11.4	2.6	0.7	0.6	15.3
base - 1%	base	9.2	2.0	0.6	0.3	12.1
base	base + 0.5%	9.7	2.1	0.6	0.4	12.8
base	base - 0.5%	10.8	2.4	0.7	0.5	14.4

Cost of discount projected for 2018

Salaries and wages growth rate	Discount rate	Length-of-service awards	Old-age and disability retirement severance payments	Death benefits	Social benefits fund	Total [(1)]
base	base	3.9	1.1	0.2	0.3	5.5
base + 1%	base	4.2	1.2	0.3	0.4	6.1
base - 1%	base	3.5	1.0	0.2	0.3	5.0
base	base + 0.5%	4.2	1.2	0.3	0.3	6.0
base	base - 0.5%	3.4	1.0	0.2	0.3	4.9

Total current service cost and cost of discount projected for 2018

Salaries and wages growth rate	Discount rate	Length-of-service awards	Old-age and disability retirement severance payments	Death benefits	Social benefits fund	Total [(1)]
base	base	14.1	3.4	0.8	0.7	19.0
base + 1%	base	15.6	3.8	1.0	1.0	21.4
base - 1%	base	12.7	3.0	0.8	0.6	17.1
base	base + 0.5%	13.9	3.3	0.9	0.7	18.8
base	base - 0.5%	14.2	3.4	0.9	0.8	19.3

[(1)] Given the different nature of pension plans operated by the Group's foreign companies – LOTOS Exploration and Production Norge AS and the companies of the AB LOTOS Geonafta Group – and their negligible effect on the Group's obligations under length-of-service awards and post-employment benefits, such companies' obligations were not presented in the review.

25. Trade payables, other liabilities and provisions

	Note	December 31st 2017	December 31st 2016
Non-current financial liabilities:		**26.5**	**23.3**
Investment commitments		7.6	3.0
Liabilities towards the Polish National Foundation		17.2	19.0
Other		1.7	1.3
Current financial liabilities:		**2,397.2**	**1,941.7**
Trade payables		2,201.7	1,718.2
Investment commitments		126.6	147.7
Liabilities to insurers		4.2	4.6
Settlements under joint operations (Norwegian fields) (1)		46.1	57.8
Liabilities towards the Polish National Foundation		2.5	5.0
Other		16.1	8.4
Financial liabilities		**2,423.7**	**1,965.0**
Non-current non-financial liabilities:		**1,045.9**	**1,177.7**
Provisions	25.1	1,034.0	1,164.4
Grants		9.4	10.1
Other		2.5	3.2
Current non-financial liabilities:		**1,681.5**	**1,395.6**
Provisions	25.1	40.3	92.7
Value-added tax payable		547.4	443.2
Excise duty and fuel charge payable		870.8	698.1
Other liabilities to the state budget other than corporate income tax		103.1	73.9
Grants		26.6	24.3
Settlements under joint operations (Norwegian fields) (1)		5.4	5.5
Prepaid deliveries		6.8	5.2
Liabilities under the NAVIGATOR loyalty programme		21.5	15.8
Provision for deficit in CO_2 emission allowances		14.4	9.8
Other		45.2	27.1
Non-financial liabilities		**2,727.4**	**2,573.3**
Total		**5,151.1**	**4,538.3**
including:			
non-current		1,072.4	1,201.0
current:		4,078.7	3,337.3
- trade receivables		2,201.7	1,718.2
- other		1,877.0	1,619.1

(1) Liabilities of LOTOS Exploration and Production Norge AS (LOTOS Petrobaltic Group, the upstream 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 during a financial year.

For currency risk sensitivity analysis of trade payables and other liabilities, see Note 27.3.1.
For information on contractual maturities of trade payables and other liabilities, see Note 27.5.

25.1 Provisions

	Note	Provisions for decommissioning and restoration costs					Other provisions	Total
		Provision for oil and gas extraction facilities			Provisions for retired refining and other units	Total		
		Poland	Norway	Lithuania				
January 1st 2017		**186.5**	**958.6**	**14.0**	**15.2**	**1,174.3**	**82.8**	**1,257.1**
Recognised		-	-	-	0.2	0.2	4.7	4.9
Remeasurement of decommissioning costs		3.5	(48.8) [(1)]	(0.9)	-	(46.2)	-	(46.2)
Remeasurement of estimated provision for contingent payments		-	-	-	-	-	0.1	0.1
Change in provisions attributable to approaching due date of liability (discount unwinding effect)	9.6	6.5	35.3	0.8	-	42.6	0.5	43.1
Interest on Oil and Gas Facility Decommissioning Fund		0.4	-	-	-	0.4	-	0.4
Exchange differences on translating foreign operations		-	(122.4)	(0.8)	-	(123.2)	(3.0)	(126.2)
Used		-	(7.9)	-	-	(7.9)	(32.5) [(2)]	(40.4)
Reversed		-	-	-	(2.9)	(2.9)	(15.6)	(18.5)
December 31st 2017		**196.9**	**814.8**	**13.1**	**12.5**	**1,037.3**	**37.0**	**1,074.3**
including:								
non-current		196.9	810.3	13.1	12.4	1,032.7	1.3	1,034.0
current		-	4.5	-	0.1	4.6	35.7	40.3

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 and Sleipner 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 mainly remeasurement of provisions for future costs of decommissioning of crude oil and gas extraction facilities related to the Heimdal and Sleipner assets.
(2) Including PLN 31.4m (NOK 69.3m) related to a provision for contingent payments under the Sleipner assets acquisition agreement.

	Note	Provisions for decommissioning and restoration costs					Other provisions	Total
		Provision for oil and gas extraction facilities			Provisions for retired refining and other units	Total		
		Poland	Norway	Lithuania				
January 1st 2016		**191.9**	**986.4**	**14.1**	**25.8**	**1,218.2**	**194.2**	**1,412.4**
Recognised		-	-	-	-	-	29.3	29.3
Remeasurement of decommissioning costs		(11.3)	(119.9) (1)	(1.5)	-	(132.7)	-	(132.7)
Remeasurement of estimated provision for contingent payments		-	-	-	-	-	(27.5)	(27.5)
Change in provisions attributable to approaching due date of liability (discount unwinding effect)	9.6	5.6	40.4	0.8	0.1	46.9	2.2	49.1
Interest on Oil and Gas Facility Decommissioning Fund		0.3	-	-	-	0.3	-	0.3
Exchange differences on translating foreign operations		-	93.6	0.6	-	94.2	11.5	105.7
Used		-	(41.9)	-	(0.2)	(42.1)	(105.6) (2)	(147.7)
Reversed		-	-	-	(10.5)	(10.5)	(21.3)	(31.8)
December 31st 2016		**186.5**	**958.6**	**14.0**	**15.2**	**1,174.3**	**82.8**	**1,257.1**
including:								
non-current		186.5	944.3	14.0	13.8	1,158.6	5.8	1,164.4
current		-	14.3	-	1.4	15.7	77.0	92.7

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 (including provision for future cost of MOPU removal), and the oil and gas extraction facilities in the Heimdal and Sleipner 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 mainly remeasurement of provisions for future costs of decommissioning of crude oil and gas extraction facilities related to the Heimdal and Sleipner assets.
(2) Including PLN 103m (NOK 218m) 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 2017, the provision for decommissioning and restoration of the extraction facility in the YME field, totalling PLN 144.2m, 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 2016, the provision was PLN 159.2m.

Provision for removal of the defective MOPU from the YME field

As described in Note 29.1, in March 2013, the operator of the YME field, Talisman Energy Norge AS ("Talisman", "Operator"), and the supplier of the Mobile Offshore Production Unit (MOPU) for operation of the YME field, Single Buoy Moorings Inc. ("SBM"), announced that an agreement had been reached to remove the defective MOPU (evacuated in mid-July 2012) from the YME field and to terminate all existing contracts and agreements between the parties in connection with the YME project. Following the agreement, the Group recognised a provision for the future removal of the MOPU from the YME field, in the amount of PLN 281.9m. The provision was gradually used in subsequent years (PLN 7.7m in 2017). As at December 31st 2017, the provision was PLN 4.2m.

For information on the YME project and details of the provision for decommissioning of the remaining subsea infrastructure associated with the YME field, see also Note 13.2.2.

Provision for decommissioning and restoration of gas extraction facilities in the YME field

Decommissioning of the fixed assets of the offshore oil and gas extraction facility in the Heimdal field and restoration work are scheduled for 2017–2035. As at December 31st 2017, the provision was disclosed in the Group's statement of financial position under other liabilities and provisions at PLN 169.5m. As at December 31st 2016, the provision was PLN 203.6m.

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

Decommissioning of the fixed assets of the offshore oil and gas extraction facility in the Sleipner field and restoration work are scheduled for 2017–2033. As at December 31st 2017, the provision was disclosed in the Group's statement of financial position under other liabilities and provisions at PLN 496.9m. As at December 31st 2016, the provision was PLN 582.7m.

Other provisions

As at December 31st 2016, the provision for contingent payments under the Heimdal assets acquisition agreement was PLN 33.7m. In 2017, the provision was fully used.

As at December 31st 2017, the provision for contingent payments under the Sleipner assets acquisition agreement was PLN 4.3m. As at December 31st 2016, the provision was PLN 5.4m.

25.2 Grants

	Note	2017	2016
At beginning of period		**34.4**	**35.1**
Grants received in period		18.4	5.0
Deferred grants	9.3	(16.8)	(5.7)
At end of period		**36.0**	**34.4**
including:			
non-current	25	9.4	10.1
current	25	26.6	24.3

The grants are primarily related to licences received free of charge and grants from the Eco Fund for the use of waste gas from an offshore oil extraction facility for heating purposes.

26. Financial instruments

26.1 Carrying amount

Categories of financial instruments	Note	Financial assets/liabilities at fair value through profit or loss - held for trading	Loans and receivables	Financial assets available for sale (1)	Financial liabilities at amortised cost	Total
		December 31st 2017				
Financial assets						
Derivative financial instruments	23	164.5	-	-	-	164.5
Trade receivables	15	-	2,677.0	-	-	2,677.0
Cash and cash equivalents	17	-	1,920.7	-	-	1,920.7
Other financial assets	15	-	449.8	9.8	-	459.6
Total		**164.5**	**5,047.5**	**9.8**	**-**	**5,221.8**
Financial liabilities						
Borrowings, other debt instruments and finance lease liabilities	22	-	-	-	4,425.9	4,425.9
Derivative financial instruments	23	79.4	-	-	-	79.4
Trade payables	25	-	-	-	2,201.7	2,201.7
Other financial liabilities	25	-	-	-	222.0	222.0
Total		**79.4**	**-**	**-**	**6,849.6**	**6,929.0**
		December 31st 2016				
Financial assets						
Derivative financial instruments	23	100.9	-	-	-	100.9
Trade receivables	15	-	2,251.7	-	-	2,251.7
Cash and cash equivalents	17	-	744.6	-	-	744.6
Other financial assets	15	-	615.1	9.8	-	624.9
Total		**100.9**	**3,611.4**	**9.8**	**-**	**3,722.1**
Financial liabilities						
Borrowings, other debt instruments and finance lease liabilities	22	-	-	-	5,557.2	5,557.2
Derivative financial instruments	23	209.2	-	-	-	209.2
Trade payables	25	-	-	-	1,718.2	1,718.2
Other financial liabilities	25	-	-	-	246.8	246.8
Total		**209.2**	**-**	**-**	**7,522.2**	**7,731.4**

(1) As at December 31st 2017 and December 31st 2016, the Group held shares in other entities measured at historical cost less impairment.

As at December 31st 2017 and December 31st 2016, the fair value of financial assets and liabilities did not materially differ from their carrying amounts.

(PLNm)

26.2 Material items of income, expenses, gains and losses disclosed in the statement of comprehensive income by category of financial instrument

Classes of financial instruments	Note	Financial assets/ liabilities at fair value through profit or loss – held for trading	Loans and receivables	Financial assets available for sale	Financial liabilities at amortised cost	Total
		Categories of financial instruments – 2017				
Trade receivables:						
Interest income	9.5	-	2.6	-	-	2.6
Foreign exchange (gains)/losses recognised in cost of sales	9.1	-	(24.1)	-	-	(24.1)
Other financial assets:						
Income from interest on deposits	9.5	-	14.3	-	-	14.3
Foreign exchange gains/(losses) on deposits and other cash and on non-bank borrowings and notes recognised in finance income	9.5	-	(209.9)	-	-	(209.9)
Derivative financial instruments (financial assets/liabilities):						
Gains/(losses) on fair value measurement of derivative financial instruments	9.5	196.7	-	-	-	196.7
Gains/(losses) on realisation of derivative financial instruments	9.5	117.4	-	-	-	117.4
Borrowings, other debt instruments and finance lease liabilities:						
Interest expense	9.6	-	-	-	(151.7)	(151.7)
Gains/(losses) on cash flow hedge accounting charged against revenue	8	-	-	-	(150.5)	(150.5)
Foreign exchange gains/(losses) on bank borrowings, non-bank borrowings, notes, and realised foreign-currency transactions in bank accounts recognised in finance income	9.5	-	-	-	313.8	313.8
Gains/(losses) on measurement of cash flow hedges recognised in other comprehensive income	20	-	-	-	725.4	725.4
Trade and other payables:						
Foreign exchange (gains)/losses recognised in cost of sales	9.1	-	-	-	19.3	19.3
Total		**314.1**	**(217.1)**	**-**	**756.3**	**853.3**

(PLNm)

Classes of financial instruments	Note	Financial assets/ liabilities at fair value through profit or loss – held for trading	Loans and receivables	Financial assets available for sale	Financial liabilities at amortised cost	Total
		Categories of financial instruments 2016				
Trade receivables:						
Interest income	9.5	-	2.3	-	-	2.3
Foreign exchange (gains)/losses recognised in cost of sales	9.1	-	20.4	-	-	20.4
Other financial assets:						
Income from interest on deposits	9.5	-	11.9	-	-	11.9
Foreign exchange gains/(losses) on deposits and other cash and on non-bank borrowings and notes recognised in finance income	9.5	-	25.6	-	-	25.6
Derivative financial instruments (financial assets/liabilities):						
Gains/(losses) on fair value measurement of derivative financial instruments	9.6	(206.6)	-	-	-	(206.6)
Gains/(losses) on realisation of derivative financial instruments	9.6	173.1	-	-	-	173.1
Borrowings, other debt instruments and finance lease liabilities:						
Interest expense	9.6	-	-	-	(179.4)	(179.4)
Gains/(losses) on cash flow hedge accounting charged against revenue	8	-	-	-	(111.7)	(111.7)
Foreign exchange gains/(losses) on bank borrowings, non-bank borrowings, notes, and realised foreign-currency transactions in bank accounts recognised in finance income	9.5	-	-	-	(18.3)	(18.3)
Gains/(losses) on measurement of cash flow hedges recognised in other comprehensive income	20	-	-	-	(138.2)	(138.2)
Trade and other payables:						
Foreign exchange (gains)/losses recognised in cost of sales	9.1	-	-	-	(17.7)	(17.7)
Total		**(33.5)**	**60.2**	**-**	**(465.3)**	**(438.6)**

27. Objectives and policies of financial risk management

The Group is exposed to financial risks, including:
- market risk (risk related to raw material and petroleum product prices, risk related to prices of CO2 allowances, currency risk, interest rate risk),
- liquidity risk,
- credit risk related to financial and trade transactions.

The Parent operates a Financial Risk Management Office, which coordinates and exercises ongoing supervision of the 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 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, makes 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 relevant 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. Grupa LOTOS S.A. 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 2017, the Parent continued to apply the hedge accounting policies implemented in 2011 and 2012 with respect to its cash flows (i.e. foreign-currency facilities used to finance the 10+ Programme, designated as hedges of future USD-denominated petroleum product sale transactions).

27.1 Risk related to raw material and petroleum product prices

The Group considers risk related to prices of raw materials and petroleum products 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 raw material (e.g. Urals crude),
- volatility of prices with respect to the raw material 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 raw material 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 ETRM system available on the market.

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

Open commodity swaps as at December 31st 2017:

Type of contract	Underlying index	Valuation period	Amount in tonnes in the valuation period	Fair value measurement	
				Financial assets	Financial liabilities
Commodity swap	3.5 PCT Barges FOB Rotterdam	Mar 2018 – Jun 2019	111,877	34.7	-
Commodity swap	Gasoil 0.1 pct Crg CIF NWE_ARA	Mar 2018 – Jun 2019	(10,339)	-	(3.8)
			Total	**34.7**	**(3.8)**

The above swap transactions for a total of 111,877 tonnes based on the 3.5 PCT Barges FOB Rotterdam liquid index in the period from March 2018 to June 2019 and (10,339) 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 relating to the prices of raw materials and petroleum products and arising in connection with the sale of bitumen components at fixed prices.

Open commodity swaps as at December 31st 2016

Type of contract	Underlying index	Valuation period	Amount in tonnes in the valuation period	Fair value measurement	
				Financial assets	Financial liabilities
Commodity swap	3.5 PCT Barges FOB Rotterdam	Mar 2017 – Nov 2018	181,526	58.5	(4.8)
Commodity swap	Gasoil 0.1 pct Crg CIF NWE_ARA	Mar 2017 – Nov 2018	(16,201)	0.2	(6.6)
Commodity swap	ULSD 10 ppm CIF NWE	Apr 2017	(16,050)	-	(7.0)
			Total	**58.7**	**(18.4)**

The above swap transactions for a total of 181,526 tonnes based on the 3.5 PCT Barges FOB Rotterdam liquid index in the period from March 2017 to November 2018 and (16,201) tonnes based on the Gasoil 0.1 pct Crg CIF NWE ARA liquid index in the period from March 2017 to November 2018 were entered into to reverse the risk profile relating to the prices of raw materials and petroleum products and arising in connection with the sale of bitumen components at fixed prices. The swap transaction for (16,050) tonnes based on the ULSA 10 ppm CIF NWE index in April 2017 was entered into to benefit from contango.

As at December 31st 2017, the Group had no open commodity options.

Open commodity options as at December 31st 2016

Type of contract	Underlying index	Valuation period	Amount in tonnes in the valuation period	Fair value measurement	
				Financial assets	Financial liabilities
Commodity options	3.5 PCT Barges FOB Rotterdam	Mar 2017 – Oct 2017	10,646	0.4	-

The above options for a total of 10,646 tonnes based on the 3.5 PCT Barges FOB Rotterdam liquid index in the period from March 2017 to October 2017 were entered into to reverse the risk profile relating to the prices of raw materials and petroleum products and arising in connection with the sale of bitumen components at fixed prices.

27.1.1 Sensitivity analysis: market risk related to raw material and petroleum product price movements

Below is presented an analysis of the sensitivity of the Group's financial transactions to the risk of fluctuations in prices of raw materials and petroleum products as at December 31st 2017 and 2016, assuming price increase/decrease corresponding to the implied annual volatility of the underlying index:

	December 31st 2017			December 31st 2016		
	Carrying amount	Change*		Carrying amount	Change**	
		+ implied volatility	- implied volatility		+ imp. vol.	-imp. vol.
Financial assets [(1)]	34.7	37.3	(37.3)	59.1	75.0	(72.9)
Financial liabilities [(1)]	3.8	4.3	(4.3)	18.4	4.6	(4.6)
Effect on profit/loss		**33.0**	**(33.0)**		**70.4**	**(68.3)**

[(1)] Total commodity swaps and options.

* With respect to instruments held as at December 31st 2017, the above deviations of underlying index prices were calculated based on the implied annual volatility of the underlying index for December 31st 2017, as published by SuperDerivatives. The volatility was +/- 27.39% for the 3.5 PCT Barges FOB Rotterdam index and +/- 21.23% for the Gasoil 0.1 pct Crg CIF NWE_ARA index.

** With respect to instruments held as at December 31st 2016, the above deviations of underlying index prices were calculated based on the implied annual volatility of the underlying index for December 31st 2016, as published on the SuperDerivatives website. The volatility was +/- 34.85% for the 3.5 PCT Barges FOB Rotterdam index, +/- 27.44% for the Gasoil 0.1 pct Crg CIF NWE_ARA index, and +/- 29.18% for the Brent (Dtd) index.

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

27.2 Risk related to prices of carbon dioxide (CO_2) emission allowances

The risk related to prices of carbon dioxide emission allowances is managed within 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 and 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 2017, the Parent's deficit of allowances in the 2013–2020 trading period (Phase III) was 1,103,796 tonnes. Taking into account derivative transactions for a total of 1,554,000 tonnes, the Parent had surplus emission allowances for 450,204 tonnes, purchased in view of the market situation and the anticipated strategic deficit in emission allowances after 2020.

As at December 31st 2016, the Parent's deficit of allowances in the 2013–2020 trading period (Phase III) was 1,231,057 tonnes. However, taking into account derivative transactions for a total of 1,752,000 tonnes, the Parent had surplus emission allowances for 520,943 tonnes, which were purchased in view of the market situation and the strategic nature of the emission allowances deficit expected after 2020.

To manage 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	1.5	1.5	12.8
Actual CO_2 emissions (2)	1.7	1.9	1.9	2.0	1.8	-	-	-	9.3

(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 for 2017 was verified in accordance with Art. 59 of the Act on Trading in Greenhouse Gas Emission Allowances of April 28th 2011.

As at December 31st 2017, considering the proposed amount of allowances to be allocated under the European Union Emissions Trading Scheme for 2017 and the actual volume of emissions, the Group reported a deficit of allocated CO_2 emission allowances, and therefore recognised a PLN 14.4m provision as at December 31st 2017 (December 31st 2016: PLN 9.8m). The PLN 4.6m effect of the provision on EBIT (see Note 9.3) is presented under other income (2016: PLN 8.7m; see Note 9.3).

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 Group through physical delivery, with the intention to potentially use the allowances to offset the Company's actual CO_2 emissions. The valuation of contracts settled through physical delivery is not disclosed under financial assets/liabilities in the financial statements. However, the Group internally monitors and performs the valuation of such contracts as part of an overall assessment of the effectiveness of its CO_2 risk management (off balance sheet).

EUA futures contracts open as at December 31st 2016 which the Group considered likely to be settled through physical delivery and used for the Group's own purposes were not disclosed in the financial statements as at the last day of the reporting period, and their fair value was recorded only as an off-balance sheet item.

Contract position as at December 31st 2017 and 2016:

Open CO_2 allowances contracts as at December 31st 2017:

Type of contract	Contract settlement period	Contract volume (in tonnes)	Phase	Fair value measurement*	
				Financial assets	Financial liabilities
EUA Futures	Dec 2018 – Dec 2020	1,554,000	Phase III	8.7	(0.1)

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

Open CO_2 allowances contracts as at December 31st 2016:

Type of contract	Contract settlement period	Contract volume (in tonnes)	Phase	Fair value measurement*	
				Financial assets	Financial liabilities
EUA Futures	Dec 2017 – Dec 2019	1,752,000	Phase III	5.6	(5.3)

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

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

As at December 31st 2017 and 2016, the Group held futures for the purchase of carbon dioxide (CO_2) emission allowances.

The Group does not perform a sensitivity analysis for the fair value of futures contracts to purchase CO_2 emission allowances held by it as at the end of the reporting period if it intends to settle the contracts through physical delivery and use them to cover its allowance deficits under the carbon emission reduction system. Therefore, no sensitivity analysis was performed with reference to the EUA futures held as at December 31st 2017 and 2016.

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 Company 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 in accordance with the scheduled payment dates. 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 to finance the 10+ Programme, 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).

Under the EFRA Project, the Group concluded EUR/USD currency contracts designed to hedge EUR-denominated capital expenditure against USD as the main financing currency.

Open currency contracts as at December 31st 2017:

Type of contract	Purchase/sale	Contract settlement period	Currency pair (base/quote)	Amount in base currency (million)	Fair value measurement	
					Financial assets	Financial liabilities
Currency spot	Purchase	Jan 2018	USD/PLN	54.0	-	(0.6)
Currency spot	Purchase	Jan 2018	EUR/PLN	0.1	-	-
Currency forward	Purchase	Jan 2018	USD/PLN	124.0	-	(8.3)
Currency forward	Purchase	Jan–Mar 2018	EUR/PLN	10.0	-	(0.6)
Currency forward	Purchase	Jan−Jun 2018	EUR/USD	25.8	5.8	-
Currency forward	Sales	Jun–Oct 2018	USD/PLN	(60.0)	6.2	-
Currency forward	Sales	Mar 2018	EUR/PLN	(10)	1.1	-
Currency swap	Purchase	Jan–Jun 2018	USD/PLN	162.6	-	(38.3)
Currency swap	Purchase	Jan 2018	EUR/USD	14.3	1.1	-
Currency swap	Sales	Jan–Oct 2018	USD/PLN	(565.7)	106.3	-
				Total	**120.5**	**(47.8)**

Open currency contracts as at December 31st 2016:

Type of contract	Purchase/sale	Contract settlement period	Currency pair (base/quote)	Amount in base currency	Fair value measurement	
					Financial assets	Financial liabilities
Currency forward	Purchase	Jan–Mar 2017	USD/PLN	53.0	8.6	(0.6)
Currency forward	Purchase	Jan 2017–Jun 2018	EUR/USD	215.2	-	(27.7)
Currency forward	Sales	Apr–Oct 2017	USD/PLN	(230.0)	-	(73.3)
Currency forward	Sales	Jan 2017	EUR/PLN	(4.6)	0.1	-
Currency swap	Purchase	Dec 2017	USD/PLN	70.0	26.2	-
Currency swap	Purchase	Jan 2017	EUR/USD	2.0	0.1	-
Currency swap	Sales	Jan–Dec 2017	USD/PLN	(267.1)	3.0	(33.2)
Currency swap	Sales	Jan–Jul 2017	EUR/PLN	(19.1)	0.1	(0.9)
				Total	**38.1**	**(135.7)**

27.3.1 Sensitivity analysis: market risk related to currency exchange movements

Currency structure of selected financial instruments as at December 31st 2017

December 31st 2017	Note	(million) USD	USD translated into PLN	(million) EUR	EUR translated into PLN	Carrying amount in foreign currency translated into PLN
Classes of financial instruments						
Financial assets						
Trade receivables		88.4	307.9	4.3	18.3	326.2
Cash and cash equivalents		271.1	868.4	23.1	102.0	970.4
Other financial assets:		182.4	634.6	4.7	20.0	654.6
Loans advanced to related entities		157.0	546.3	4.7	19.8	566.1
Deposits		8.3	29.0	-	-	29.0
Security deposit (margin)		-	-	-	0.2	0.2
Cash for removal of the MOPU from the YME field	15	15.9	55.1	-	-	55.1
Other		1.2	4.2	-	-	4.2
Total		**541.9**	**1,810.9**	**32.1**	**140.3**	**1,951.2**
Financial liabilities						
Borrowings		1,201.1	4,116.2	-	-	4,116.2
Notes		59.0	205.4	-	-	205.4
Finance lease liabilities		-	-	10.7	44.5	44.5
Trade payables		485.3	1,689.3	5.3	21.9	1,711.2
Other financial liabilities		4.5	15.6	6.4	26.5	42.1
Total		**1,749.9**	**6,026.5**	**22.4**	**92.9**	**6,119.4**

Currency structure of selected financial instruments as at December 31st 2016

December 31st 2016	Note	(million) USD	USD translated into PLN	(million) EUR	EUR translated into PLN	Carrying amount in foreign currency translated into PLN
Classes of financial instruments						
Financial assets						
Trade receivables		87.0	363.5	5.1	22.7	386.2
Cash and cash equivalents		13.0	54.2	10.6	47.1	101.3
Notes		85.5	357.5	-	-	357.5
Other financial assets:		178.9	749.4	9.2	40.4	789.8
Loans advanced to related entities		152.7	639.5	4.7	20.6	660.1
Deposits		7.6	31.6	-	-	31.6
Security deposit (margin)		-	-	4.5	19.8	19.8
Cash for removal of the MOPU from the YME field	15	17.9	75.3	-	-	75.3
Other		0.7	3.0	-	-	3.0
Total		**364.4**	**1,524.6**	**24.9**	**110.2**	**1,634.8**
Financial liabilities						
Borrowings		1,284.7	5,325.1	-	-	5,325.1
Notes		136.5	572,0	-	-	572,0
Finance lease liabilities		-	-	13.5	59.6	59.6
Trade payables		281.4	1,176,0	12.9	57.1	1,233.1
Other financial liabilities		4.7	19.7	17.8	78.8	98.5
Total		**1,707.3**	**7,092.8**	**44.2**	**195.5**	**7,288.3**

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 the appropriate method of fair value measurement, which also determines 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 7.23). The tables below, presenting sensitivity of financial instruments to currency risk as at December 31st 2017 and December 31st 2016, 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 2017, showing the effect of a +/- 9.087% change in the USD/PLN exchange rate and a +/- 5.950% change in the EUR/PLN exchange rate on net profit or loss

December 31st 2017	Effect of exchange rate increase/decrease on net profit/loss for the year in 2017			
	+9.087%	+5.950%	-9.087%	-5.950%
	USD	EUR	USD	EUR
Classes of financial instruments				
Financial assets				
Derivative financial instruments	(206.7)	6.7	206.7	(6.7)
Trade receivables	28.0	1.1	(28.0)	(1.1)
Cash and cash equivalents	78.9	6.1	(78.9)	(6.1)
Other financial assets:	57.6	1.2	(57.6)	(1.2)
Loans advanced to related entities	49.6	1.2	(49.6)	(1.2)
Deposits	2.6	-	(2.6)	-
Cash for removal of the MOPU from the YME field	5.0	-	(5.0)	-
Other	0.4	-	(0.4)	-
Total financial assets	**(42.2)**	**15.1**	**42.2**	**(15.1)**
Financial liabilities				
Borrowings	157.2 (1)	-	(157.2) (1)	-
Notes	18.7	-	(18.7)	-
Finance lease liabilities	-	2.6	-	(2.6)
Derivative financial instruments	95.5	2.5	(95.5)	(2.5)
Trade payables	153.5	1.3	(153.5)	(1.3)
Other financial liabilities	1.4	1.6	(1.4)	(1.6)
Total financial liabilities	**426.3**	**8.0**	**(426.3)**	**(8.0)**
Total	**(468.5)**	**7.1**	**468.5**	**(7.1)**

(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 9.087% change of the USD/PLN exchange rate, the effect of cash flow hedge accounting would potentially lead to a change of PLN (219.4)m/PLN 219.4m in the fair value of borrowings. Furthermore, the calculation takes into account the effect of paid upfront arrangement fees (measured at the exchange rate effective on the payment date), reducing financial liabilities under borrowings, which would potentially result in a change of PLN 2.6m/PLN (2.6)m in the fair value of borrowings, assuming a +/- 9.087% change of the USD/PLN exchange rate.

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 2017, which was 9.087% for USD/PLN and 5.950% for EUR/PLN, as published by Reuters. The sensitivity analysis was performed with reference to the balance of instruments held as at December 31st 2017.

Analysis of the sensitivity to currency risk as at December 31st 2016, showing the effect of a +/- 12.9% change in the USD/PLN exchange rate and a +/- 7.375% change in the EUR/PLN exchange rate on net profit or loss

December 31st 2016	Effect of exchange rate increase/decrease on net profit/loss for the year in 2016			
	+12.9%	+7.375%	-12.9%	-7.375%
	USD	EUR	USD	EUR
Classes of financial instruments				
Financial assets				
Derivative financial instruments	15.8	(1.7)	(15.4)	1.7
Trade receivables	46.9	1.7	(46.9)	(1.7)
Cash and cash equivalents	6.9	3.5	(6.9)	(3.5)
Notes	46.1	-	(46.1)	-
Other financial assets:	96.7	3.0	(96.7)	(3.0)
Loans advanced to related entities	82.5	1.5	(82.5)	(1.5)
Deposits	4.1	-	(4.1)	-
Security deposits (margins)	-	1.5	-	(1.5)
Cash for removal of the MOPU from the YME field	9.7	-	(9.7)	-
Other	0.4	-	(0.4)	-
Total financial assets	**212.4**	**6.5**	**(212.0)**	**(6.5)**
Financial liabilities				
Borrowings	202.2 (1)	-	(202.2) (1)	-
Notes	73.8	-	(73.8)	-
Finance lease liabilities	-	4.4	-	(4.4)
Derivative financial instruments	345.8	(65.1)	(345.8)	65.1
Trade payables	151.7	4.2	(151.7)	(4.2)
Other financial liabilities	2.5	5.8	(2.5)	(5.8)
Total financial liabilities	**776.0**	**(50.7)**	**(776.0)**	**50.7**
Total	**(563.6)**	**57.2**	**564.0**	**(57.2)**

(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 12.9% change of the USD/PLN exchange rate, the effect of cash flow hedge accounting would potentially lead to a change of PLN (489.5)m/PLN 489.5m in the fair value of borrowings. Furthermore, the calculation takes into account the effect of paid upfront arrangement fees (measured at the exchange rate

effective on the payment date), reducing financial liabilities under borrowings, which would potentially result in a change of PLN 4.8m/PLN (4.8)m in the fair value of borrowings, assuming a 12.9% change of the USD/PLN exchange rate.

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 2016, which was 12.9% for USD/PLN and 7.375% for EUR/PLN, as published by Reuters. The sensitivity analysis was performed with reference to the balance of instruments held as at December 31st 2016.

27.4 Interest rate risk

The Parent is exposed to the risk of changes in cash flows caused by interest rate movements as interest income and interest expense related to certain assets and liabilities accrue based on floating interest rates, including in particular investment credit facilities under the 10+ Programme and the EFRA Project, as well as the financing and refinancing credit facility where the amount of interest is computed by reference to the floating LIBOR USD rate. The Parent manages the interest rate risk within the granted limits using interest rate swaps.

In a long-term perspective, a partial risk mitigation effect was achieved through the choice of a fixed interest rate for a tranche of the term facility contracted to finance the 10+ Programme.

Open interest rate contracts as at December 31st 2017:

Type of contract	Period	Notional amount (USD million)	Company receives	Financial assets	Financial liabilities
Interest rate swap (IRS)	Jul 2011–Jun 2019	207.5	6M LIBOR	0.1	(19.8)
Interest rate swap (IRS)	Jan 2015–Dec 2021	494.0	3M LIBOR	9.2	(8.0)
			Total	**9.3**	**(27.8)**

In the table 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.

Open interest rate contracts as at December 31st 2016:

Type of contract	Period	Notional amount (USD million)	Company receives	Financial assets	Financial liabilities
Interest rate swap (IRS)	Jul 2011–Jun 2019	212.5	6M LIBOR	0.1	(43.7)
Interest rate swap (IRS)	Jan 2015–Dec 2021	494.0	3M LIBOR	3.6	(11.4)
			Total	**3.7**	**(55.1)**

In the table 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.

27.4.1 Sensitivity analysis: market risk related to interest rate movements

Analysis of the Group's sensitivity to interest rate risk as at December 31st 2017, assuming a +/- 0.30% change in interest rates

December 31st 2017	Note	Carrying amount	Change	
			+0.30%	-0.30%
Classes of financial instruments				
Financial assets				
Derivative financial instruments (2)	23	9.3	7.3	(7.4)
Cash and cash equivalents	17	1,920.7	5.8	(5.8)
Other financial assets:		334.1	1.0	(1.0)
Oil and Gas Extraction Facility Decommissioning Fund	15	34.1	0.1	(0.1)
Deposits	15	37.0	0.1	(0.1)
Security deposits (margins)	15	-	-	-
Cash pledged as security for contractual obligations related to future asset decommissioning	15	207.9	0.6	(0.6)
Cash for removal of the MOPU from the YME field	15	55.1	0.2	(0.2)
Total		**2,264.1**	**14.1**	**(14.2)**
Financial liabilities				
Bank borrowings	22.1	3,903,0	10.0 (1)	(10.0) (1)
Non-bank borrowings	22.2	68.3	0.2	(0.2)
Notes	22.3	313.0	0.9	(0.9)
Finance lease liabilities	22.4	141.6	0.4	(0.4)
Derivative financial instruments (2)	23	27.8	(0.9)	0.9
Total		**4,453.7**	**10.6**	**(10.6)**

(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 0.30% 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 0.30%, in the second case reduces the interest rate by 0.30%).

Analysis of the Company's sensitivity to interest rate risk as at December 31st 2016, assuming a +/- 0.35% change in interest rates

December 31st 2016	Note	Carrying amount	Change	
			+0.35%	-0.35%
Classes of financial instruments				
Financial assets				
Derivative financial instruments (2)	23	3.7	2.7	(2.7)
Cash and cash equivalents	17	744.6	2.6	(2.6)
Other financial assets:		509.3	1.8	(1.8)
Oil and Gas Extraction Facility Decommissioning Fund	15	33.2	0.1	(0.1)
Deposits	15	189.2	0.7	(0.7)
Security deposits (margins)	15	19.6	-	-
Cash pledged as security for contractual obligations related to future asset decommissioning	15	192.0	0.7	(0.7)
Cash for removal of the MOPU from the YME field	15	75.3	0.3	(0.3)
Total		**1,257.6**	**7.1**	**(7.1)**
Financial liabilities				
Bank borrowings	22.1	5,082.9	14.5 (1)	(14.5) (1)
Non-bank borrowings	22.2	81.8	0.3	(0.3)
Notes	22.3	213.0	0.7	(0.7)
Finance lease liabilities	22.4	179.5	0.6	(0.6)
Derivative financial instruments (2)	23	55.1	(15.2)	15.4
Total		**5,612.3**	**0.9**	**(0.7)**

(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 0.35% 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 0.35%, in the second case reduces the interest rate by 0.35%).

The sensitivity analysis was performed for the balance of instruments held as at December 31st 2017 and December 31st 2016. 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 2017 and December 31st 2016, 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 2017 and December 31st 2016, calculated based on historical volatility data for interest rates on interest rate swaps expiring in two and three years, respectively, 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 limits for counterparties in financial and trade transactions,
- ensuring adequate quality and diversification of available financing sources,
- internal control processes and organisational efficiency facilitating prompt contingency response.

Contractual maturities of financial liabilities as at December 31st 2017 and December 31st 2016:

Contractual maturities of financial liabilities:

December 31st 2017	Note	Carrying amount	Contractual cash flows	Up to 6 months	6 - months 12th	1–2 years	2–5 years	Over 5 years
Bank borrowings (other than overdraft facilities)	22.1	3,902.9	4,624.0	89.8	1,164.4	906.5	1,968.4	494.9
Overdraft facilities	22.1	0.1	0.1	0.1	-	-	-	-
Non-bank borrowings	22.2	68.3	69.4	6.5	58.1	0.9	2.2	1.7
Notes	22.3	313.0	306.1	306.1	-	-	-	-
Finance lease liabilities	22.4	141.6	179.0	28.7	28.7	53.2	68.4	-
Trade payables	25	2,201.7	2,201.7	2,196.5	5.2	-	-	-
Other financial liabilities	25	222.0	222.0	188.0	7.4	3.3	7.8	15.5
Total		**6,849.6**	**7,602.3**	**2,815.7**	**1,263.8**	**963.9**	**2,046.8**	**512.1**
December 31st 2016								
Bank borrowings (other than overdraft facilities)	22.1	5,069.1	6,167.7	(305.5)	1,108.1	790.3	3,641.1	933.7
Overdraft facilities	22.1	13.8	13.8	13.8	-	-	-	-
Non-bank borrowings	22.2	81.8	83.2	6.3	6.5	11.9	56.0	2.5
Notes	22.3	213.0	213.1	79.8	133.3	-	-	-
Finance lease liabilities	22.4	179.5	235.8	28.8	29.0	56.7	117.0	4.3
Trade payables	25	1,718.2	1,718.2	1,718.2	-	-	-	-
Other financial liabilities	25	246.8	246.8	221.0	2.3	9.2	7.3	7.0
Total		**7,522.2**	**8,678.6**	**1,762.4**	**1,279.2**	**868.1**	**3,821.4**	**947.5**

Contractual maturities of derivative financial instruments:

December 31st 2017	Note	Carrying amount*	Contractual cash flows	Up to 6 months	6 - months 12th	1–2 years	2–5 years	Over 5 years
Commodity swap	23	30.9	31.3	10.6	20.1	0.6	-	-
Currency forward and spot contracts		3.6	3.7	(0.4)	4.1	-	-	-
Interest rate swap (IRS)		(18.5)	(18.6)	(21.5)	7.1	(5.9)	1.7	-
Currency swap		69.1	69.1	62.9	3.2	3.0	-	-
Total		**85.1**	**85.5**	**51.6**	**34.5**	**(2.3)**	**1.7**	**-**
December 31st 2016								
Commodity swap	23	40.3	40.8	(0.4)	25.9	15.3	-	-
Commodity options		0.4	0.4	-	0.4	-	-	-
Currency forward and spot contracts		(92.9)	(93.5)	(52.2)	(38.5)	(2.8)	-	-
Interest rate swap (IRS)		(51.4)	(51.8)	(30.5)	3.8	(19.4)	(5.7)	-
Currency swap		(4.7)	(4.5)	(23.9)	19.4	-	-	-
Total		**(108.3)**	**(108.6)**	**(107.0)**	**11.0**	**(6.9)**	**(5.7)**	**-**

*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 (excluding CO_2 emission allowance futures purchased with the intention of settlement through physical delivery).

27.6 Credit risk

Management of credit risk related to counterparties in financial transactions consists in the verification of creditworthiness of the current and potential counterparties and monitoring of credit exposures against the granted limits.
The credit exposure is attributable to bank deposits and derivatives measurement.

The counterparties must have an appropriate credit rating assigned by leading rating agencies or hold guarantees from institutions meeting the minimum 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 2017 and December 31st 2016, the concentration of credit risk exposure to any single counterparty in the Group's financial transactions did not exceed PLN 845.67m and PLN 575.8m, respectively (9.51% and 8.15% 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. In 2017, the Parent completed development of a rating model which supports assigning credit limits to counterparties. 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 2017 and December 31st 2016, the concentration of credit risk exposure to any single counterparty in the Group's trade transactions did not exceed PLN 530.47m and PLN 239.0m, respectively (5.97% and 3.38% 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	December 31st 2017	December 31st 2016
Derivative financial instruments	23	164.5	100.9
Trade receivables	15	2,677.0	2,251.7
Cash and cash equivalents	17	1,920.7	744.6
Other financial assets	15	459.6	624.8
Total		**5,221.8**	**3,722.0**

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 9.4 and 15.1.

For discussion of credit risk concentrations for trade receivables, see Note 15.1.
For ageing analysis 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 liabilities under finance leases less cash and cash equivalents. Equity includes equity attributable to owners of the Parent plus non-controlling interests.

	Note	December 31st 2017	December 31st 2016
Non-current liabilities			
Bank borrowings	22.1	2,633.6	3,769.8
Non-bank borrowings	22.2	4.4	69.3
Finance lease liabilities	22.4	100.3	141.4
Total		**2,738.3**	**3,980.5**
Current liabilities			
Bank borrowings	22.1	1,269.4	1,313.1
Non-bank borrowings	22.2	63.9	12.5
Notes	22.3	313.0	213.0
Finance lease liabilities	22.4	41.3	38.1
Total		**1,687.6**	**1,576.7**
Cash and cash equivalents	17	(1,920.7)	(744.6)
Net debt		**2,505.2**	**4,812.6**
Equity attributable to owners of the Parent		10,712.4	8,610.8
Non-controlling interests		0.1	0.1
Total equity		10,712.5	8,610.9
Net debt to equity		**0.23**	**0.56**

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

There were no significant changes with respect to pending material court, arbitration, and administrative proceedings or with respect to other risks to the Company or its subsidiaries in the period between the end of the previous financial year, i.e. December 31st 2016, and the date of issue of these financial statements. For information on pending material proceedings, see Note 30.1 to the consolidated financial statements for 2016.

Tax settlements

In 2015, the Company's VAT settlements for 2010–2011 were subject to two inspections by tax inspection authorities. On June 23rd 2015, the Company received post-inspection reports and challenged some of the findings contained in the reports. On September 30th 2015, the Company received two decisions issued by the Director of the Tax Audit Office in Bydgoszcz, in which the Tax Audit Office assessed the VAT amount payable by the Company for the period from January to December 2010 and from January to December 2011, identifying VAT arrears of PLN 48.4m for 2010 and PLN 112.5m for 2011. In these decisions, the Director of the Tax Audit Office stated that certain transactions with two of the Company's trade partners had involved fraudulent tax practices, arguing that the Company had failed to exercise due care in executing transactions with those trade partners and that it should at least have been aware that the transactions were connected to and resulted from a tax fraud committed at an earlier stage, and therefore the Company had no right to make VAT deductions. Having reviewed the decisions, the Company dismissed the allegations of the Director of the Tax Audit Office as entirely groundless and on October 14th 2015 filed an appeal with the Director of the Tax Chamber in Gdańsk. The Director of the Tax Chamber in Gdańsk upheld the decisions of the Director of the Tax Audit Office in Bydgoszcz, whereas the complaint lodged by the Company with the Provincial Administrative Court in the first half of 2016 was dismissed. As at the date of issue of these financial statements, both decisions of the Director of the Tax Audit Office in Bydgoszcz in which it assessed the VAT amount payable by the Company for individual months of 2010 and 2011 remain upheld. In Q3 2016, the Company lodged cassation complaints with the Supreme Administrative Court of Warsaw. Currently, the Company is waiting for the Court to set the date of the hearing.

In 2016, the Company's VAT settlements for the period from November 2014 to September 2015 were subject to inspection by the Director of the Tax Audit Office in Gdańsk. In connection with the proceedings, following receipt of a post-inspection report on December 7th 2016, the Company submitted corrected VAT returns in which the input VAT amount was reduced by PLN 34.3m.

Regulations on value added tax, corporate income tax, and social security contributions are subject to frequent amendments, with the effect being lack of appropriate points of reference, conflicting interpretations, and scarcity of established precedents which could be followed. Furthermore, the applicable tax laws lack clarity, which leads to differences in opinions and diverse interpretations of tax regulations, both between various public authorities and between public authorities and businesses. Tax settlements and other areas of activity (e.g. customs or foreign exchange control) are subject to inspection by bodies which are authorised to impose high penalties and fines, and any additional tax liabilities arising from such inspections need to be paid with high interest. Consequently, tax risk in Poland is higher than in countries with more mature tax systems. The amounts presented and disclosed in the financial statements may therefore change in the future as a result of a final decision by a tax inspection authority.

On July 15th 2016, the Tax Legislation was amended to reflect the provisions of the General Anti-Abuse Rule ("GAAR"). GAAR is intended to prevent the creation and use of abusive arrangements to avoid paying taxes in Poland. Under GAAR, tax avoidance is defined as an arrangement the main purpose of which is to obtain a tax advantage that is contrary to the objectives and purpose of the tax legislation. In accordance with GAAR, no tax advantage can be obtained through an arrangement which is abusive. Any arrangements involving (i) separation of transactions or operations without a sufficient rationale, (ii) engaging intermediaries where no business or economic rationale exists, (iii) any offsetting elements, and (iv) any arrangements that operate in a similar way, may be viewed as an indication of the existence of an abusive arrangement subject to GAAR. The new regulations will require much more judgement to be exercised when assessing the tax consequences of particular transactions.

The GAAR clause should be applied with respect to arrangements made after its effective date as well as arrangements that were made before its effective date but the benefit of the tax advantage obtained through the arrangement continued or still continues after that date. After the new regulations are implemented, Polish tax inspection authorities will be able to challenge certain legal agreements and arrangements made by taxpayers, such as corporate restructurings.

Court proceedings instigated by or against companies of the LOTOS Group

Agreement to which LOTOS Exploration and Production Norge AS is a party

LOTOS Exploration and Production Norge AS ("LOTOS E&P Norge AS") was a party to proceedings held before an arbitration court in Norway in connection with claims filed by Single Buoy Moorings Inc. ("SBM"), the supplier of thye MOPU (Mobile Offshore Production Unit) for operation of the YME field, against Talisman Energy Norge AS, the operator of the YME field ("Talisman", "Operator") and the other YME licence holders. The share of SBM's claims attributable to LOTOS E&P Norge AS was 20%.

In 2013, Talisman Energy Norge AS ("Talisman", the then operator of the YME field) and Single Buoy Moorings Inc. ("SBM", owner of the MOPU) announced that an agreement was reached to terminate all existing contracts and agreements executed by the parties in connection with the YME project and remove the defective MOPU from the YME field.

SBM paid USD 470m to the consortium members, and Talisman Energy, on behalf of the licence holders, agreed to make the necessary preparations and remove the platform from the field. Under the agreement, SBM was responsible for towing the MOPU to the port and its scrapping, whereas following completion of certain works, the ownership of elements of the YME field in situ subsea infrastructure delivered by SBM should be transferred to the consortium members, who would be required to perform site restoration (and disassembly) activities related to the infrastructure. Each of the parties will cover the costs of its scope of decommissioning work as set out in the agreement.

In accordance with the provisions of the agreement made with SBM, the balance of the Group's share in the amount due to the consortium members under the agreement, that is USD 81.78m, was transferred to the YME project escrow account, to be gradually released to finance the removal of the MOPU and related infrastructure from the field, in accordance with the agreement.

On August 22nd 2016, the YME project partners completed evacuation of the defective MOPU from the field. In Q1 2017, the caisson (element of the subsea infrastructure) was inspected; as a result of the inspection it was found that the caisson can stand without additional support until 2019 (provided that it is inspected on a semi-annual basis and its condition remains unimpaired).

As at December 31st 2017, available cash deposited in the escrow account, denominated in the presentation currency, was recognised in the amount of PLN 55.1m under other assets in the statement of financial position. The remaining provision for future costs of removal of the MOPU and disassembly of the related fixed assets amounted to PLN 4.2m and was recognised under the short-term portion of other liabilities and provisions.

In addition, the Group notes that, in relation to a notice received by LOTOS Exploration and Production Norge AS on July 17th 2017, SBM Offshore confirmed on August 11th 2017 its entry into an agreement with the majority of MOPU insurers on the settlement of insurance claims relating to the MOPU's construction defects, including with one additional entity not listed in the notice of July 17th 2017. Under the agreement, 83.6% of the claim is to be covered and SBM will receive approximately USD 281m in cash as full and final settlement of the claim in respect of the insurers concluding the settlement agreement. SBM continues to pursue its claims towards the other insurers, and the court case is to start in October 2018. Upon payment of all legal fees and other expenses associated with full claims, the remaining balance of the insurance settlement will be allocated to SBM Offshore and Repsol Norge AS ("Repsol", the existing YME field operator) on a 50/50 basis. In accordance with the agreement of March 11th 2013, 20% of the amount allocated to Repsol will be attributable to LOTOS Exploration and Production Norge AS.

Due to a lack of detailed information and basis for reliable estimation of costs of obtaining the insurance payment, and given the uncertain date of obtaining the cash payment, the Group acknowledges that as at December 31st 2017 it is unable to reliably estimate the future amount receivable and does not recognise it as an asset or income.

Tax settlements of LOTOS Exploration and Production Norge AS

In the twelve months ended December 31st 2016, the income tax settlements of LOTOS Exploration and Production Norge AS ("LOTOS E&P Norge AS") for 2013–2014 were investigated by the Norwegian Oil Taxation Office the "OTO"). On June 1st 2016, LOTOS E&P Norge AS received a notice of May 31st 2016 requesting the company to provide explanations. In the notice, the OTO questioned recognition of some of the finance costs incurred by LOTOS E&P Norge AS in 2013−2014 as tax deductible expenses due to the company's thin capitalisation in that period. Considering the risk of a dispute with the taxation authority and the company's financial position in the period 2013–2014, to which the OTO referred, as well as the fact that the company applies the same approach to the period 2015–2016, and taking into account the adverse effect of LOTOS E&P Norge AS's thin capitalisation, the company made an assessment as at December 31st 2016 of its ability to realise deferred tax assets on account of tax losses carried forward, and in 2016 made a downward revision of the deferred tax asset amount by PLN 80.9m. On September 6th 2017, LOTOS E&P Norge AS received from the OTO a draft decision, whose preliminary analysis confirmed the scope and amount of the provision recognised by LOTOS E&P Norge AS. On November 10th 2017, upon the analysis of the draft decision, a reply was sent to the Office requesting that the creditworthiness of LOTOS E&P Norge AS be taken into account, including that resulting from the company's exploration activities and associated tax credits.

Prior to the issue date of these financial statements, on January 15th 2018, the Group received a final decision of the OTO, in line with the draft received on September 6th 2017. The Group is considering whether to submit a formal appeal against the decision based on the arguments used in the reply of November 10th 2017. As at the date of issue of these financial statements, the proceedings were pending.

Dispute between LOTOS Kolej Sp. z o.o. and Newag S.A.

In December 2017, Newag S.A. indicated its readiness to deliver five Griffin locomotives produced under lease contracts concluded on December 23rd 2015 with LOTOS Kolej Sp. z o.o. However, permits to operate these locomotives were subject to certain restrictions; therefore, LOTOS Kolej Sp. z o.o. refused to accept them and called on Newag S.A. to provide permits enabling their operation without any restrictions. In connection with the company's refusal to accept the locomotives, on January 26th 2018 Newag S.A. terminated its contract with LOTOS Kolej Sp. z o.o. with immediate effect, arguing that the locomotives were in conformity with the contract and permitted to be used in the area of operation – but excluding the core network. In the Management Board's opinion, the termination was not effective and so the risk of imposition of contractual penalties on LOTOS Kolej Sp. z o.o. was low, and therefore no provisions were recognised in these consolidated financial statements.

In the twelve months ended December 31st 2017, 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 2016, and the date of issue of these financial statements, there were no changes in the Company's or its subsidiaries' other material contingent liabilities (see Note 30.2 to the consolidated financial statements for 2016).

30. Related parties

30.1 Transactions with related entities in which the Group holds equity interests

Equity-accounted joint ventures		2017	2016
Sales		431.4	209.9
	Note	December 31st 2017	December 31st 2016
Receivables	15	34.5	16.1
Liabilities		-	0.2

In 2017 and2016, 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 executed in 2017 was PLN 431.3m (2016: PLN 209.7m). As at December 31st 2017, the balance of outstanding receivables under these transactions was PLN 34.5m (December 31st 2016: PLN 16.1m).

For general information on joint ventures in which the Group holds interests, see Note 14 .

30.2 Entity having control of the Group

As at December 31st 2017 and December 31st 2016, the State Treasury held a 53.19% interest in Grupa LOTOS S.A. In 2016 and 2017, no transactions were concluded between Grupa LOTOS S.A. and the State Treasury.

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

In 2017 and 2016, the Group executed transactions with parties related to it through the State Treasury, the aggregate value of which was material. They were concluded on an arm's length basis in the course of the Group's day-to-day operations And involved mainly purchase of crude oil, natural gas and other fuels, as well as sale of fuels, transport services and storage services..

	2017	2016
Sales	394.0	370.1
Purchases	1,587.5	1,237.6
	December 31st 2017	December 31st 2016
Receivables	82.9	28.9
Liabilities	263.4	173.0

In addition, as at December 31st 2017, the Group had liabilities under borrowings and other debt instruments towards banks and financial institutions of which the State Treasury has control or joint control or over which it exercises significant influence, in the total amount of PLN 1,327.5m (December 31st 2016: PLN 899.6m). These entities include PKO BP S.A., PEKAO S.A., BGK S.A., Polski Fundusz Rozwoju S.A., and Agencja Rozwoju Przemysłu S.A.

30.3 Remuneration of members of the Management and Supervisory Boards, along with information on loans and other similar benefits granted to members of the management and supervisory staff

Remuneration paid to members of the Company's Management and Supervisory Boards	2017	2016
Management Board		
Short-term employee benefits (salaries)	2.6	1.5
Management Board – subsidiaries (1)		
Short-term employee benefits (salaries)	0.3	3.0
Supervisory Board		
Short-term employee benefits (salaries)	0.6	0.3
Total (2)	**3.5**	**4.8**
Other employee benefits	**December 31st 2017**	**December 31st 2016**
Management Board		
Post-employment benefits, length-of-service awards and other benefits	-	0.3
Current liabilities under annual bonus (3)	1.4	0.1
Total	**1.4**	**0.4**

(1) Remuneration paid to members of the Company's Management Board for serving on corporate bodies of direct and indirect subsidiaries.
(2) The amount reflects changes in the composition of the Company's Management and Supervisory Boards.
(3) Pursuant to the Act on Rules of Remunerating Persons Who Manage Certain Companies.

In 2017 and 2016, 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 Company's Management and Supervisory Boards, in 2017 and 2016, Grupa LOTOS S.A. was not aware of any transactions concluded with the Company or another company of the LOTOS Group 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.

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

Remuneration paid to members of key management staff (other than members of the Grupa LOTOS Management Board)	2017	2016
Short-term employee benefits (salaries), including:	46.0	33.7
- annual bonus paid	7.1 [(1)]	7.4 [(2)]
- length-of-service award paid	0.5	0.6
Other employee benefits	December 31st 2017	December 31st 2016
Post-employment benefits, length-of-service awards and other benefits	11.0	11.5
Current liabilities under annual bonus	10.5	9.0
Total	**21.5**	**20.5**

[(1)] Remuneration paid in 2017 on account of annual bonus for 2016.
[(2)] Remuneration paid in 2016 on account of annual bonus for 2015.

In 2017, the Group did not advance any material loans to its key management personnel. In comparative period, the Group did not advance any loans to its key management personnel.

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

In 2017, the Group executed transactions with parties related to it through members of the Management Board and Supervisory Board. The transactions were concluded at arm's length in the course of the Group's day-to-day business, and were mainly related to the purchase of civil law and property insurance in the amount of PLN 26.4m (2016: PLN 9.9m). As at December 31st 2017, unsettled transactions with parties related to the Group through members of the Management and Supervisory Boards totalled PLN 0.9m (December 31st 2016: PLN 0.8m).

AUTHORISATION OF THE CONSOLIDATED FINANCIAL STATEMENTS FOR ISSUE

These consolidated financial statements were authorised for issue by the Management Board on March 6th 2017.

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

Marcin Jastrzębski

Vice President of the Management Board,
Chief Financial Officer

Mateusz Aleksander Bonca

Vice President of the Management Board,
Chief Refining and Marketing Officer

Jarosław Kawula

Chief Accountant

Tomasz Południewski

Directors' Report
on the operations of Grupa LOTOS S.A.
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for 2017

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Overview of Grupa LOTOS S.A. and its Group

1. Overview of Grupa LOTOS S.A. and its Group

1.1. Key assets, principal business and results

Key assets and principal business

The LOTOS Group is the second largest fuel producer in Poland. The refinery in Gdańsk is one of the youngest and most advanced refineries in Europe in terms of technology and environmental protection.

The LOTOS Group is the sole producer of hydrocarbons in Poland's Exclusive Economic Zone of the Baltic Sea. It also produces oil and natural gas from fields located on the Norwegian Continental Shelf and in Lithuania.

The Group's business is organised into two reportable segments: Upstream and Downstream.

Apart from Grupa LOTOS (the parent, operator of the Gdańsk refinery), the LOTOS Group comprises 17 other companies operating under the LOTOS brand, two of which are based outside Poland, in Lithuania and Norway.

The LOTOS Group's core business involves production and processing of crude oil, as well as wholesale and retail sale of oil products, including:

Upstream segment | **Downstream segment**

Portfolio of assets in three countries: Norway, Poland, and Lithuania.
2P reserves: 88 mboe[1]

One of Europe's most technologically advanced refineries

Third largest service stations network in Poland - 493 sites
Wholesale of fuels and other petroleum products (bitumens and oils)

- fuels (unleaded gasoline, diesel oil and light fuel oil)
- heavy fuel oil
- bitumens
- aviation fuel
- naphtha
- propane-butane (LPG)
- base oils

Grupa LOTOS shares have been listed on the Warsaw Stock Exchange since June 30th 2005.

Vision

The LOTOS Group is:

- A producer of premium quality fuels ,and chemicals, with the optimal degree of vertical integration
- A provider of highly specialist logistics and maintenance services,
- A national innovation leader implementing advanced solutions in its core business.

[1] Boe – barrels of oil equivalent, data as at December 31st 2017.

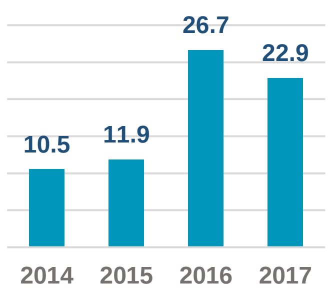
Operations

In 2017, the LOTOS Group reported the expected decline in hydrocarbon production, with total output at 8.4mboe, including 43% of crude oil and 57% of gas. 74.5% of the total volume was produced in Norway, 21.5% in Poland and 4% in Lithuania.

In 2017, the Gdańsk refinery processed nearly 9.6 million tonnes of crude. Grupa LOTOS sold its products in Poland and abroad, on the wholesale market and through its own network of service stations. At the end of 2017, the number of service stations increased to 493.

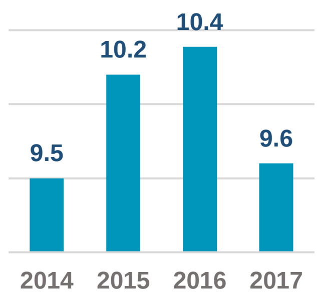
Key financial metrics

Crude oil and gas production
('000 boe/day[2])



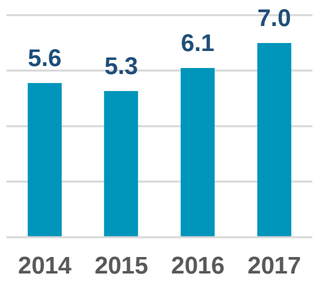
Expected decline in output until now production projects come on stream

Crude oil throughput
(m tonnes/year)



Throughput reduced by a scheduled maintenance shutdown at the Gdańsk refinery

Domestic fuel sales[3]
(m tonnes/yea)r

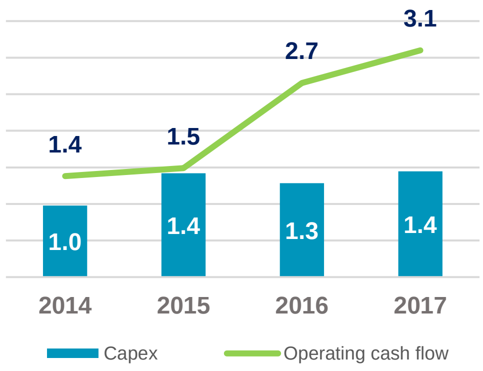


Improved profitability in the Downstream segment on larger volumes of domestic fuel sales

In 2017, Grupa LOTOS S.A. and its subsidiaries delivered record financial results by optimally using their assets and maximising the benefits from the market environment. In 2017, the Group again improved its performance, recording its best operating profit to date. **Consolidated revenue** was **PLN 24,186m.** Clean **LIFO-based EBITDA[4] was record high at PLN 3.1bn.** In 2017, the **Group** earned consolidated net profit of **PLN 1.7bn**.

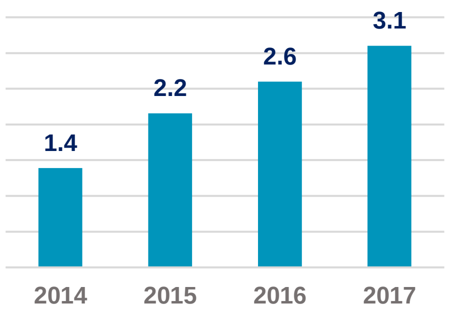
[2] Daily production = production in a period/number of calendar days – change in methodology relative to the previous periodic report.
[3] Gasoline, LPG, diesel oil, light fuel oil and aviation fuel.
[4] Management estimates. EBIT before depreciation and amortisation, and the LIFO effect (the difference arising from the application of the Last In First Out (LIFO) method and the weighted average cost method to account for inventory flows), excluding one-off items and theoretical write-downs on LIFO-measured inventories.

Operating cash flows and capex (PLNbn)



High-quality assets generate operating cash flows which are then used to finance business development projects.

LIFO-based EBITDA[5] (PLNbn)



Continued growth of EBITDA lends credibility to the Group's objectives outlined in the new business strategy for 2017–2022.

1.2. Overview of the Group's organisation and management

1.2.1 Organisational structure of Grupa LOTOS S.A. and its Group

The Group's operations comprise two reportable operating segments:

- **Upstream segment** – acquisition of crude oil and natural gas reserves, and crude oil and natural gas production,
- **Downstream segment** – production and processing of refined petroleum products and their wholesale and retail sale; auxiliary, transport, and maintenance activities.

Within the LOTOS Group, the role of Grupa LOTOS S.A. as the parent is to **integrate the key management and support functions.**

Changes in key management policies of Grupa LOTOS S.A. and its Group

1. Within the LOTOS Group, the role of Grupa LOTOS S.A. as the parent is to integrate the key management and support functions.
2. In 2017, in response to the challenges posed by the market environment and following changes in the composition of the Grupa LOTOS Management Board, significant modifications were made in the Company's organisational structure and management policies. As at the end of 2017, the Management Board of Grupa LOTOS S.A. consisted of:
   - President of the Management Board
   - Chief Strategy and Development Officer
   - Chief Refining Officer

   The remits of the individual members of the Grupa LOTOS Management Board as at December 31st 2017 are set out below.

[5]Management estimates. EBIT before depreciation and amortisation, and the LIFO effect (the difference arising from the application of the Last In First Out (LIFO) method and the weighted average cost method to account for inventory flows), excluding one-off items and theoretical write-downs on LIFO-measured inventories.

President of the Management Board	Chief Strategy and Development Officer	Chief Refining Officer
Finance	Strategy and Development	Refining
Trade in Refinery Products	Enterprise Risk Management	Technology/Maintenance/Turnarounds
Commodity Trading	Innovation	Refining Efficiency
Logistics	Technology Development	Occupational Health and Safety
Supply Chain Management	Project Management	Environmental Protection
Legal	EFRA Project	
Organisation and Management Systems	Efficiency	
Process Management		
Audit/Control		
Human Resources		
Marketing		
Communication		
Planning and Reporting		
IT		
Office of the Management Board and Compliance		
Purchases		
Management Control		
Corporate Supervision		
Investor Relations		
Internal Security		
Data Security		
Critical Infrastructure and Defence		

3. In 2017, work began to improve the management model at the LOTOS Group.
4. In 2017, the LOTOS Group companies continued work to centralise their functions and processes in the areas of procurement, compliance and management systems.

As of March 1st 2018, the organisational structure of Grupa LOTOS S.A. was changed to adjust it to the composition of three-member Management Board.

Pursuant to Resolution No. 29/IX/2018 of March 1st 2018, the Management Board of Grupa LOTOS S.A. introduced amendments to the Organisational Regulations (including the organisational chart of Grupa LOTOS S.A. as its an integral part) with effect from March 1st 2018, including:

- Removal of the following postions: Chief Strategy and Development Officer (NS) and Chief Refining Officer (NO), and creation of the following positions: Chief Financial Officer (NS) and Chief Refining and Marketing Officer (NO).

As a result, the supervision areas were divided among: President of the Management Board (DN), Chief Financial Officer (NS), and Chief Refining and Marketing Officer (NO) as follows:

a. Supervision areas assigned to the **President of the Management Board**:
   - Strategy and development,
   - Process management,
   - Human resources,
   - Corporate support (internal audit, compliance, business controlling, supply chain management, corporate supervision, security (except for occupational health and safety), marketing, communication and CSR, procurement of goods and services).

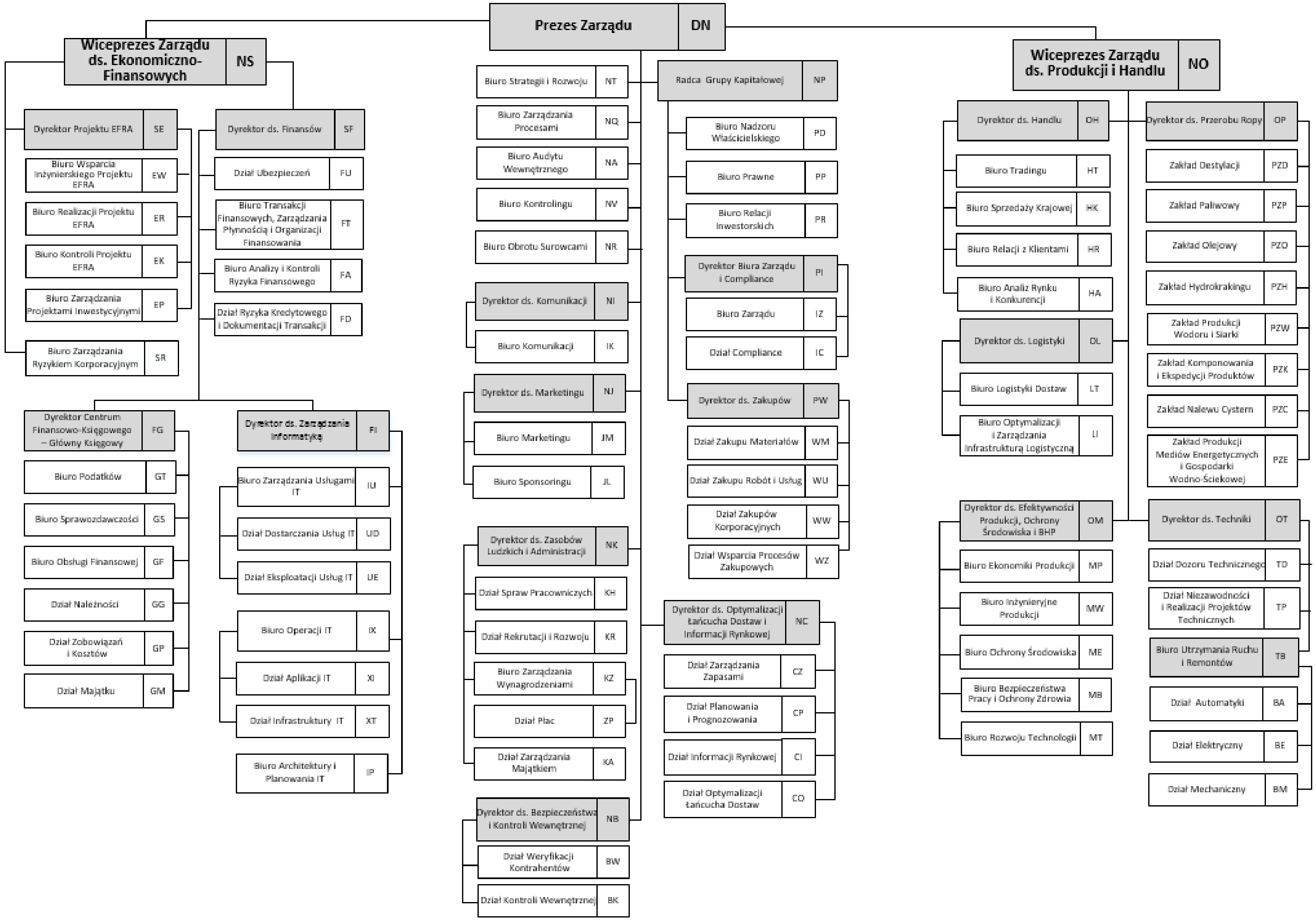
The responsibility for the other business processes and functions has been divided between the other two Management Board members. The responsibility areas resulting directly from the adopted assumptions are: economics and finance and downstream business.

b. Areas assigned to the **Chief Financial Officer**: finance, taxes, risks, investments and IT,

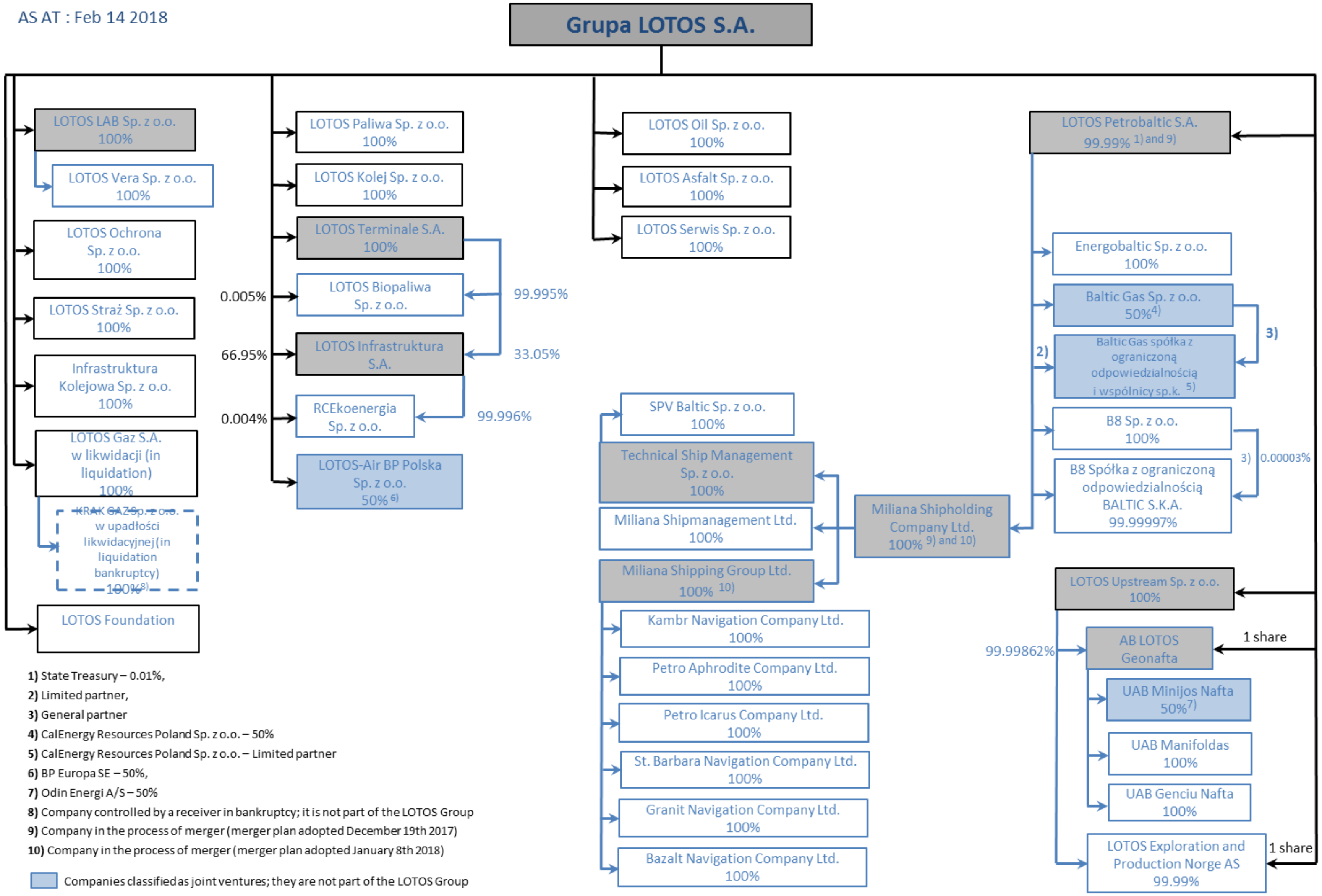
c. Areas assigned to the **Chief Refining and Marketing Officer**: refining, trade, logistics, technology, technology development, environmental protection and occupational health and safety,

in accordance with the organisational chart presented below:

Organisational structure of the LOTOS Group as at March 1st 2018



Organisational structure of the LOTOS Group as at February 14th 2018



1) State Treasury – 0.01%,
2) Limited partner,
3) General partner
4) CalEnergy Resources Poland Sp. z o.o. – 50%
5) CalEnergy Resources Poland Sp. z o.o. – Limited partner
6) BP Europa SE – 50%,
7) Odin Energi A/S – 50%
8) Company controlled by a receiver in bankruptcy; it is not part of the LOTOS Group
9) Company in the process of merger (merger plan adopted December 19th 2017)
10) Company in the process of merger (merger plan adopted January 8th 2018)

Companies classified as joint ventures; they are not part of the LOTOS Group

In addition, Grupa LOTOS S.A. owns an 8.97% equity interest in P.P.P.P. Naftoport Sp. z o.o. (a company of the PERN Group of Płock)

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Strategy of the LOTOS Group

2. Strategy of the LOTOS Group

2.1. ‘Stability and Sustainable Growth’ − LOTOS Group Strategy 2017−2022

At the end of 2016, Grupa LOTOS S.A. adopted the strategy for 2017–2022, which focused on stability and sustainable development as its key objectives. As Poland’s leading company and a major energy group, our vision for growth is to position ourselves as:

- A producer of premium quality fuels and chemicals, with the optimal degree of vertical integration,
- A provider of specialist logistics and maintenance services, and
- A leader of innovation in our core business,

to promote stable shareholder value growth.

The strategy sets out five strategic objectives to facilitate stable growth:

1. Effective use of production licences, further optimisation of refining technologies, launch of new products and alternative fuels, and commitment to quality,
2. Consistent and repeatable reduction of operating expenses and optimisation of margins along the value chain
3. Readiness to develop and embrace innovation based on dedicated funding, an advanced model of cooperation with research institutions and creative engagement of employees,
4. Flexible response to risks, perceived through potentially offered business opportunities,
5. Commitment to fostering and developing talent within the organisation, improving the safety of employees’ work, infrastructure and IT systems, and raising the standards of corporate social responsibility

The strategy will be implemented over two time horizons. In 2017–2018, the main goals will be to stabilise cash flows, reduce debt and effectively implement the ongoing investment projects. In the second phase from 2019 to 2022 the objectives will be to implement a new investment programme based on leading expansion projects, to effectively build a portfolio of production assets, to further expand the service station network and implement innovation projects to create value for the future.

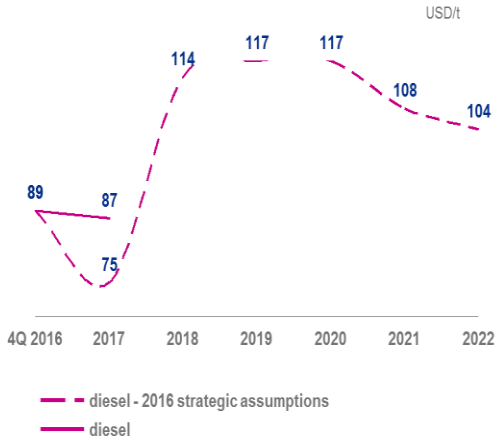
2.2. Macroeconomic environment versus strategic assumptions

In 2017, the macroeconomic environment supported the implementation of our strategic goals. The average prices of crude oil and natural gas were 8% and 15% above the levels assumed by Grupa LOTOS. Crack spreads for diesel oil and light fuel oil also exceeded expectations, by around 15%. Motor gasoline crack spreads were slightly (1%) below the level assumed in the strategy. The average USD/PLN exchange rate for the year was 3.78 versus the assumed 4.09.

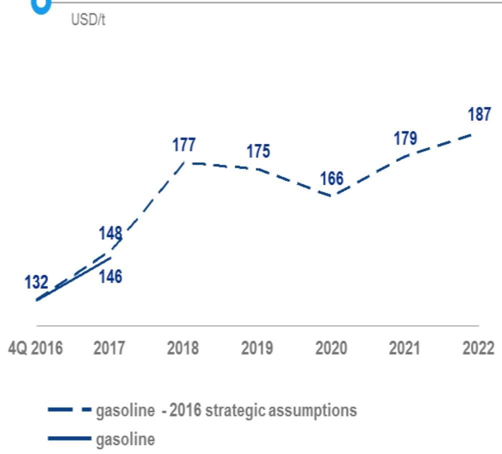
Crude oil

Natural gas

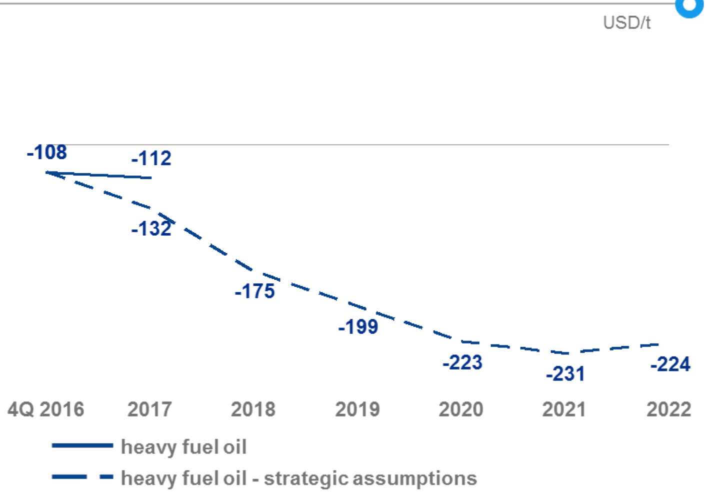
Product crack spread – diesel



Product crack spread - gasoline



Product crack spread – heavy fuel oil



2.3. Strategy implementation in 2017 – key metrics

The LOTOS Group strategy for 2017–2022 provides for a number of key strategy implementation metrics for evaluating the progress in strategy implementation, including:

- Twofold increase in average annual LIFO-based EBITDA in 2019−2022,
- Reduction of net debt/LIFO-based EBITDA to or below 1.5,
- CAPEX of PLN 9.4bn over six years,
- 2P reserves at more than 60 mboe and daily hydrocarbon production of 30,000-50,000 boe,
- Increase in the number of service stations to 550,
- LTIF <3.

For each stage of the strategy implementation detailed metrics were defined, with a breakdown by area of the LOTOS Group's operations.

The following values of strategic metrics have been set for the first stage of strategy implementation (2017–2018):

Security	LTIF <3		
Operational and financial metrics	**PRODUCTION**	**REFINING**	**RETAIL**
Operational metrics	2P reserves: ca. 60 mboe production: ca. 22,000 boe/d	10.5m tonnes	550+ service stations standardisation
Average annual LIFO-based EBITDA in 2017–2018 (PLNbn)	0.6 - 0.7	1.6 – 1.9	
Total CAPEX in 2017–2018 (PLNbn)	ca. 1.5	ca. 1.8	ca. 0.3
Net debt/EBITDA	max 1.5x		
OPEX savings	PLN 200m annually (run rate) vs 2015 cost base		
Customer satisfaction	Net Promoter Score (NPS) implemented, first measurements in 2017		
Dividend paying capacity	Yes		

2.4. Implementation of strategic objectives

Grupa LOTOS S.A.'s strategy for 2017–2022 envisages five key strategic objectives. In 2017, we worked to operationalise the strategy and put in place an efficient system for monitoring of progress for each objective. The implementation of individual strategic initiatives started to be monitored on a regular basis and a cross-functional forum was established to discuss key challenges and development directions for the Group. Below is presented a brief description of key initiatives taken under each strategic objective:

1. Effective use of assets along the value chain

New, safer concept for developing a balanced upstream portfolio

The activities undertaken in 2017 focused on reorganising the Upstream segment and preparing a plan to build a balanced asset portfolio. A new company was set up, namely LOTOS Upstream, which will eventually take over production and exploration activities, while LOTOS Petrobaltic will provide services to production companies.

Superior competitive advantage driven by innovative technologies and new products

The main project pursued by Grupa LOTOS S.A. is EFRA (Effective Refining), intended to ensure deeper conversion of crude oil thanks to the construction of a state-of-the-art delayed coking unit. Once completed the project is expected to push up the model refining margin by approximately USD 2/bbl. At the end of December 2017, the stage of completion of the EFRA Project was 90%.

Additionally, analytical and preparatory work is under way on a portfolio of other development projects. Three potential directions of the refinery's development are being contemplated:

- Lubricate blending unit for the production of Group 1 and 2 base oils,
- Gasoline complex for the production of motor gasolines from naphta,
- Olefins complex with an ETBE unit.

The decision on the launch of another project will be made in the second half of 2018.

LOTOS Energy Hub in retail and care to ensure high quality standards

At the LOTOS Group, fuel is sold on a retail basis by LOTOS Paliwa, which operates a service station chain.

In 2017, work continued on further standardisation of the service station chain image, both in terms of external and internal visual design of the service stations, and optimisation of customer service quality. Last year, the LOTOS service station chain outperformed the competition in a survey measuring overall customer satisfaction with service station chains in Poland.

Apart from extension of the service station chain, initiatives are being implemented to broaden and improve the range of non-fuel services, including food services and products as well as other services (such as car wash facilities or trailer rental). New Subway outlets are also being opened.

The LOTOS service station chain is also preparing to meet the challenges resulting from the development of electromobility. Last year, 50 stations along TEN-T (motorways and expressways) were selected in Poland where EV charging points would be deployed. A pilot implementation of the first 12 charging points, co-financed with the EU funds, is also under way. The aim is to make it possible for electric vehicles to travel without interruptions along the Gdynia – Gdańsk – Warsaw route.

2. Effective processes to ensure stability

In line with the Strategy, the Efficiency Improvement Programme was launched at Grupa LOTOS to optimise cost management and streamline processes within the organisation.

According to the Solomon Associates' ranking published in 2016, Grupa LOTOS S.A. confirmed its competitive advantages by being placed in the first quartile in the following areas: Process Utilisation, Energy Intensity Index, Return on Investment.

Implementation of this strategic objective also requires commercial efforts, such as integrated margin optimisation and diversification of feedstock sources. In 2017, more than 20% of oil processed by the refinery in Gdańsk was imported from sources other than markets east of Poland. Feedstock diversification plays an important role in ensuring stable oil supplies to the Grupa LOTOS' refinery and improving its processing efficiency. At the end of last year, Grupa LOTOS S.A. signed a forward contract for the supply of American crude oil to its Gdańsk refinery. Under the contract, at least five cargoes of crude oil will be delivered by sea in 2018.

3. Readiness to embrace innovation

In 2017, the key efforts in innovation focused on developing new models of collaborative interaction with research institutions and start-ups based on joint research agendas. Projects joined by Grupa LOTOS S.A. include Space3ac acceleration programme for start-ups – a pilot project implemented as part of the government's Start In Poland programme to commercialise innovative solutions, including products and services.

The Company additionally launched the LOTOS INSPIRES internal innovation support programme, thus creating a framework for the process of putting forward and assessing employees' innovative ideas.

Within the structures of the LOTOS Group, LOTOS Vera (a subsidiary of LOTOS LAB) will carry out innovative research projects creating development prospects for Grupa LOTOS S.A. An incubator for innovative projects is planned to be established in the near future to fully harness the innovation potential.

Work has also begun to set up a corporate innovation support fund (Corporate Venture Capital fund), designed to search for and acquire innovative projects to improve the operations of the LOTOS Group and to grow new business areas.

4. Active opportunity and risk management

A new approach to managing risks and opportunities was developed at the LOTOS Group; in particular, a new classification of risks was put in place. At the same time, work continues to strengthen the Group's capabilities in the area of searching for and defining business opportunities that may mitigate identifies risks, as well as build shareholder value.

5. Strong team, coherent CSR story and safety

Talent development as a key source of competitive advantage

Talent identification and development within the organisation is one of the strategic priorities for Grupa LOTOS S.A.

An initiative was taken to implement an internal knowledge management system based on modern channels (e-learning platform), which will enable effective teaching and knowledge sharing as well as systematic development of the staff competencies required to achieve current and future business goals.

Projects in progress include those aimed at the development of management personnel to prepare them to work efficiently in the organisation, and at building a culture of continuous improvement.

Last year saw the launch of a number of activities to optimise HR processes, as reflected in, for instance, simplification and facilitation of contacts with the HR staff, and development of IT systems supporting employees in their daily activities relating to this area.

Grupa LOTOS' commitment to employee matters and its professional management of human resources was confirmed by the award in 2017, for the third consecutive time, of the Top-Quality Human Resources Certificate by the Polish Human Resources Management Association.

Integrated CSR policy

In 2017, Grupa LOTOS continued to target its CSR activities at a broad range of stakeholders. Our CSR efforts rely on active cooperation with the stakeholders, and on the implementation of programmes to solve their social and environmental issues. Grupa LOTOS' key CSR initiatives include social and sports programmes (addressed also to children and youth), improvement of road traffic safety (such as the 'LOTOS Safety Belt Champions' project), and environmental protection. In recognition of its CSR activity, in December 2017 Grupa LOTOS was again included in the WSE's RESPECT Index of socially responsible businesses.

Robust safety culture

Safety of our employees is an absolute priority across the entire LOTOS Group. We work continuously with the purpose of raising the awareness of a safe working environment and increasing commitment to employee safety within the organisation. In 2017, the 8th Workplace Health and Safety Days were organised. Moreover, information campaigns for employees are held on a regular basis, and work continues to adapt the incentive system to promote safe behaviour.

We understand safety also as the protection of infrastructure that is of key importance to Poland's energy security. In the face of the new type of threats, namely those present in cyberspace, we launched a programme to increase the level of cybersecurity across the LOTOS Group By raising the employees' awareness of cyberthreats and implementing new technological and infrastructural solutions to mitigate them.

LOTOS Group's Corporate Social Responsibility Strategy

In 2008, the Grupa LOTOS Management Board adopted the first comprehensive strategy for corporate social responsibility at the LOTOS Group. In late 2016, a draft version of a new Corporate Social Responsibility Strategy was prepared.

Following the announcement of the LOTOS Group's Business Strategy for 2017–2022, in December 2016 the Company took steps to align the objectives outlined in the draft CSR Strategy with the objectives and activities specified in the Business Strategy. In 2017, work on the CSR Strategy for 2018–2022 continued.

Directors' Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2017

Macroeconomic environment of Grupa LOTOS S.A. and the LOTOS Group in 2017

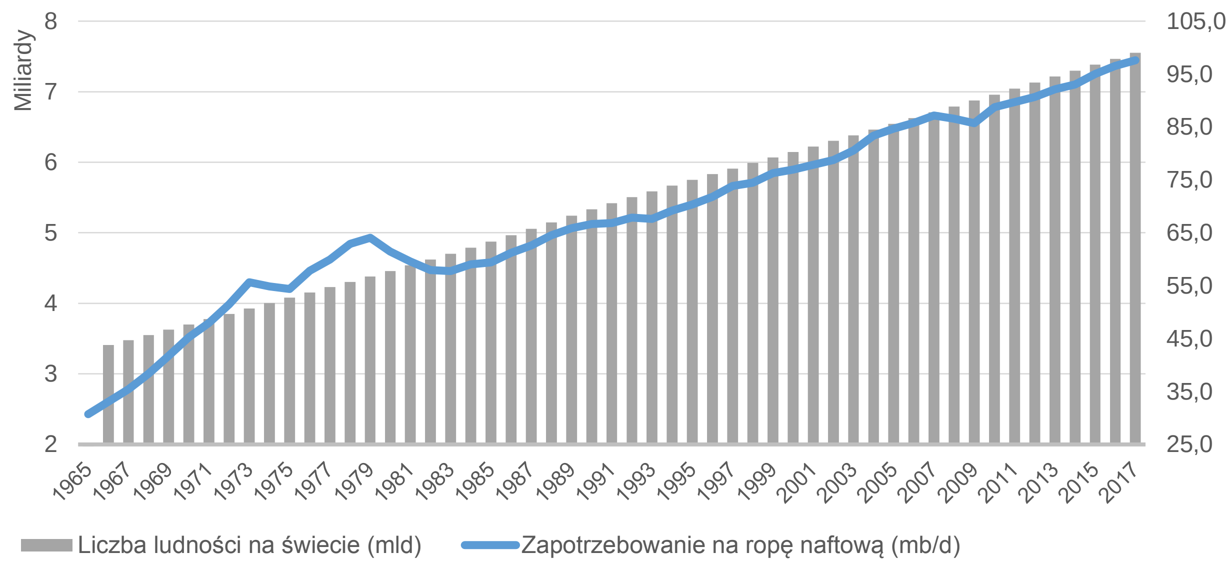
3. Macroeconomic environment of Grupa LOTOS S.A. and the LOTOS Group in 2017

3.1. Drivers of crude oil and gas prices

3.1.1. World population

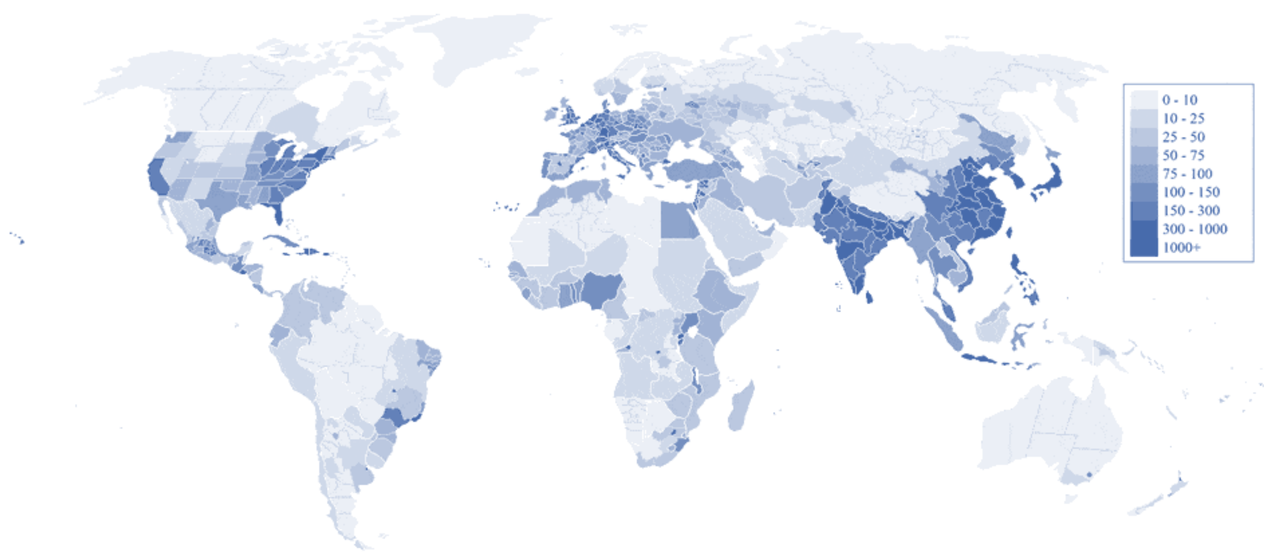
In 2017, the world population increased to 7.55bn. On average, over the last 50 years, the world population has been growing by around 1.6% per year. As the population grew, so did the demand for oil – by 2.3% annually on average over the last 50 years. The graph below shows a strong correlation between those two values.

World population



Source: Grupa LOTOS' in-house analysis based on http://www.worldometers.info/world-population/world-population-by-year/; BP Statistical Review of World Energy 2017.

World population per square kilometre



Source:: www.worldometers.info/world-population/world-population-by-year

3.1.2. The global economic situation in 2017

In 2017, according to financial agencies' and financial institutions' forecasts, the global economy grew 3.7% year on year, driven by positive information about the improvement of the economic situation in China, Japan and the European Union.

GDP dynamics in 2016–2017

	2016	2017	% y/y
Global economy	**3.6%**	**3.7%**	**+0.1%**
OECD countries	3.3%	4.2%	+0.9%
European Union	2.5%	2.1%	-0.4%
Eurozone	1.8%	2.1%	+0.3%
US	2.1%	2.5%	0.4%
China	6.7%	6.8%	+0.1%
India	7.1%	6.7%	-0.4%

Source: Grupa LOTOS' in-house analysis based on World Economic Outlook Update, October 2017 and OECD data.

Along with the growth of the population and the global economy, the demand for crude oil and petroleum products rose as well. On average, based on available economic studies, the demand amounted to 97.9 mb/d in 2017, up 1.5% year on year.

Crude oil demand in 2016–2017 (mb/d)

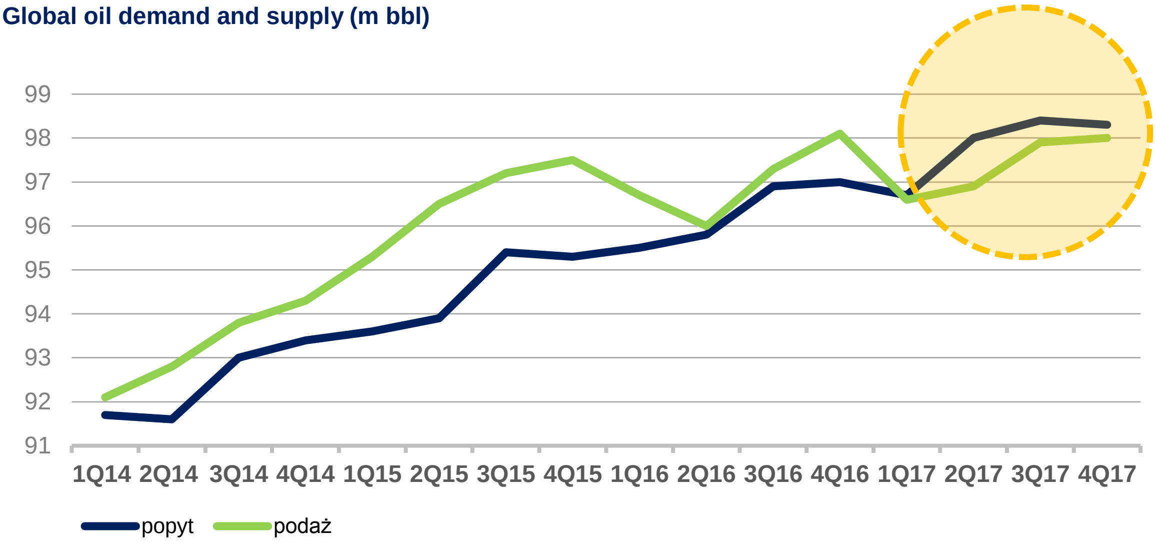
	2016	2017	% y/y
EIA (US)	96.9	98.2	+1.34%
IEA	96.1	97.7	+1.66%
OPEC	95.4	96.8	+1.48%
Average	**96.1**	**97.6**	**+1.56%**

Source: Grupa LOTOS' in-house analysis based on EIA, Short-Term Energy Outlook, November 2017; IEA, Oil Market Report, October 2017; OPEC, Oil Market Report, October 2017 and JBC Energy, Mid-Term Outlook 2017–2022, May 2017.

3.1.3. Global and regional changes in oil supply and demand in 2017

In 2017, for the first time in over two years, the global supply of crude oil exceeded the global demand. On average, the annual demand for crude oil exceeded its production by approximately 1.4m bbl per day. In 2016, the average oversupply was about 0.7m bbl per day.

Global oil demand and supply (m bbl)

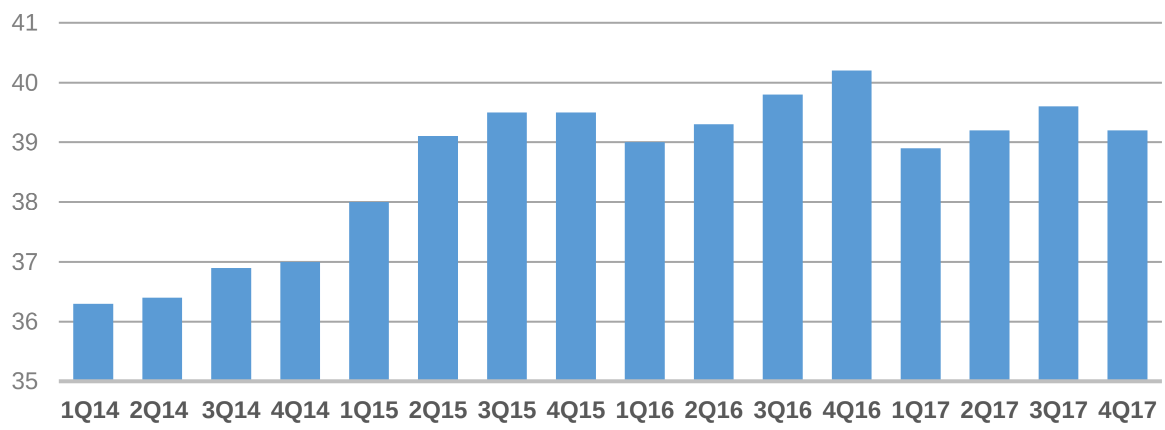


Source: Grupa LOTOS' in-house analysis based on International Energy Agency data, www.iea.org

<u>Crude oil supply worldwide</u>

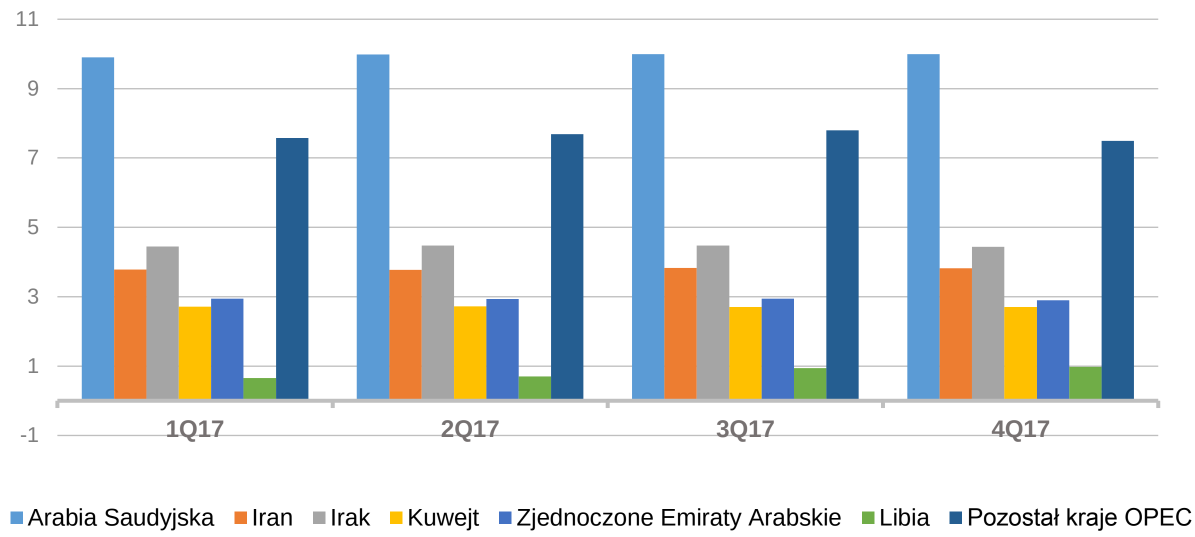
As major producers in the global oil market, OPEC countries used their spare production capacities to adjust the supply of crude oil and stabilise its price within the desired price range. The shale revolution in the United States and oversupply of oil made the cartel abandon this policy. It was not until the end of November 2016 that OPEC and non-OPEC oil producers agreed to cut global oil production by less than 2%. In 2017, the cartel member countries and Russia consistently complied with the agreement and extended it twice. In this way, the supply of crude oil from OPEC producers dropped by around 0.5m barrels per day. In the United States, the crude oil production increased by approximately 0.6m barrels per day in 2017.

OPEC crude oil output in 2014−2017 (m bbl/d)



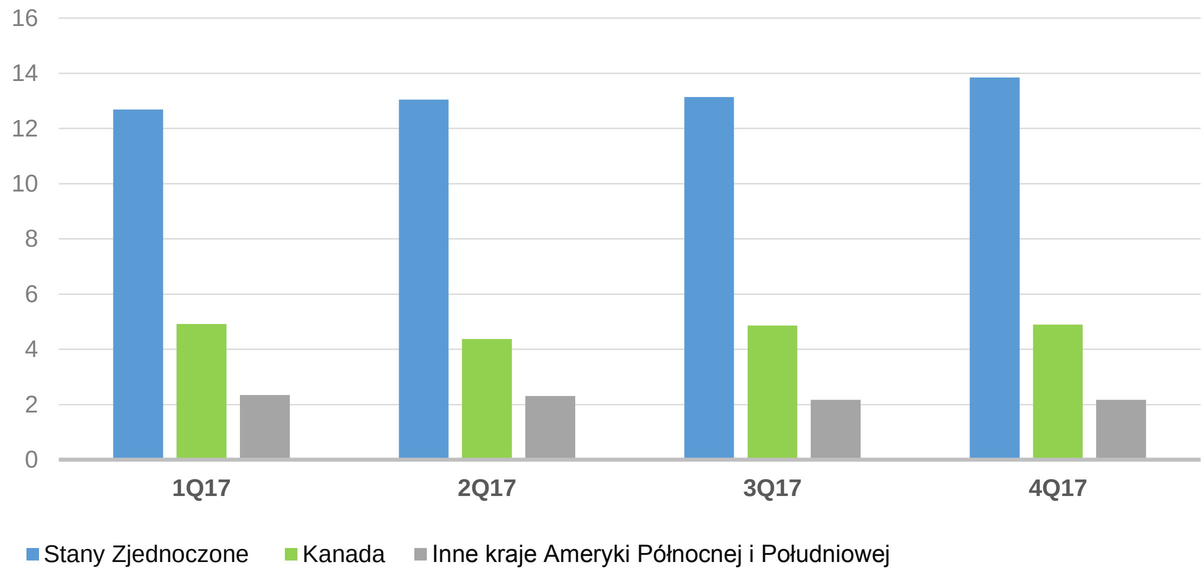
Source: Grupa LOTOS' in-house analysis based on International Energy Agency data, www.iea.org

Oil output by the largest OPEC producers in 2017 (m bbl/d)



Source: Grupa LOTOS' in-house analysis based on International Energy Agency data, www.iea.org.

Oil output in the United States and Canada in 2017 (m bbl/d)

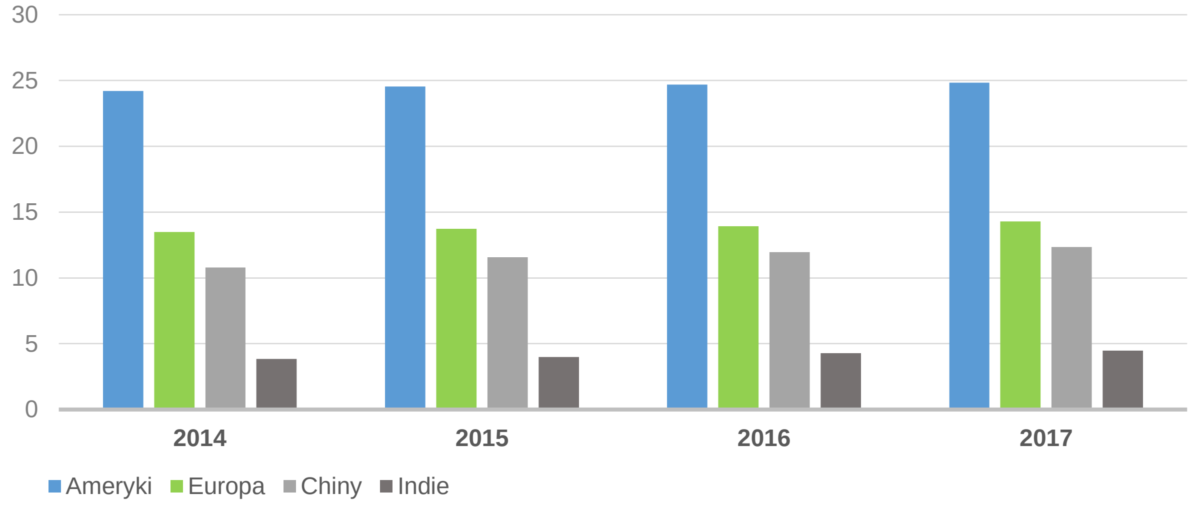


Source: Grupa LOTOS' in-house analysis based on International Energy Agency data, www.iea.org

Crude oil demand worldwide

The United States, Europe, China and India account for a half of the global oil demand. Over the last four years, oil consumption in those countries has been on a rise, by 1.3m bbl/d annually on average, driven by the aforementioned economic growth and demographics.

Oil consumption in North and South America, Europe, China and India (m bbl/d)

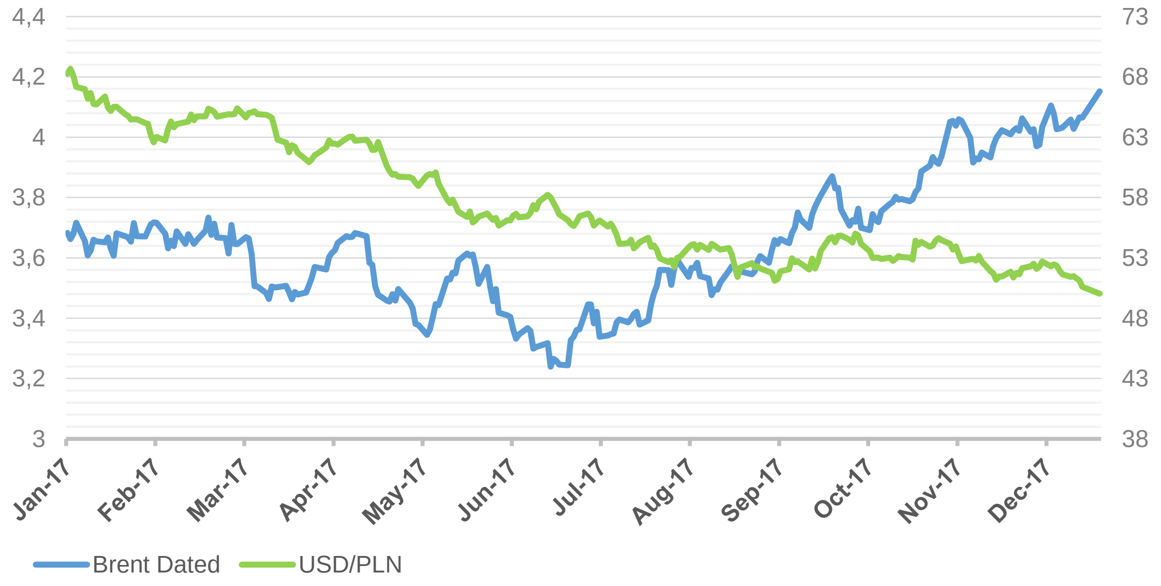


Source: Grupa LOTOS' in-house analysis based on International Energy Agency data, www.iea.org

3.1.4. PLN/USD exchange rate

In 2017, the US dollar depreciated relative to other major currencies. Typically, depreciation of the US dollar (which is the currency of international commodity transactions) is positively correlated with the price of crude oil as demand may rise in countries which experience increase in their currencies' purchasing power. This scenario occurred in the second half of 2017.

USD/PLN exchange rate vs Brent Dated crude oil price in 2017



Source: In-house analysis based on Thomson Reuters data.

Other crude oil and natural gas price drivers:

- Macroeconomic conditions, economic growth of regions and countries,

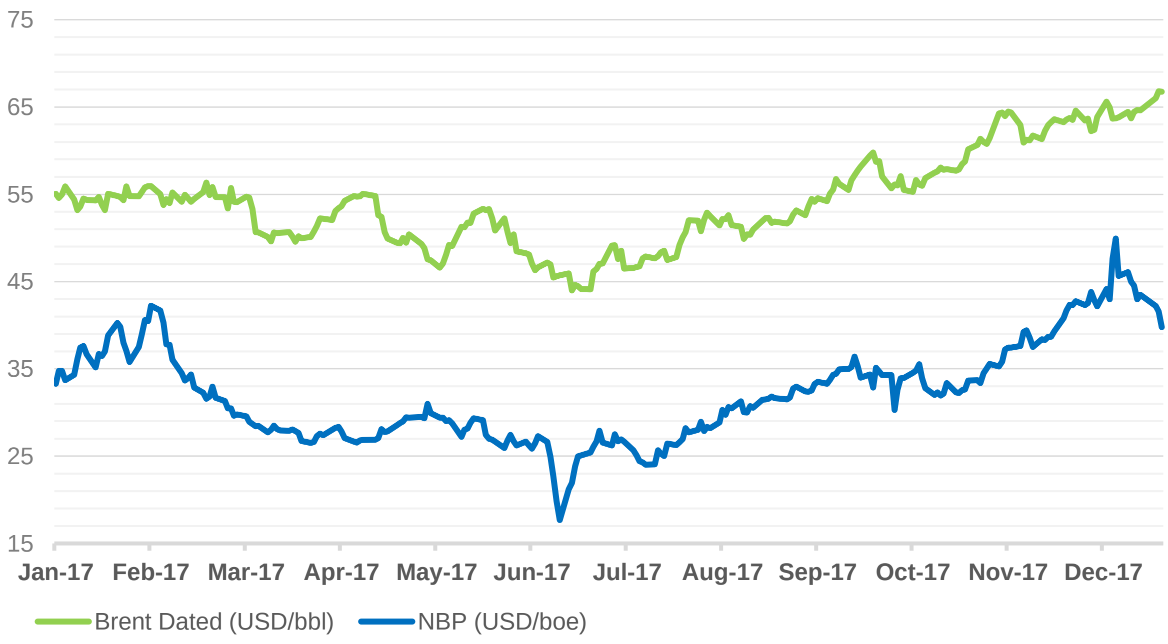
- Uncertain geopolitical situation, terrorist activities or war potentially affecting supply and transport of, or demand for, hydrocarbons and petroleum products, or a threat of such activities,
- Availability and cost of construction or use of pipelines, tankers and other handling and processing infrastructure,
- Price and availability of, and government subsidies for, alternative energy sources and new technologies,
- Political, economic and military developments in oil-producing regions, in particular in the Middle East, Russia, Africa, Central and South America, as well as national and foreign regulations and activities of public authorities, including restrictions on imports and exports, taxes, repatriation and nationalisation processes,
- Global and regional economic conditions,
- Trading activities of market participants and other entities seeking to secure access to oil and gas or hedge against trade risks, or engaging in such activities as part of their investment portfolio management, and
- Weather conditions and natural disasters.

3.2. Crude oil and gas prices in 2017

Towards the end of 2017, the price of Brent Dated oil reached its three-year high of USD 66/bbl. The average annual price grew to USD 54.2/bbl and was USD 11/bbl higher year on year. Sentiment on the oil market was improving during the year, and the Brent Dated oil price eventually went up by 20%.

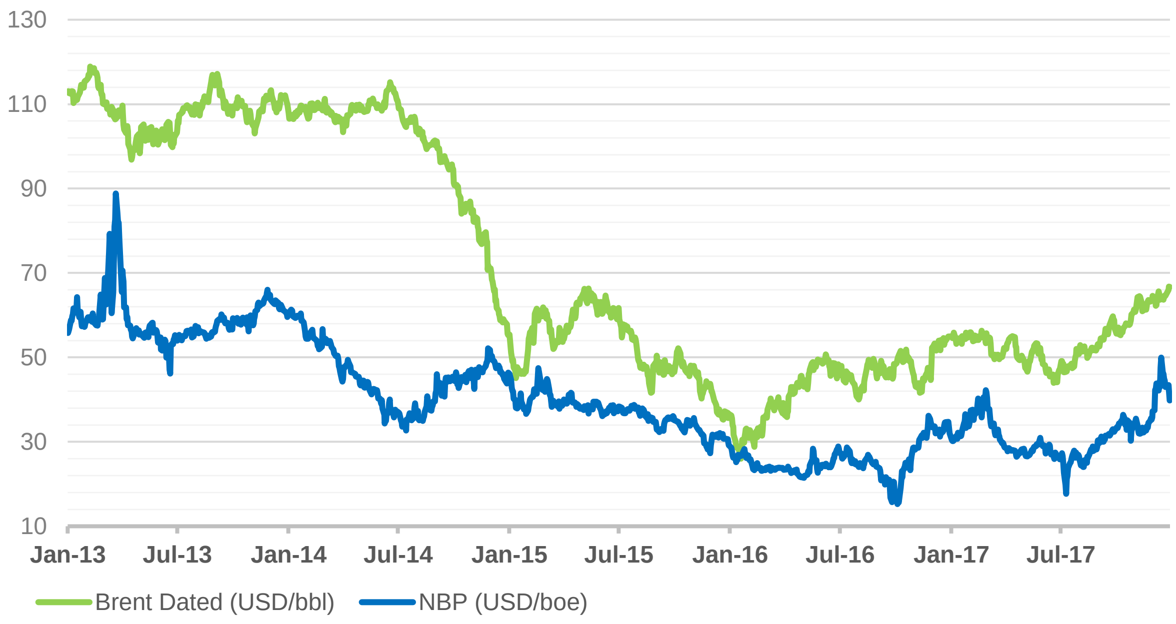
In 2017, the annual average natural gas prices were 26% higher than in 2016. In parallel with crude prices, natural gas prices rose in the second half of the year.

Figure 8. **Crude oil and gas prices in 2017**



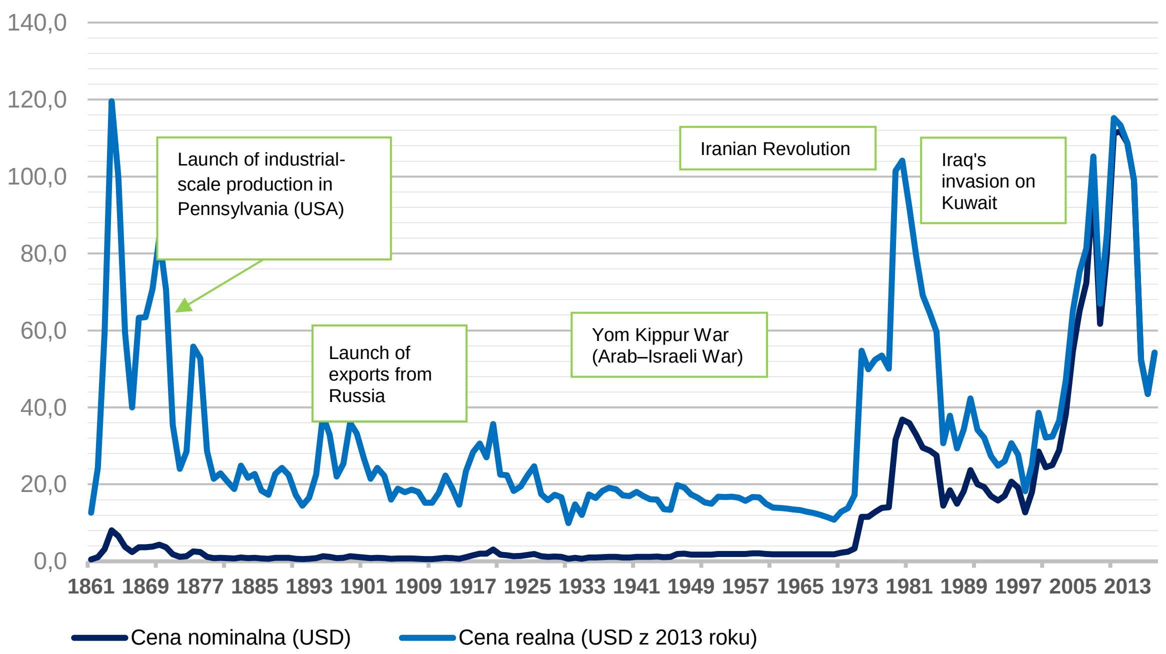
Source: In-house analysis based on Thomson Reuters data.

Crude oil and gas prices in 2013−2017



Source: In-house analysis based on Thomson Reuters data.

Brent Dated oil price in 1861–2017 (USD/bbl)



Source: In-house analysis based on BP data.

3.3. Drivers of profitability in the upstream business and current industry trends

Drivers of profitability in the upstream business

- **Macroeconomic conditions**

A factor of crucial importance to the profitability of exploration and production activities is macroeconomic conditions, including in particular oil and gas price levels. Profitability of operations is driven by the difference between revenue, being a function of the production volumes and commodity prices, and operating costs, including costs of extraction, transport, distribution and tax costs. After the period of oil crisis that began in 2014, 2017 brought a rebound in the commodity market: the average price of crude reached USD 54/bbl, while the average price of natural gas grew to USD 32/bbl, which means an increase of nearly 25% on the average prices seen in 2016. At the same time, over the past four years the upstream sector saw major cost optimisation in costs of drilling and offshore services, lifting costs, costs of development of new fields (standardisation of technical solutions, technological progress, improved processes of contracting and purchasing offshore products and services), with the average reduction in operating costs relative to 2013 exceeding 40%. The expected stabilisation of commodity prices in the medium term, coupled with the optimised operating cost base, ensure effectiveness of the upstream operations and give investors comfort in making decisions on new development projects.

- **Regulatory environment**

The LOTOS Group's upstream operations are influenced by numerous regulations, including in particular the Polish Geology and Mining Law, EU regulations and international conventions, such as those relating to environmental protection and climate change. The following regulatory factors may affect the results of our exploration and production operations in the near future: (i) regulatory changes in the taxation of hydrocarbon production; (ii) amendments to environmental protection regulations, including introduction of more stringent requirements and/or increase in mandatory security against the risk of environmental damage, (iv) amendments to the licencing system and the conditions and procedures for the grant of new licences to explore for and produce hydrocarbons. Because of the regulatory changes and the necessity to comply with the resulting new requirements and more stringent standards, the Group may be required to incur additional capital expenditure and/or operating costs.

We expect that in the foreseeable future results of our operations will be affected by a number of regulatory factors, including: (i) planned regulatory changes in the taxation of hydrocarbon production; (ii) further tightening of environmental protection regulations; (iii) increase in mandatory collateral relating to the risk of environmental damage; and (iv) amendments to regulations pertaining to emergency stocks of crude oil and certain petroleum products.

Trends in the industry

Economists predict crude oil prices to remain in the range of USD 40–70/bbl in the near future. In recent years, oil producers have learned how to keep profitable in such conditions. First of all, they significantly reduced oil production costs, thanks to new technologies, cooperation models and innovations. This means that despite the strong decline in the valuation of deposits, the industry is still attractive to investors.

3.4. Drivers of profitability in the refining business and current industry trends

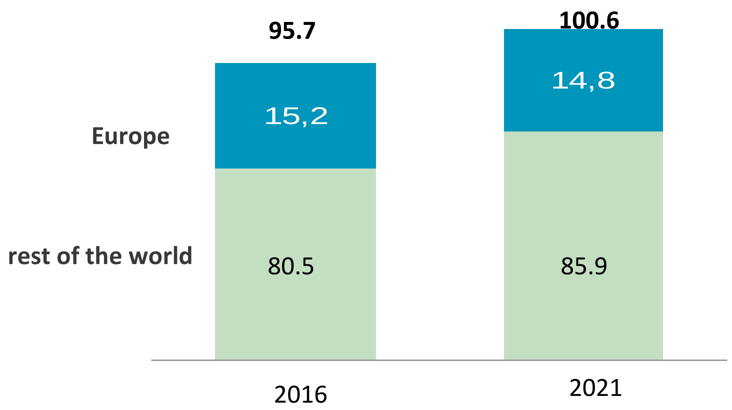
Drivers of profitability in the refining business

- **Prices of crude oil and natural gas** – changes in prices of oil, as the key feedstock used in refining operations, also have a significant direct impact on refineries' costs

- **Level and structure of demand for and supply of petroleum products**

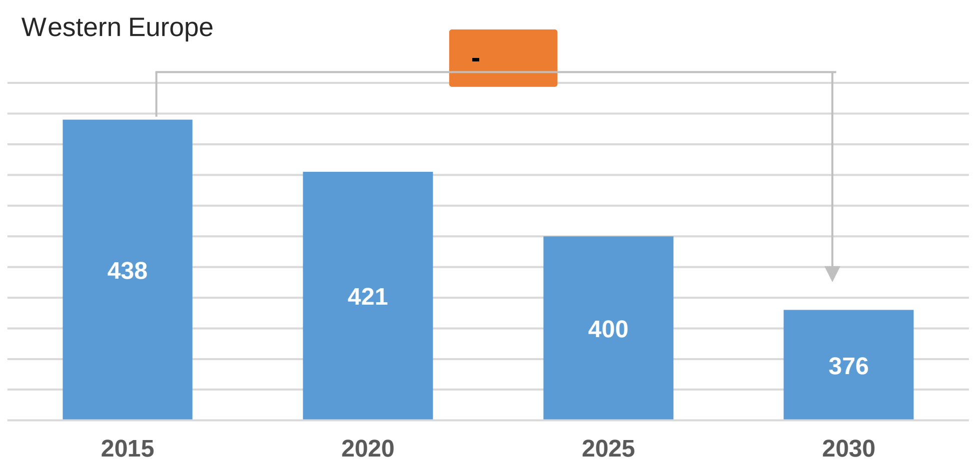
According to JBC data, global demand for refined products will keep growing. Continued growth of CEE economies implies further increase in fuel consumption and its ultimate convergence with consumption levels in Western Europe. The growing CEE market is considered more promising for fuel producers in the coming years.

Global demand for refined products (bn boe)



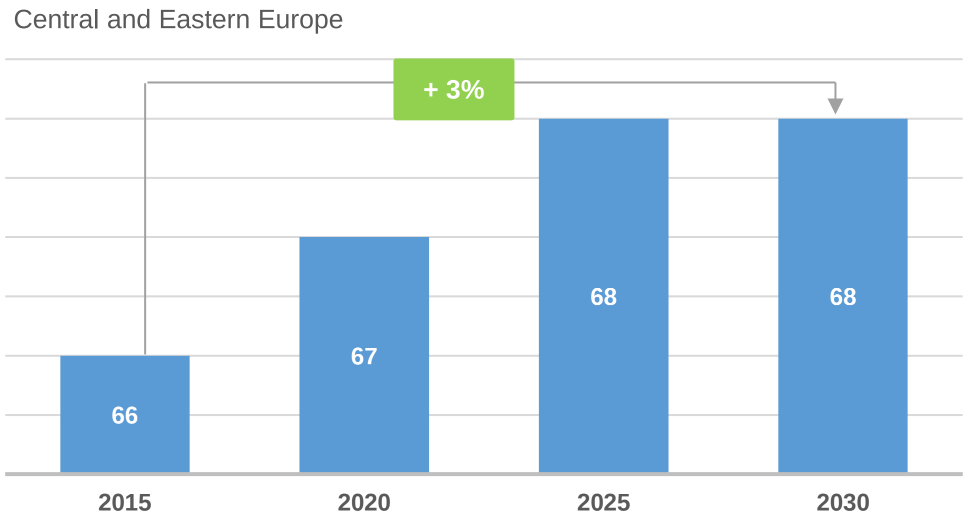
Source: LOTOS Group Strategy 2017−2022.

Forecast demand for main transport fuels (gasoline, diesel oil, light fuel oil, aviation fuel in million tonnes)



Source: LOTOS Group Strategy 2017−2022.

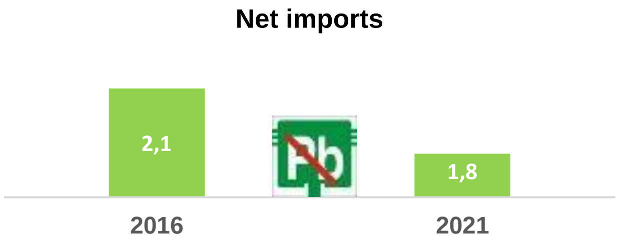
Forecast demand for main transport fuels (gasoline, diesel oil, light fuel oil, aviation fuel in million tonnes)



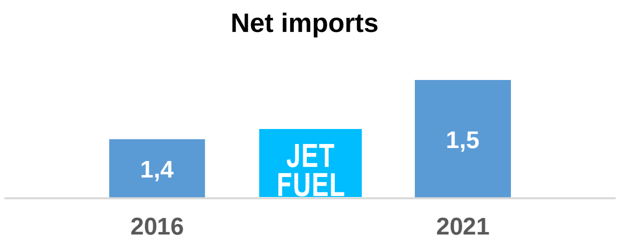
Source: LOTOS Group Strategy 2017−2022.

In recent years, a considerable surplus of gasoline has been observed on European markets, accompanied by limited supply of diesel oil. This large oversupply made European refineries, which are set to produce higher yields of gasoline (or light fractions in general), sell this part of their output on non-European markets.

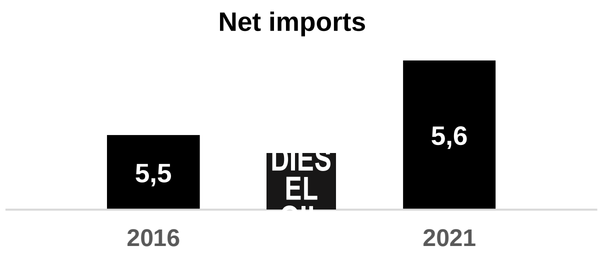
Europe: demand for key products and international balance (mboe/d)



- **13% drop in demand**
- **Increase in exports** of gasolines to 1.4 mboe/d



- **10% increase in demand**
- **Increase in imports** of aviation fuel and kerosene to 0.5 mboe/d



- **3% increase in demand**
- **Increase in imports of diesel oil and light fuel oil**to 1.0 mboe/d

Source: LOTOS Group Strategy 2017−2022.

The Group believes that the anticipated economic improvement in Poland and across the region (growing GDP, falling unemployment) should stimulate demand for petroleum products, especially diesel oil and aviation fuel. At the same time, efforts to counteract the grey market in Poland, undertaken both by the government (the fuel market legislation) and legitimate fuel suppliers, have reduced the market's size, additionally contributing to an increase in registered demand for diesel oil.

- **Macroeconomic factors** − including declining real GDP growth and investment activity in Poland, lower industrial output, and rising unemployment, − adversely affect demand for petroleum products, which in turn results in downward pressures on prices of petroleum products and on refining margins

- **Global throughput, refining capacity utilisation, refinery shutdowns** – since 2009, several refineries with a combined processing capacity of 3.7m bbl/d have been shut down in the Atlantic area. However, this scaling back still seems to be insufficient, as many European refineries generate small returns, and their processing capacities are relatively low. Small low-complexity refineries are particularly exposed to the risk of closure, given their high unit operating costs

Refinery closures in Europe in 2009−2017

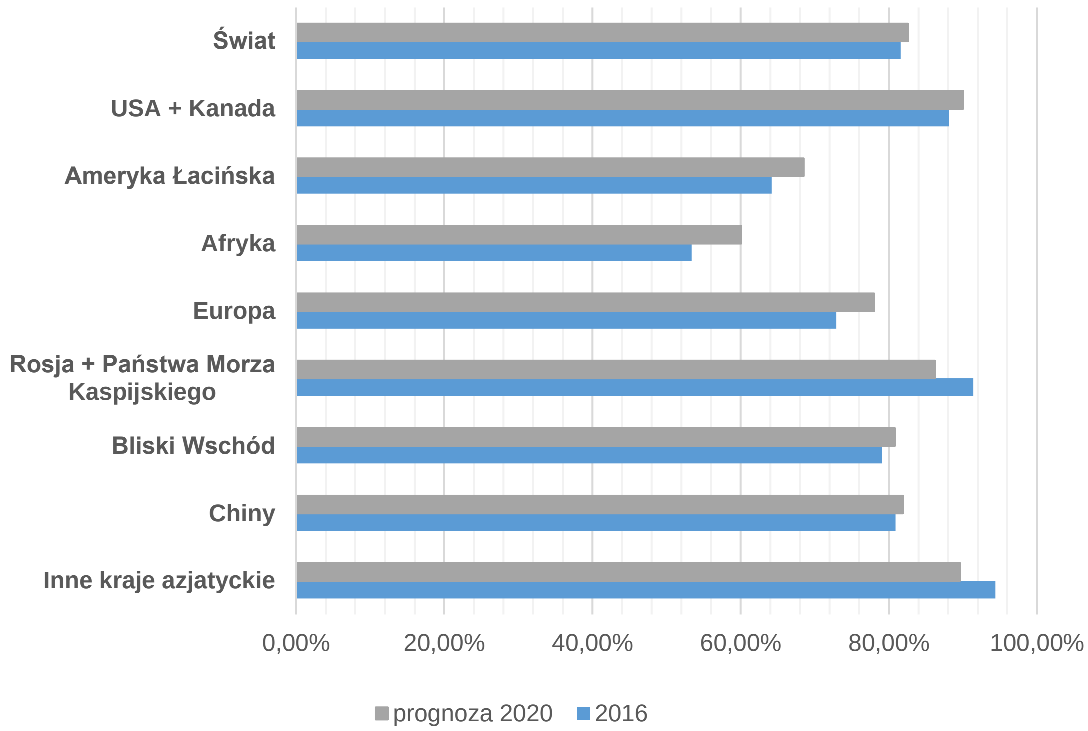
Year of closure	Refinery	Nelson Complexity Index*	Capacity ('000 bbl/d)	Owner	Country
2015	Collombey	N/A	78	Tamoil	Switzerland
2015	Gela	13.1	105	Eni	Italy
2014	Milford Haven	7.0	135	Murphy Oil	United Kingdom
2014	Mantova	8.4	57	Eni	Italy
2014	Paramo	N/A	15	Unipetrol	Czech Republic
2013	Harburg	9.6	107	Shell	Germany
2013	Porto Marghera	6.8	80	Eni	Italy
2012	Coryton	12.0	172	Petroplus	United Kingdom
2012	Kherson	3.1	138	Alliance Oil Co.	Ukraine
2012	Drogobich	3.0	64	Ukraine Oil Co.	Ukraine
2012	Petit Couronne	7.3	141	Petroplus	France
2012	Berre l'Etang	6.7	105	LyondellBasel	France

2012	Roma	7.7	92	Total ERG	Italy
2011	Arpechim	7.3	77	Petrom	Romania
2011	Cremona	7.5	90	Tamoil Raffnazione SPA	Italy
2011	Reichstett	5.3	78	Petroplus	France
2010	Teesside	N/A	117	Petroplus	United Kingdom
2010	Dunkirk	6.1	140	Total	France
2010	Odessa	3.9	56	Lukoil	Ukraine
2010	Wilhelmshaven	5.0	260	Hestya Energy	Germany
2009	Antwerp	4.5	24	Petroplus	Belgium

Source: In-house analysis based on JBC data.

* Nelson Complexity Index − crude oil processing complexity ratio. It reflects the intensity of investments in the refinery, potential fixed costs, and the refinery's potential to generate value added.

Refining capacity utilisation in 2016 and forecast until 2020



Source: World Oil Outlook 2017.

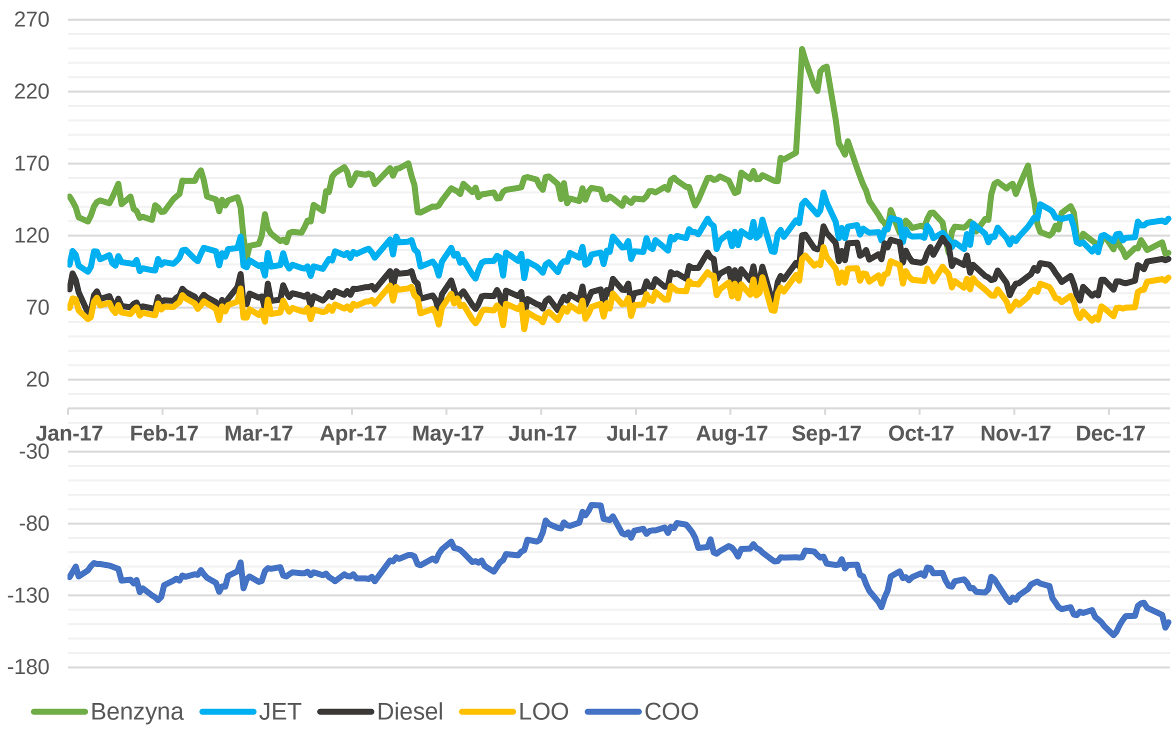
- **Crack spreads** (i.e. the difference between the price of petroleum products and the price of Brent crude) as price formulae in petroleum product sale contracts are, as a rule, based on petroleum product prices quoted on international markets, and the price of oil purchased and processed into petroleum products is based on the price of Brent crude

A crack spread is the difference between the price of a product and the reference price of crude oil. In 2017, the crack spreads were as follows:

- Gasoline – low: USD 104.49/t, high: USD 249.66/t – annual change: -26.65%, or USD -39.24/t,
- Jet fuel – low: USD 90.16/t, high: USD 149.99/t – annual change: +32.10% or USD 32.01/t,
- Diesel oil – low: USD 63.98/t, high: USD 126.49/t – annual change: +25.04% or USD 21.01/t,
- Light fuel oil – low: USD 54.98/t, high: USD 111.99/t – annual change: +30.49% or USD 21.26/t,
- Heavy fuel oil – low: USD -157.58/t, high: USD -67.13/t – annual change: +26.64% or USD -31.24/t.

In 2017, gasoline crack spreads were particularly volatile.

Crack spreads in 2017 (USD/t)



Source: Grupa LOTOS' in-house analysis based on Thomson Reuters data.

- **The Brent-Urals differential (spread)** (i.e. the difference between the price of Brent crude and the price of Urals crude) as Urals crude (also known as REBCO) is the key feedstock used in refining operations in the region, while crack spreads are based on prices of Brent crude; a positive Brent-Urals differential (i.e. when the price of Urals crude is lower than the price of Brent crude) has a positive effect on financial performance, while a negative Brent-Urals differential (i.e. when the price of Urals crude is higher than the price of Brent crude) adversely affects financial performance

As its main feedstock, Grupa LOTOS S.A. uses Russian REBCO crude (Russian Export Blend Crude Oil). Compared with the global Brent benchmark, REBCO is a heavier crude with higher sulfur content, and yields more middle distillates (diesel oil, aviation fuel).

Brent Blend is a light sweet crude produced in the North Sea, with approximately 38 API gravity* and sulfur content of approximately 0.4%.

Russian Export Blend (a Russian crude benchmark) is a blend of several crude types used domestically or exported. Russian crude is a medium sour crude with approximately 32 API gravity and sulfur content of approximately 1.4%.

Lower parameters of this feedstock are the cause of the discount against the Brent crude benchmark. The difference in prices between the two types of crude is called Brent-Urals differential (USD/bbl). The larger the spread, the higher the refining margins earned by Polish refiners.

Characteristics of crude oils

	Brent Blend	Urals
Source	United Kingdom	Russia
Density (g/ml)	0,833	0,866
API*	38.3	31.9
Sulfur (wt %)	0.42	1.43

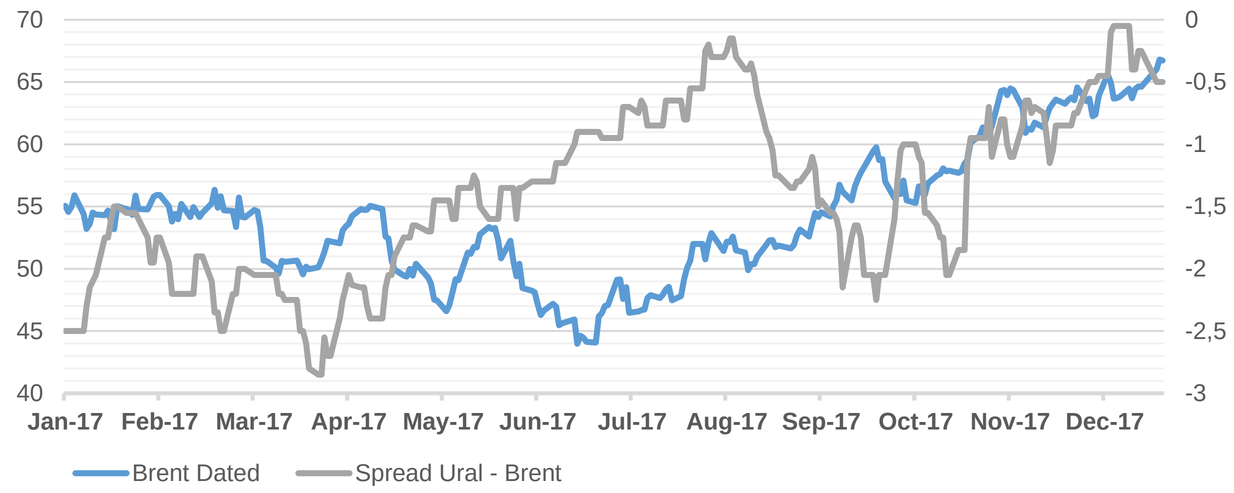
Fractional composition (% of weight)

	Brent Blend	Urals
Gases	2.5	1.6
Gasolines	20.8	12.9
Oil	11.9	10.4
Diesel oils	23.7	22.9
Vacuum oils	26.5	29.3
Vacuum residue	14.7	22.9

* API gravity – crude oil density measure developed by the American Petroleum Institute (API).

The higher the API gravity, the lighter the crude oil. Light crude oils have API gravity of 38 or more, whereas heavy crude oils – of 22 or less. Crude oils with API gravity between 22 and 38 are generally referred to as medium.

Brent-Urals differential and Brent Dated crude prices (USD/bbl) in 2017



Source: Grupa LOTOS' in-house analysis based on Thomson Reuters data.

In 2017, the Brent-Urals differential ranged from USD -0.05/bbl to USD -2.85/bbl, partly due to geopolitical factors that caused a decline in the supply of crudes with characteristics similar to those of Urals.

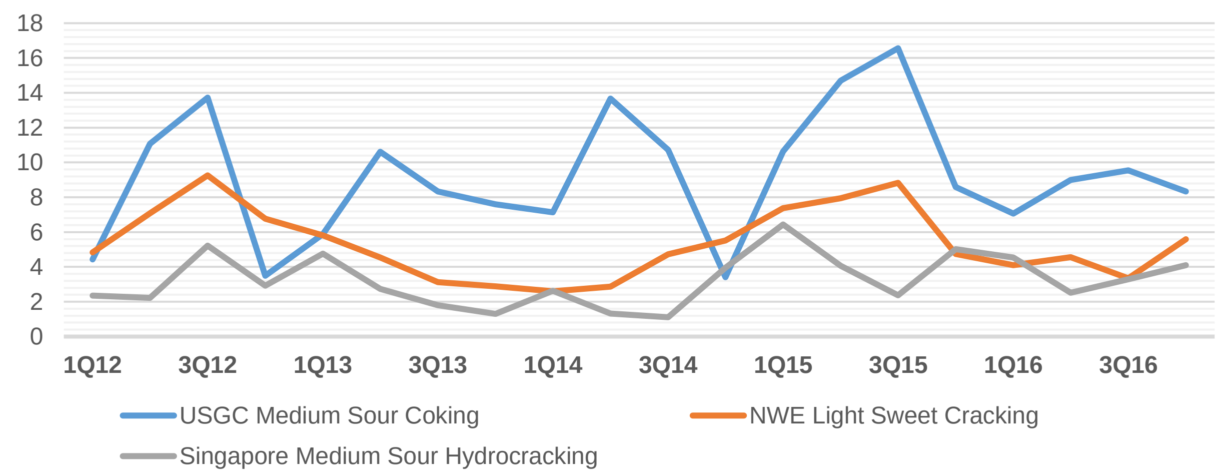
- **Exchange rates** − while the Polish złoty is the Company's reporting currency, prices of crude oil and petroleum products are denominated in, or tied to, the US dollar

- **Regulatory environment** – including the obligation to meet more stringent NIT level requirements for bio-components

<u>Trends in the refining industry</u>

In the last two years, refining margins have stayed significantly above the long-term average. The main drivers behind the Gdańsk refinery's solid performance were high refinery margins, but also the fuel market legislation which helped curb the grey market.

Refining margins globally (USD/bbl)



Directors' Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2017

Operations of Grupa LOTOS S.A. and the LOTOS Group

Upstream segment

4. Operations of Grupa LOTOS S.A. and the LOTOS Group

4.1 Upstream segment

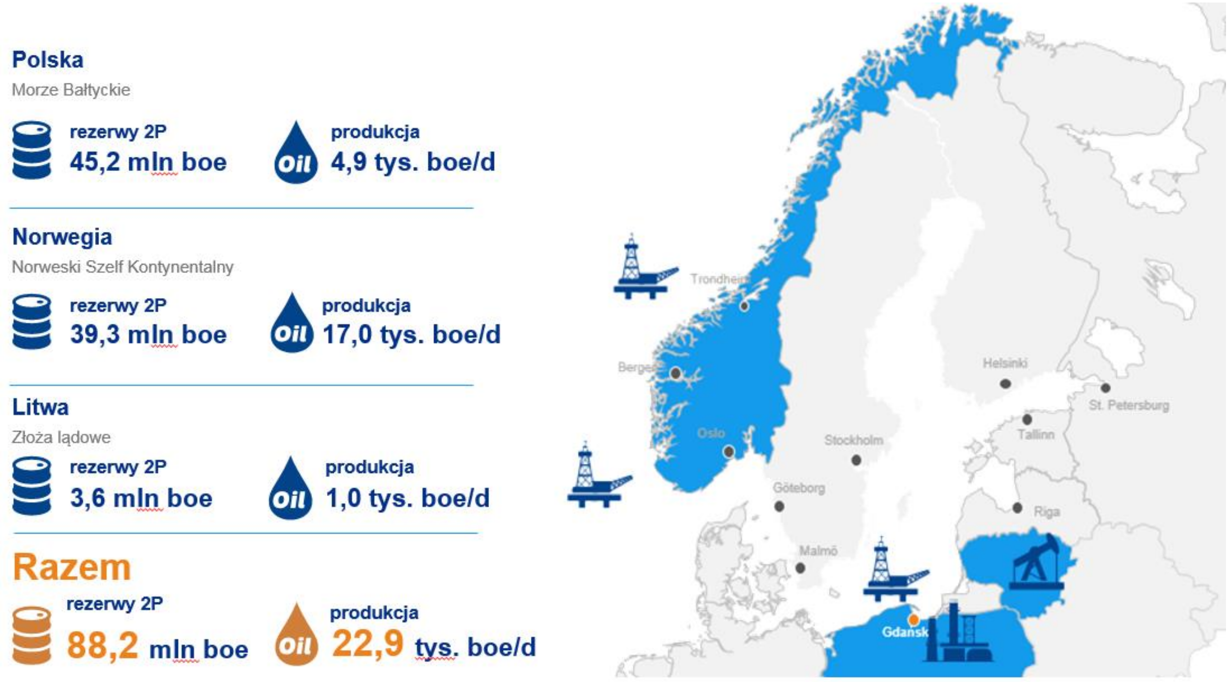
4.1.1. Overview of production assets, products and markets

The LOTOS Group conducts hydrocarbon exploration and production activities in the Baltic sea and in the Norwegian Continental Shelf. In 2017, hydrocarbons were produced from fields located in the Baltic Sea (mainly crude oil with minor volumes of associated gas), from Norwegian fields (natural gas and condensate (i.e. light crude)) with a predominant share of the gas), as well as from onshore fields in Lithuania (crude oil).

In 2017, LOTOS' average daily oil and gas output was 22,900 boe/day (thousand barrels of oil equivalent per day), which translates into an annual capacity of 1.1m toe (million tonnes of oil equivalent). 74% of the overall output, i.e. 17,000 boe/day, came from the Norwegian fields.

At the end of 2017, LOTOS Group's total 2P (proved and probable) reserves were estimated at 88.2 mboe, including 8.8m tonnes of crude oil and 3.3 bcm of natural gas.

LOTOS Group's hydrocarbon reserves and output
2P crude oil and natural gas reserves as at December 31st 2017
Average daily oil and gas output in 2017



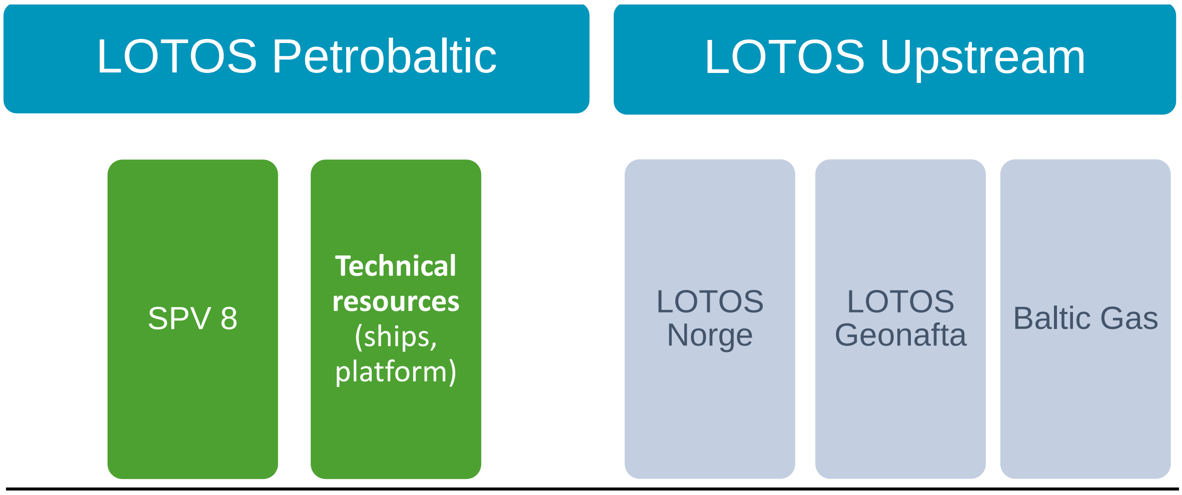
Until December 2017, LOTOS' exploration and production activities were conducted by the LOTOS Petrobaltic Group. LOTOS Petrobaltic S.A. managed the Upstream segment and concurrently conducted exploration and production activities and provided related services in Poland, and was the owner of the upstream assets in Norway (through LOTOS E&P Norge AS) and in Lithuania (through the AB LOTOS Geonafta Group).

With a view to ensuring effective implementation of the LOTOS Group Strategy in the upstream area, in 2017 it was reorganised in terms of capital structure. A new company – LOTOS Upstream ("LUPS") – was established to manage the Upstream segment and perform the following business organisation functions: strategy and business development, asset portfolio management, corporate supervision, management control and arrangement of external financing. LUPS will implement the segment's development plans through its subsidiaries LOTOS E&P Norge (Norway), AB LOTOS Geonafta (Lithuania) and Baltic Gas (the B4B6 project), after it purchases shares in these companies from LOTOS Petrobaltic, and potentially also based on new special purpose vehicles that will be created to carry out upstream projects on new markets, for instance in the United Kingdom.

LOTOS Petrobaltic will focus on exploration and production activities and provision of related services in the Baltic Basin, and ultimately may also provide offshore services to upstream operators that are not members of the LOTOS Group. In 2017, auxiliary service activities were performed through LOTOS Petrobaltic's subsidiaries: Miliana Shipholding Company Limited and its subsidiaries managed a fleet of specialised vessels and provided services using those assets, while Energobaltic Sp z o.o. was engaged in processing of the natural gas extracted from the fields in the Baltic Sea as well as in the production of electricity, heat, LPG and condensate.

As part of the capital structure reorganisation process in the Upstream segment, LOTOS Petrobaltic S.A. sold all shares in LOTOS E&P Norge AS of Norway and AB LOTOS Geonafta of Lithuania to LUPS; the transaction was closed on December 12th 2017.

Projected business structure of the Upstream segment after the capital structure reorganisation



Exploration and production activities in Poland

LOTOS conducts hydrocarbon exploration and production activities in Poland through subsidiary LOTOS Petrobaltic and its subsidiaries and joint ventures. This activity focuses mainly in the Polish Economic Zone of the Baltic Sea, but also in some onshore licence areas in north-eastern and north-western Poland.

In 2017, LOTOS' hydrocarbon output from the Baltic fields amounted on average to 4,900 boe/day, or 21% of the Upstream segment's total output. As at the end of 2017, the 2P reserves in the Baltic Sea fields were estimated at 45.2 mboe (including 5.4m tonnes of crude oil and 0.57 bcm of natural gas) and accounted for 51% of the segment's total reserves.

Poland – the Baltic Sea

In the Baltic Sea, LOTOS Petrobaltic S.A. holds three oil and gas exploration, appraisal and production licences (combined licences) for the Łeba, Rozewie and Gotlandia licence areas, and (including through subsidiaries and joint ventures) four licenses for production of hydrocarbons from the B3, B8, B4 and B6 fields.

Overview of key licence assets:

- B3 producing field. In 2017, the average output of crude oil and associated gas was 2,100 boe/day. The field's remaining 2P recoverable reserves are estimated at 8.3 mboe as at December 31st 2017. Based on the current licence validity date, production from the field is expected to continue until 2026 (proceedings are under way to amend the B3 licence, including with respect to extension of the licence validity period and the possibility of drilling additional boreholes).
- B8 field, under development, including preliminary production operations. The B8 field development project is conducted by B8 Sp. z o.o. Baltic S.K.A. ("SPV B8"). In 2017, SPV B8 produced 2,800 boe/day on average from the B8 field as part of preliminary production and concurrently worked on converting the Petrobaltic platform into a production hub for the field. The field's remaining 2P recoverable reserves

are estimated at 36.9 mboe as at December 31st 2017. Based on the current licence validity date, production from the field is expected to continue until 2036.

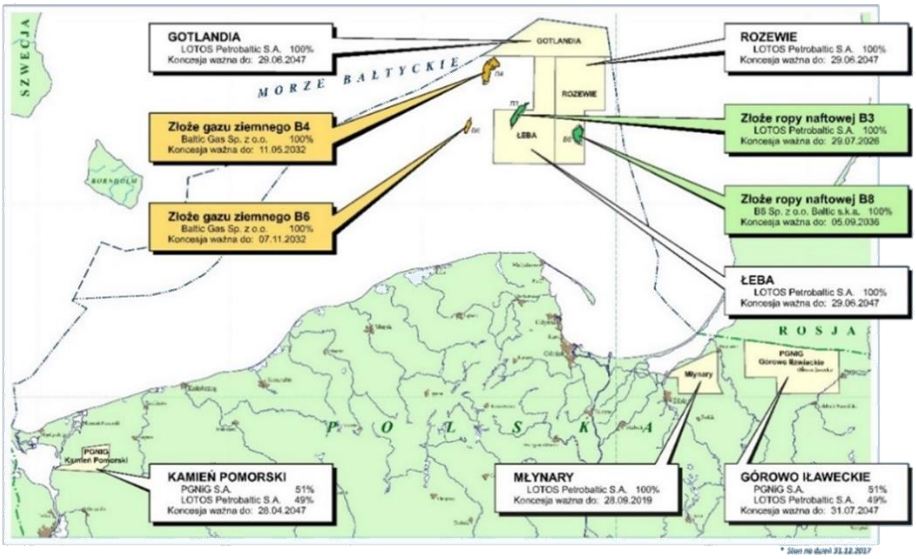
- B4/B6 gas fields, prepared for development. The B4B6 project is carried out by Baltic Gas Sp. z o.o. i Wspólnicy Spółka komandytowa in collaboration with CalEnergy Resources Poland Sp. z o.o. as a partner. LOTOS has a 51% interest in the project. Work completed in 2017 included the main part of the engineering design and additional critical path assignments, including engineering design of the onshore section of the gas pipeline. The recoverable gas reserves in the B4B6 fields are estimated at nearly 5 bcm (for 100% interest).

Poland – onshore licences:

Onshore operations in Poland are conducted by LOTOS in its own Młynary licence area and, jointly with PGNiG, in the Kamień Pomorski and Górowo Iławeckie license areas, where LOTOS holds 49% interests.

All the onshore projects are currently in the exploration phase. Exploration and appraisal work is conducted with a view to discovering new hydrocarbon accumulations. Major tasks performed in 2017 were as follows: (i) in the Górowo Iławeckie licence area, preparatory work was carried out in connection with the 3D seismic data acquisition planned for Q1 2018; (ii) in the Kamień Pomorski licence area, the Stawno-1 borehole was drilled and its results were documented; due to no hydrocarbon flow, the borehole was plugged and abandoned; (iii) field preparatory work was performed in the licence area in connection with the planned 2D seismic surveys.

LOTOS Group's licences in Poland as at December 31st 2017



Exploration and production activities in Norway

Exploration and production activities in Norway are conducted through subsidiary LOTOS E&P Norge AS ("LEPN") of Stavanger. At the end of 2017, LEPN held interests in 26 licenses for exploration, appraisal and production of hydrocarbon reserves in the Norwegian Continental Shelf. Moreover, as part of the APA 2017 (Awards in Predefined Areas) licence round, on January 16th 2018, the company received an offer from the Norwegian authorities to acquire two new licenses: PL918S and PL910. After the company's governing bodies receive the new licences, the number of Norwegian licences will increase to 28.

In 2017, LOTOS' average output from the Norwegian fields was 17,000 boe/day, or 74% of the total Upstream segment's output. As at the end of 2017, the 2P reserves in the Baltic Sea fields were estimated at 39.3 mboe (including 2.9m tonnes of crude oil and 2.7 bcm of natural gas) and accounted for 45% of the segment's total reserves.

Overview of key licence assets:

Heimdal area (licence interests purchased in December 2013), including:

- Licence interests in producing fields including Atla (LEPN's interest: 20%), Skirne (30% interest), Vale (25.8% interest), and Heimdal (5% interest). In 2017, the average output of natural gas and condensate (with a predominant share of gas – 81%) was 3,600 boe/day. The remaining 2P recoverable reserves in the Heimdal area fields are estimated at 2.7 mboe as at December 31st 2017.
- Discovered reserves planned for development north of Heimdal, including FriggGammaDelta, Langfjellet, Rind, Fulla and Froy, in which LOTOS holds an average interest of 10%. In 2017, LOTOS, working in collaboration with AkerBP, the operator, carried our analyses to identify the best option for development of the fields as part of the 'Greater Heimdal' project. The hydrocarbon reserves in those fields are estimated at 34 mboe for LOTOS' interest.

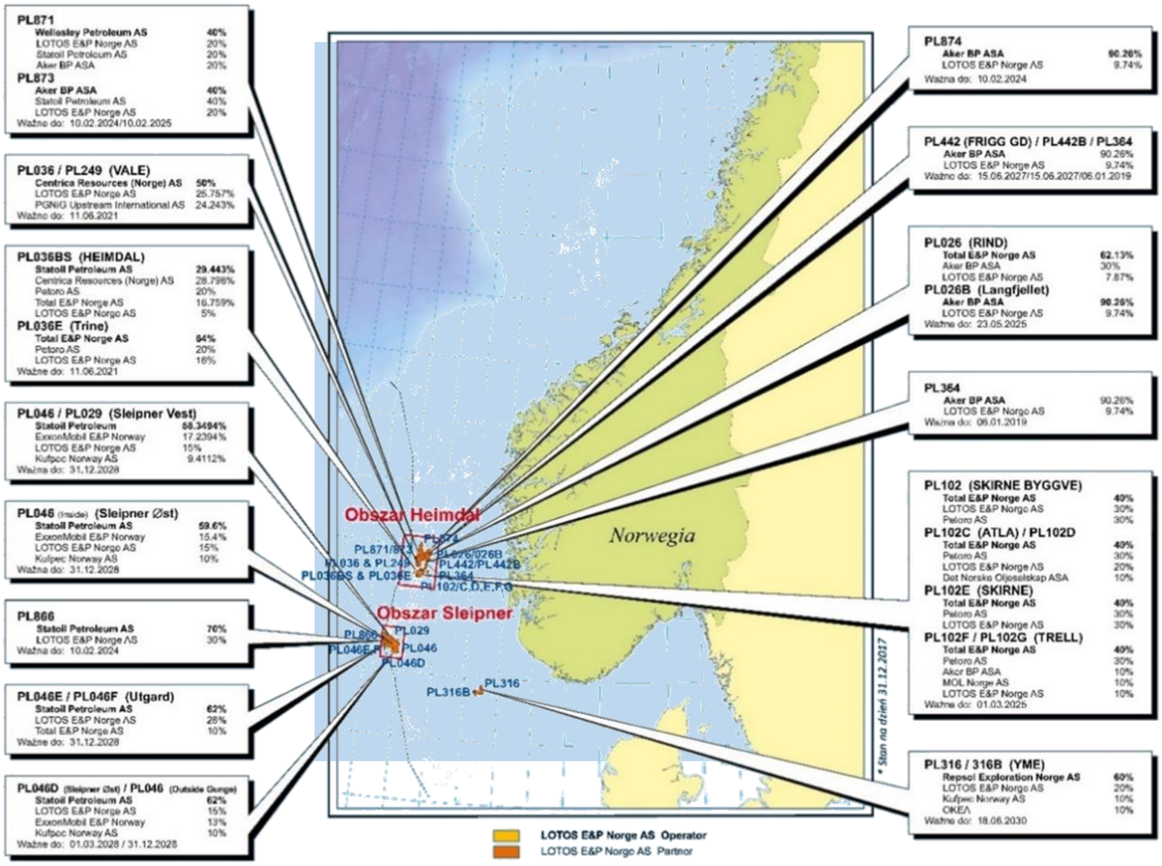
Sleipner area (licence interests purchased in December 2015), including:

- The Sleipner Vest and Sleipner East producing fields, along with the Gungne and Loke satellite fields (LEPN's interest: 15%). In 2017, the average output of natural gas and condensate (with a predominant share of gas – 72%) was 13,500 boe/day. The remaining 2P recoverable reserves in the Sleipner area fields are estimated at 15.5 mboe as at December 31st 2017.
- Utgard field, in the development phase. The field operator is Statoil, and the development is carried out on a 'fast track' basis, i.e. it relies on synergies with existing Sleipner hub infrastructure. The recoverable reserves of the Utgard field are estimated at 8.1 mboe for LOTOS' interest. Commercial production from the field is planned to start in early 2020. During the first five years of commercial production, annual production volumes attributable to the LOTOS' interest are assumed to be 4,000 boe/day.

In addition, LOTOS holds a 20% interest in the Yme field, which is being prepared for redevelopment and launch of oil production. On October 27th 2017, the licence partners approved the Plan for Development and Operation (PDO) of the field, which was then submitted to the Ministry of Petroleum and Energy for approval on December 19th 2017. The recoverable reserves of the Yme field attributable to LOTOS' interest are estimated at 12.9m bbl of crude oil. Commercial production from the field is planned to be launched in the first half of 2020.

In addition to its interests in the fields as such, LEPN also holds interests (of 5% and 15% respectively) in the Heimdal and Sleipner area gas hubs, i.e. the gas and condensate processing and exporting centres of strategic importance to exporting gas from Norway to Central Europe and the United Kingdom.

LOTOS Group's licences in Norway as at December 31st 2017



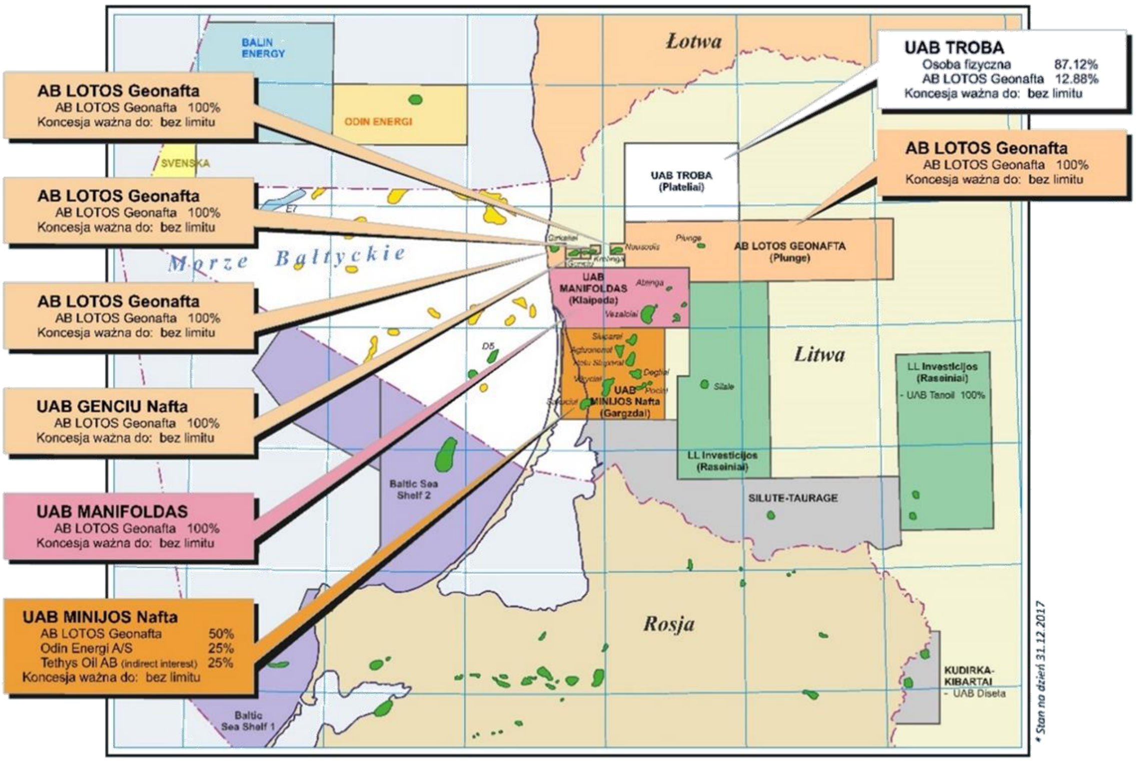
Exploration and production operations in Lithuania

Exploration and production operations in Lithuania are carried out through a subsidiary, AB LOTOS Geonafta of Gargždai. The company is the parent of another group of companies, comprising:

- UAB Genciu Nafta (100% owned by AB LOTOS Geonafta),
- UAB Minijos Nafta (50% owned by AB LOTOS Geonafta),
- UAB Manifoldas (100% owned by AB LOTOS Geonafta).

In 2017, Lithuanian companies were engaged in production from onshore oilfields within 7 license blocks: Girkaliai, Genciai, Kretinga, Nausodis, Plunge, Klaipeda, Gargždai. In 2017, the average output of LOTOS in Lithuania was 1,000 boe/day, or 4% of the Segment's total volume. As at the end of 2017, 2P reserves of the Lithuanian deposits were at 3.6m bbl of crude oil (0.47m tonnes), accounting for 4% of the Segment's total reserves.

LOTOS Group's licences in Lithuania as at December 31st 2017



4.1.2. Upstream segment's logistics

The Baltic Sea

Crude oil and associated natural gas are produced from the B3 field using the Baltic Beta rig and the PG-1 unmanned drilling rig. All produced crude oil is transported by tankers and sold to Grupa LOTOS. Natural gas is transported via a subsea 80 km pipeline to the CHP plant in Władysławowo, owned by Energobaltic Sp. z o.o. (wholly-owned subsidiary of LOTOS Petrobaltic).

Initial production of crude oil from the B8 field is conducted by the LOTOS Petrobaltic drilling platform. All produced crude oil is transported by tankers and sold to Grupa LOTOS. Ultimately, the crude oil will be produced using the Petrobaltic drilling platform after it has been properly adapted and converted. Natural gas will be transported to the Energobaltic CHP plant in Władysławowo.

Sea logistics services in the Baltic Sea region are provided by the Miliana Shipholding Group. The services consist in the receipt and storage of crude oil at production sites, transport of crude from the field onshore, and rescue assistance services for offshore rigs.

Norwegian Continental Shelf

LOTOS E&P Norge AS holds interests in licences covering the production infrastructure in the Heimdal and Sleipner fields, including: the Heimdal gas and condensate processing and export hub (5% interest, with Statoil Petroleum AS the operator) and the Sleipner gas and condensate processing and export hub (15% interest, with Statoil Petroleum AS the operator).

Gas produced from the Heimdal and the Sleipner fields is injected into the Gassled pipeline system, and then delivered to off-take points in the UK and continental Europe (the Netherlands, Germany).

Condensate from the Heimdal field is injected into the Forties Pipeline System (FPS), and then delivered to an off-take point at the Kinneil Terminal/Hound Point in Scotland, where it is processed into final products, i.e. Forties Blend crude oil and gas fractions.

Condensate from the Sleipner field is transported via a pipeline to an off-take point in Karsto (Norway), where it is processed into final products, i.e. Gudrun Blend light crude and liquid fractions (NGL).

Lithuania

Crude oil from the Lithuanian fields is produced using onshore production infrastructure. Produced crude oil is transported to a marine terminal in Liepāja (Latvia). The oil is then transported to Gdańsk by a tanker ship and sold to Grupa LOTOS. The only exception is the oil produced by UAB Minijos Nafta (a 50% subsidiary of LOTOS Geonafta), which is sold to the ORLEN Lietuva refinery. All associated natural gas is flared.

4.1.3. Competition for the upstream business

Poland

After a majority of foreign investors have withdrawn, seeing that the viability of shale gas production in Poland was not confirmed, key players on the upstream market in Poland are Polish state-owned companies. The leader here is PGNiG, which operates on 48 exploration and appraisal licences (55% of all licenses issued in Poland as at December 31st 2017) and 213 production licences (96% of all licences).

LOTOS is the leader in exploration and production in the Polish zone of the Baltic Sea. All three combined hydrocarbon exploration, appraisal and production licences and all four licences for production of hydrocarbons from oil and gas fields in the Polish Economic Zone of the Baltic Sea were issued to LOTOS Petrobaltic, its subsidiaries and joint ventures. Works under production licences covering the B4B6 gas fields are carried out in collaboration with a partner, CalEnergy Resources Poland Sp. z o.o. (as part of the Baltic Gas Spółka z ograniczoną odpowiedzialnością i wspólnicy sp.k. partnership). LOTOS’ interest in the B4B6 project is 51%.

Companies holding the largest number of licences for exploration for and appraisal of sources of hydrocarbons in Poland (as at December 31st 2017)

Company	Number of licences
PGNIG S.A.	48
Orlen Upstream Sp z o.o.[6]	16
ShaleTech Energy Sp. z o.o.	7
LOTOS Petrobaltic S.A. [7]	**6**

Companies holding the largest number of licences for production of hydrocarbons from sources in Poland (as at December 31st 2017)

Company	Number of licences
PGNIG S.A.	213
LOTOS Petrobaltic S.A. [8]	**4**
ZOK Sp. z o.o.	2

[6] Including licences granted to FX Energy and licences in collaboration with PGNiG, with ORLEN’s interest of 49%.
[7] Including onshore licences in collaboration with PGNiG, with LOTOS’ interest of 49%.
[8] LOTOS Petrobaltic and its subsidiaries and joint ventures, including: LOTOS Petrobaltic S.A. (1 licence), B8 Spółka z o.o. BALTIC spółka komandytowa (1), Baltic Gas spółka z o.o. i wspólnicy spółka komandytowa (2).

Norwegian Continental Shelf

Highly prospective in terms of resources and offering a still significant potential for new discoveries of oil and gas, the Norwegian Continental Shelf remains an attractive area of activity for companies in the upstream industry. The competitive landscape is shaped, among other factors, by macroeconomic conditions, including fluctuations in commodity prices, and thus undergoes continuous changes. The beginning of the 20th century saw a significant increase in hydrocarbon production activity on the Norwegian Continental Shelf and, as a consequence, an increase in the number of E&P players from around 25 in 2002 to almost 60 in 2013. The revival was partly driven by favourable regulatory changes, introduction of the mechanism for reimbursement of exploration costs, an increase in oil prices and easier access to capital.

The oil crisis that began in 2014 and the persistently low prices of commodities led to a reversal of the positive trend and a decline in the number of active players to 43 in 2017. The largest player in the market is Statoil, holding approximately 33% of production reserves in Norway and accounting for 32% of current production output. Other key players include Petoro, a state-owned company (27% of production), and major international corporations such as Total, Shell, ExxonMobil, AkerBP, ConocoPhillips, each accounting for 4–5% of production. There are also small and mid-sized companies conducting production operations on the Shelf, including Lundin, Wintershall, DEA, Eni, Spirit Energy, OMV, INEOS, Point Resources, Repsol, and Polish companies – LOTOS and PGNiG. With daily production of 17,000 boe and 2P reserves of 39m boe, LOTOS has a share of approximately 0.4% in the Norwegian market.

The E&P industry is currently showing signs of recovery on the Norwegian Continental Shelf. The companies have adapted to the macro environment and are able to operate effectively in the environment of lower commodity prices owing to optimisation initiatives implemented in such areas as costs of drilling and offshore services, lifting costs, costs of development of new fields (standardisation of technical solutions, technological progress, improved processes of contracting and purchasing offshore products and services). The implemented efficiency-enhancing measures contributed to lower operating expenses – an average decline by more than 40% compared to 2013, as well as to higher profitability of new growth projects.

The improved market sentiment can also be seen among new players who, encouraged by positive prospects, are entering the Norwegian market. Independent E&P companies, supported by private equity funds, form a new group of investors. On the other hand, large multi-national corporations are choosing to divest of their North Sea production portfolios, looking for greater growth opportunities appropriate to their scale and aspirations. This provides business opportunities for medium and smaller players such as LOTOS, which are starting to take an increasing share in both M&A transactions and organic growth of new fields on the Norwegian Continental Shelf.

Lithuania

There is no active E&P market in Lithuania. The LOTOS Geonafta Group companies are the only entities engaged in the production of oil from Lithuanian fields. LOTOS owns 100% of Lithuanian assets, except for UAB Minijos Nafta, where it owns 50% and the remaining investors are: Tethys Oil AB, Odin Energy A/S and private investors.

4.1.4. Growth directions for the Upstream segment

The Upstream segment follows the growth directions defined in the LOTOS Group Strategy 2017–2022 'Stability and sustainable growth'. The LOTOS Group identified five key strategic objectives, with the Upstream segment responsible in particular for the implementation of the first one, i.e.: 'Effective use of production licences, further optimisation of refining technologies, launch of new products and alternative fuels, and commitment to quality' and the initiative assigned to that objective: 'New safer concept for developing a balanced upstream portfolio'.

Activities in the upstream area are aimed at building a balanced and diversified portfolio of assets. LOTOS intends to pursue more new field development projects, gradually increase the importance of exploration activities in its portfolio, and reduce the share of licences covering mature fields. Apart from organic growth, LOTOS plans to actively exploit investment opportunities offered by the market and supplement its portfolio by acquiring attractive new assets.

An important element of the Strategy for the upstream business is building a strong position around the existing Sleipner and Heimdal hubs, as well as constructing new hubs, e.g. north of the Heimdal hub. These measures are aimed at maximising the output from currently producing fields, effective development of new fields using the existing infrastructure in the 'fast-track' option, extending the life cycle of the hub and postponing the obligations related to decommissioning of production infrastructure. As part of its hub strategy, LOTOS cooperates with experienced operators – Statoil and AkerBP – which ensures high efficiency of its activities.

Areas of the North Sea, both within the Norwegian Shelf and the British Shelf, as well as the Baltic Basin region (Baltic Sea, onshore licences in Poland and Lithuania) will be the key growth direction of the upstream business.

Total capital expenditure provided for in the LOTOS Group Strategy for the development of defined upstream projects in 2017–2022 is PLN 3bn. Additionally, the Strategy provides for an option to allocate additional funds from the pool of PLN 3.3bn to be distributed among the segments for new development projects in the 2018+ perspective. The following parameters are expected to be achieved by the Upstream segment following the implementation of the Strategy:

KPI	2017-2018 Perspective	2019-2022 Perspective
Annual EBITDA	PLN 0.6bn–0.7bn	PLN 1.6bn–1.8bn
Production	22,000 boe/day	30,000–50,000 boe/day
2P reserves	60 mboe	> 60 mboe

In 2017, LOTOS was engaged in the following key activities in the upstream area to ensure the achievement of its strategic objectives:

- Production from the currently operated fields was optimised: in particular, LOTOS, in cooperation with the operator, Statoil, implemented a programme aimed to increase production from the Sleipner fields, which provides for the drilling of additional infills wells and extending the life cycle of existing wells. As a result, additional production reserves of approximately 5 mboe (for the LOTOS interest) were recognised in Q4 2017 in respect of the Sleipner fields.
- New field development projects were carried out in order to diversify and balance the portfolio of assets, including: (i) works related to the development of the Utgard field in the Sleipner area in Norway were carried out, with production planned to commence at the beginning of 2020 (2P reserves of 8.1 mboe, expected average output of approximately 4,000 boe/day for the LOTOS interest), (ii) partners in the Yme licence approved the Plan for Development and Operations of the Yme field in Norway, with production planned to commence in the first half of 2020 (2P reserves of 12.9 mboe, expected average output of approximately 5,000 boe/day for the LOTOS interest), (iii) works were carried out to develop the B4B6 Baltic natural gas deposits with a resource potential of nearly 5 bcm and LOTOS interest of 51%.
- The strategy of consolidating the position around the existing Sleipner and Heimdal hubs was implemented in a consistent manner: LOTOS cooperated with the operator, Statoil, in such areas as: (i) stepping up production from currently operated fields, (ii) creating added value through efficient development of new fields with relatively low capital involvement, using the existing technical infrastructure – the Utgard project, (iii) seeking new growth opportunities through the development of new fields near the hub: following the conclusion of the APA 2017 round (Awards in Predefined Areas), LOTOS was offered two new exploration and production licences by Norwegian authorities. One of them, the PL918S licence, is located to the west of the Heimdal hub and covers the discovered Peik field, which can be developed through connection to the existing Heimdal infrastructure. The operator of the licence is Statoil with an interest of 75%. LOTOS Norge's interest is 25%. The objective of those measures is to increase operational efficiency, extend the life cycle of hubs, and postpone the technical infrastructure decommissioning obligations, thus maximising added value from the assets located in the hub area.
- Activities aimed at construction of new hubs on the Norwegian Shelf were carried out: in particular, LOTOS, in cooperation with AkerBP, analysed the optimum development scenario for the resources discovered in the area north of Heimdal, taking into account the fields in which LOTOS holds interests i.e. FriggGammaDelta, Langfjellet, Rind, Froy, Full and, potentially, additional Krafla and Askja fields. The project provides an opportunity to build up a position in a new attractive area in cooperation with experienced partners (AkerBP, Statoil) and ensures long-term development prospects. The resource potential of the fields in the Greater Heimdal area is approximately 34 mboe for the LOTOS interest.
- In order to ensure a high efficiency of operations, the capital structure of the upstream business was reorganised through the establishment of a new holding company, LOTOS Upstream. This company will implement development plans using the following subsidiaries: LOTOS E&P Norge (Norway), AB LOTOS

Geonafta (Lithuania) and Baltic Gas (B4B6 project). LOTOS Petrobaltic will focus on exploration and production activities and related services in the Baltic Basin area.

As a result of activities consistently implemented in the upstream business, LOTOS met its strategic targets for 2017: its output in Poland, Norway and Lithuania reached the average level of 22,900 boe/day (over the target of 22 thousand boe/day), proved 2P hydrocarbon reserves stood at 88.2 mboe as at December 31st 2017 (over the target of 60 mboe), and the Upstream segment's clean EBITDA reached a record-high value of PLN 811m (over the target of PLN 0.6-0.7bn).

4.1.5. Summary of threats and opportunities in the Upstream segment

External factors

OPPORTUNITIES (+)

- Indications of a possible improvement of the situation on the commodity market
- Higher return on the development of new fields, driven by cost reductions in the upstream industry, e.g. due to lower prices of drilling services
- Higher availability of drilling rigs due to their lower utilisation
- Potential for further optimisation of costs and enhancement of the industry's efficiency as a result of the application of innovations and advanced technology solutions
- Exit from the E&P business by a number of players, creating an opportunity for acquisition of attractive assets
- The emergence of new development opportunities, such as the APA licensing rounds, which give access not only to exploration assets but also to resources that have already been discovered (elimination of exploration costs and risks)
- Improving sentiment of financial institutions towards the upstream industry and better prospects for raising capital for new development projects

THREATS (–)

- Actual rate of increase in oil and gas prices below 2017–2022 assumptions
- High volatility in the macroeconomic environment at the time of making key investment decisions concerning strategic projects
- Growing competition on the transaction market, e.g. competition from companies supported by private equity funds

Internal factors

STRENGTHS (+)

- A portfolio of attractive development projects ensuring long-term growth prospects
- A clear and transparent strategy for reinforcing position around existing hubs and building new hubs in Norway
- Good knowledge of the geographical region of the Baltic Sea shelf and Norwegian Continental Shelf
- Constant building of expertise and operator competences
- Investments in politically safe locations with stable legal and tax regimes, and good access to logistics infrastructure
- Existing drilling and hydrocarbon production capabilities
- Partnership with strong and experienced players with international presence

WEAKNESSES (–)

- Sensitivity to changes in macroeconomic parameters and industry specific exploration and project risks due to the still relatively small operating scale
- Limited prospects for building a long-term resource base in the Baltic Sea
- High share of relatively mature assets in the upstream portfolio
- High debt level, limiting the capacity for exploration projects and acquisitions
- Need to enhance project execution capabilities

Directors’ Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2017

Operations of Grupa LOTOS S.A. and the LOTOS Group

Downstream segment – crude oil refining

4.2. Downstream segment – crude oil refining

4.2.1. Competition for the refining business

The Grupa LOTOS refinery, with the annual processing capacity of approximately 10.5m tonnes of crude oil, is one of the most advanced and youngest refineries in Europe. To a large extent, the refinery owes its technological advancement to the Group's 10+ Programme completed in 2011, the largest industrial project of the last decade in Poland in terms of capital expenditure (EUR 1.43bn). The upgrade and extension of the refinery as part of the 10+ Programme resulted in increased yields of high-margin products per barrel of crude processed (including an increase in the volumes of fuels per barrel of crude from 4m tonnes to 7.8m tonnes) relative to peers in Central Europe, and enabled Grupa LOTOS S.A. to process more technologically demanding types of crude.

The EFRA project is a continuation of the wider effort to technologically modernise the refinery, and natural completion of the crude oil processing chain created as part of the 10+ Programme.

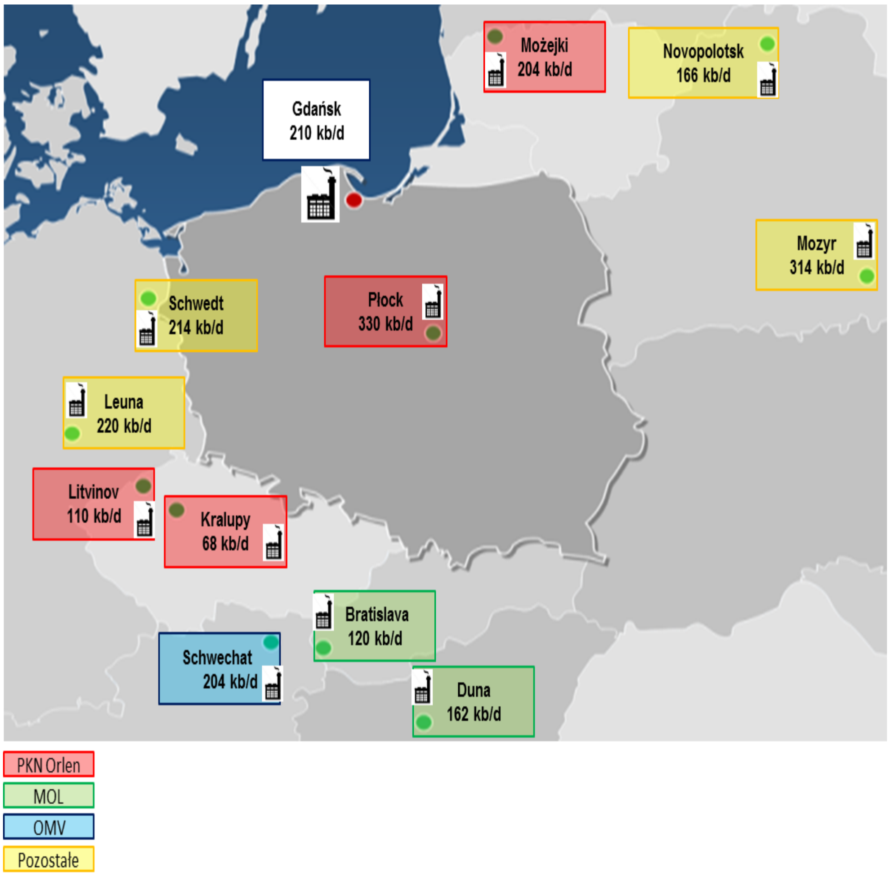
The very good technological condition of the refinery is further confirmed by its Nelson Complexity Index (crude oil processing complexity ratio). Based on the Company's estimates, it is the highest in Poland and among the highest in Europe. The ratio reflects the intensity of investments in the refinery, potential fixed costs, and the refinery's ability to generate value added. The Nelson Complexity Index for the Gdańsk refinery is 10.0. A rating of 10.0 or more is reported only for highly advanced facilities, including the Slovnaft refinery in Bratislava, Slovakia (11.5), and the MOL refinery in Dunba, Hungary (10.6). To compare, according to the ORLEN Group’s documents (the ‘We Fuel the Future’ presentation of January 2017), the PKN ORLEN refinery has the Nelson Complexity Index of 9.5.

The Gdańsk refinery also features a high distillate rate (due to a large share of fuels in the product mix) and focuses on medium distillates, which enables the Company to successfully adjust its output to the structure of domestic demand and to exports opportunities. The technological configuration of the refinery, combined with its favourable location, enable Grupa LOTOS to flexibly process various types of crude, and thus adjust the production volumes in particular oil groups to effectively respond to changes in the structure of domestic demand and to export opportunities.

The refinery's location is a source of major competitive advantage in the region in terms of logistics (access to feedstock and product sales channels). The location close to the handling terminal provides the LOTOS Group with direct access to international markets, enabling it to export its oil products primarily to Scandinavia, north-western Europe and the Baltic states. It also helps the LOTOS Group to optimise its sales channels and purchases of various types of crude oil.

The refinery also benefits from a unique combination of supply channels, which offers simultaneous access to feedstock supplies by road (from Russia) and via the PERN pipeline network, as well as by sea, from numerous countries and the Group's own fields. With access to two supply channels, the Company is able to use different supply sources and respond flexibly to changes in petroleum product and crude oil prices; it can also effectively diversify the types of crude processed at the refinery without being limited to the Russian Urals, which also has the effect of increasing its negotiation power vis-à-vis the supplier of Russian oil.

Gdańsk refinery vs competitors in the region



Source: In-house analysis; daily production capacity in thousands boe/d.

Key competitors in the region:

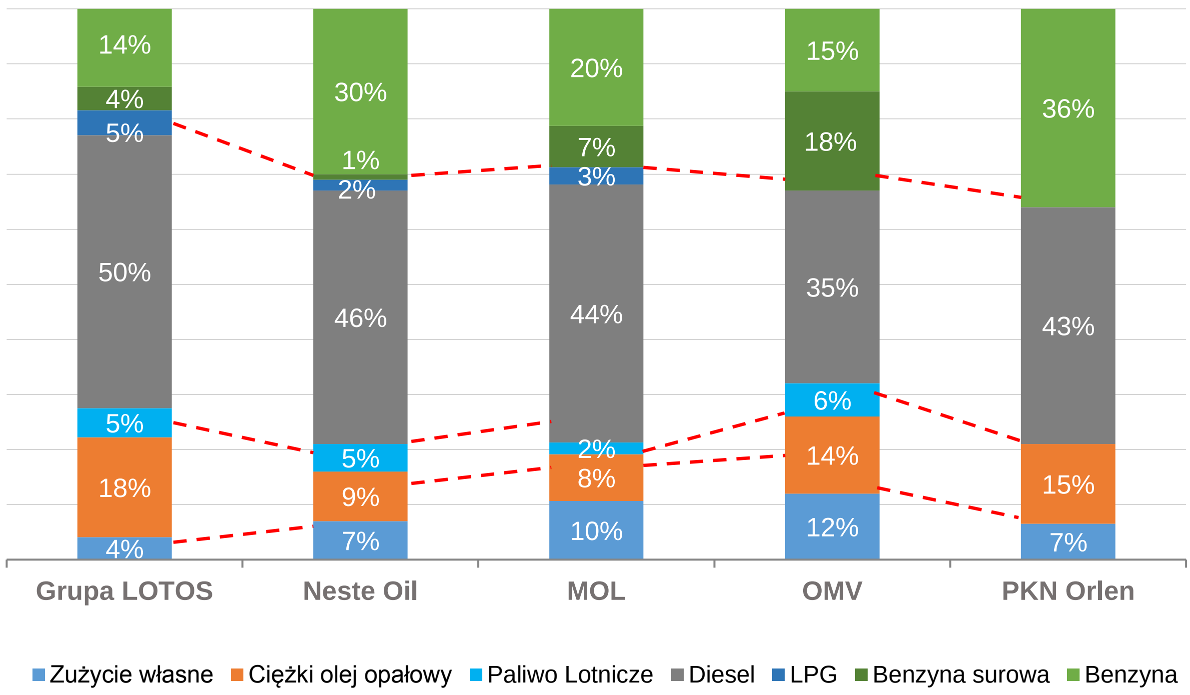
- Płock refinery (PKN ORLEN), Poland – processing capacity of approximately 16m tonnes,
- Schwedt refinery (PCK Raffinerie GmbH), Germany – approximately 12m tonnes,
- Leuna refinery (TOTAL Group), Germany – approximately 11m tonnes,
- Schwechat refinery (OMV), Austria – approximately 10m tonnes,
- Mažeikiai refinery (PKN ORLEN), Lithuania – approximately 10m tonnes,
- Bratislava refinery (Slovnaft, MOL Group), Slovakia – approximately 6m tonnes,
- UniPetrol refineries in Kralupy, Litvinov and Pardubice (PKN ORLEN), the Czech Republic – approximately 4m tonnes.

The level of **model refining margin** confirms the high efficiency of the Grupa LOTOS refinery's technological setup.

The model margin is calculated for a yield structure estimated in the averaged scenario (excluding annual seasonality) of the Grupa LOTOS refinery operation. Annual throughput has been assumed to correspond to the capacity utilisation of 95%, with Urals crude as the only feedstock − its value is determined as the sum of Brent Dated price and the Brent/Urals spread.

Further information on the model refining margin is available at: → http://inwestor.lotos.pl/1439/strefa_inwestora/modelowa_marza_rafineryjna

Yield structures of the refineries operated by local competitors of Grupa LOTOS



Source: In-house analysis based on company data.

Crude processing and product slate

In 2017, the LOTOS refinery processed 9.6m tonnes of crude oil, down 7% year on year because of the six-week maintenance shutdown 'Spring 2017'. As in previous years, Russian Urals was the main type of crude oil processed by the LOTOS Group. Its share in the total volume was close to 78.3%, slightly higher than in previous years.

Crude oil from other sources, including approximately 201 thousand tonnes of crude supplied by the LOTOS Petrobaltic Group, accounted for the balance of the crude feed. The mix of crudes resulted from the production optimisation process whose objective was to take advantage of opportunities for increasing the refinery's processing margin.

4.2.2. Key products, merchandise and services

The key groups of products obtained from crude oil processing at the refinery are:

- fuels (unleaded gasoline, diesel oil and light fuel oil)
- heavy fuel oil
- bitumens
- aviation fuel
- naphtha
- propane-butane (LPG)
- base oils

Fuels

Unleaded gasoline is used in spark-ignition engines. The Group's unleaded gasolines include premium gasoline – LOTOS DYNAMIC 98, containing antioxidants and washing additives which ensure better cleaning of the engine, lengthen its useful life, and economise fuel consumption. The fuel is marketed solely through LOTOS service stations.

Diesel oil is used in compression-ignition engines. This group of products includes premium diesel oil – LOTOS DYNAMIC DIESEL which, owing to the use of friction-reducing components, offers more power efficiency and guarantees engine start at temperatures as low as -32°C. The fuel is marketed solely through LOTOS service stations. Diesel oil has the largest share in sales on the Polish fuel wholesale market.

Light fuel oil is designed for use in heating equipment. With a low sulfur content and unique additives, the product has oxidation resistance and anti-corrosive properties, helps maintain clean nozzles, and reduces noxious combustion emissions.

Heavy fuel oil

Heavy fuel oil has three principal applications: as fuel for power generation, as bunker fuel, and as feedstock for further processing, including in coking units.

Bitumens

The key product in this group is road bitumen used in construction and maintenance of roads, airports, etc. Apart from the road construction industry, bitumens are also used in the manufacturing of construction materials with waterproofing properties (bitumen roofing papers, bitumen roof shingles, adhesives), with industrial bitumens being the most popular component.

Aviation fuel

Aviation fuel is designed for use in jet engines.

Naphtha

Naphtha is used as a raw material in the petrochemical industry and in production of motor gasolines. The entire output of naphtha is exported.

Propane-butane LPG

Propane-butane LPG may be used as a fuel for engines equipped with LPG systems, as a fuel for heating equipment (also marketed in gas tanks and bottles), and as a feedstock in petrochemical processes.

Base oils

The key products include Group I base oils, which are used as feedstock for production of lubricant oils, including motor and industrial oils.

The Group's primary motor oil product lines include:

- LOTOS Quazar – premium synthetic oils for passenger cars
- LOTOS Thermal Control – mineral, semi-synthetic and synthetic oils for passenger cars,
- LOTOS Turdus – mineral, semi-synthetic and synthetic oils for HGVs.

The lines of industrial oils are Hydromil, Transmil, and Remiz, which make up a full category of hydraulic, turbine and machine oils, as well as industrial lubricants.

Other major product lines

- **TDAE and RAE class plasticizers** marketed under the **QUANTILUS T50** and **QUANTILUS T60** brands, used by European and Asian tire and rubber manufacturers. These products meet the requirements of the EU REACH directive and have been approved by global tire manufacturers.
- **MODBIT modified bitumens** – state-of-the-art bitumens enhancing pavement resistance to rutting, and improving durability and resistance to extreme weather conditions.
- **Xylene fraction** is a product launched in 2012, obtained through reformate splitting. It is used as feedstock in plastics production. Xylene separation will further diversify the LOTOS Group's product portfolio

and reduce the share of aromatic hydrocarbons in the range of gasoline components produced by the Gdańsk refinery. This will contribute to greater technological flexibility of the refinery, allowing it to sell some of the components on the fuel or petrochemical markets.

4.2.3. Segment's logistics (rail and sea transport)

The LOTOS Group consistently adapts its logistics operations to the requirements of its trading operations and builds an efficient distribution system that meets expectations of its customers, but also helps reduce costs. The purpose of those measures is to build an optimum logistics chain that would function efficiently in the constantly changing external and internal environments.
In secondary logistics of fuels, Grupa LOTOS S.A. adopted a model of cooperation with transport companies that guarantees appropriate flexibility in customer service (e.g. in fuel supplies to hypermarket service stations) with fixed costs curbed to the minimum.

During the LOTOS refinery maintenance shutdown in 2017, fuel terminals used by Grupa LOTOS were supplied without any disruptions from external supply sources, including through intra-community supplies from EU countries.

Over the last year, a number of changes were introduced that significantly contributed to growth in fuel sales volumes, customer service quality and tightness of the distribution system. The entry into force of the Act on the Monitoring System for the Road Carriage of Goods (SENT) required the development and implementation of new functionalities in the LOTOS Group's IT systems in order to automate the process of sending notifications to the Ministry of Finance. The TAS systems in fuel depots, filling systems at the refinery and the electronic portal where B2B customers can place orders were adapted accordingly. A number of interfaces for communication with key customers and fuel depots (OLPP, TanQuid in Radzionków, Falco in Olsztyn, IMSO in Koszalin, Trios in Łętownia, and Pol-Oil in Modlin) were extended, which helped ensure the security of transactions for the LOTOS Group and its customers.

At the same time, in 2017 the LOTOS Group continued using a business intelligence tool for end-to-end analysis of fuel volume discrepancies arising in the process of fuel supply to service stations. The solution significantly enhanced the integrity of the fuel loss control system in the LOTOS Group's logistics chain.
The structure of emergency stocks was optimised to ensure that the cost of their holding was minimised while securing the LOTOS Group's needs as regards the requirement to maintain emergency stocks. Grupa LOTOS earned additional revenue from the provision of logistics services to third-party customers; the services included fuel stock rotation and ticketing (the latter consists in holding emergency stocks of fuels on behalf of customers in the form of oil for processing, held as emergency stocks by Grupa LOTOS).

The scope of the project to construct a marine cargo terminal on the Martwa Wisła river, in the immediate vicinity of the Gdańsk refinery, was reviewed on a regular basis to accommodate planned volumes and structure of Grupa LOTOS' expected output after completion of the EFRA Programme. Concurrently, the logistics services market was being monitored to identify any alternative solutions in low-tonnage sea cargo handling.

As part of the optimisation of operating expenses, the Group made changes to its rolling stock, resulting in numerous benefits in terms of rates and the number of rail tank cars used.

Rail transport

Rail transport of products from the Gdańsk refinery is a mainstay of the Group's production security. Comprehensive rail logistics services are provided to the entire Group by LOTOS Kolej, a rail operator.

In 2017, LOTOS Kolej provided the following railway services:

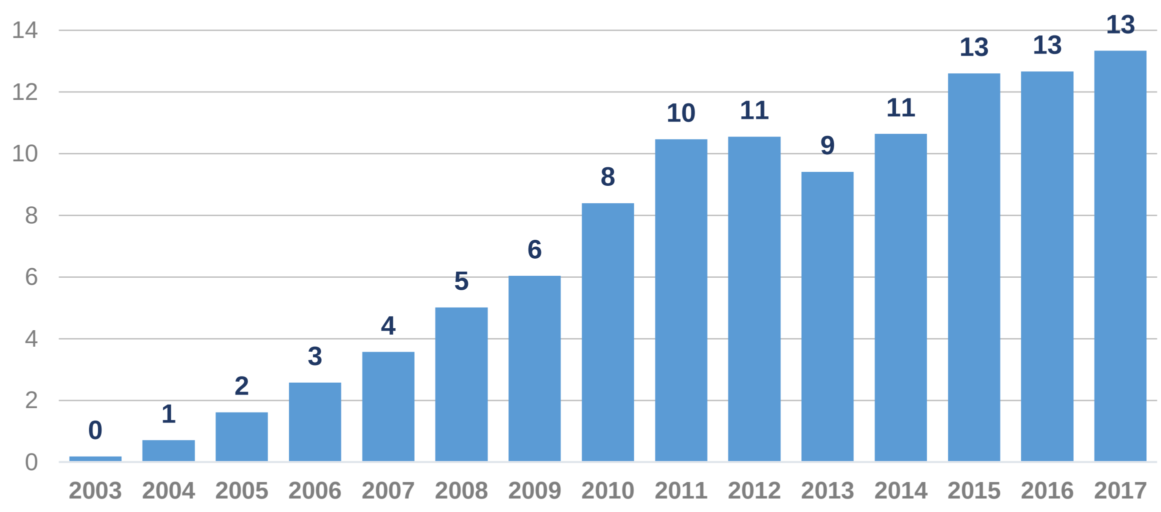
- Rail freight transport in Poland,
- Independent freight transport services in Germany,
- Traction services,
- Trainload and non-trainload services,
- Maintenance of rolling stock,
- Eco-friendly cleaning of rail tank cars,
- International rail freight and forwarding services,
- Siding services for the LOTOS Group.

In 2017, LOTOS Kolej transported 13.3m tonnes of cargo, 7.03m of which were hazardous materials. The company continues to develop its business relations with customers from outside the LOTOS Group in the area of both domestic and international transport.

In 2017, LOTOS Kolej continued its four-year contract with the Polish Armed Forces for transport of F-34 aviation fuel. The contract was awarded in tender procedure based on strictly defined criteria, including safety and quality of services.

LOTOS Kolej, a modern and dynamically growing company, has been providing freight transport services in Germany for over a year now. In 2017, using the services of own and German train drivers, it transported 1,339m tonnes of products and intends to continually increase this volume. By expanding operations in Germany, LOTOS Kolej has broadened its offering and provided fast and reliable transport services between Poland and Western Europe to its customers.

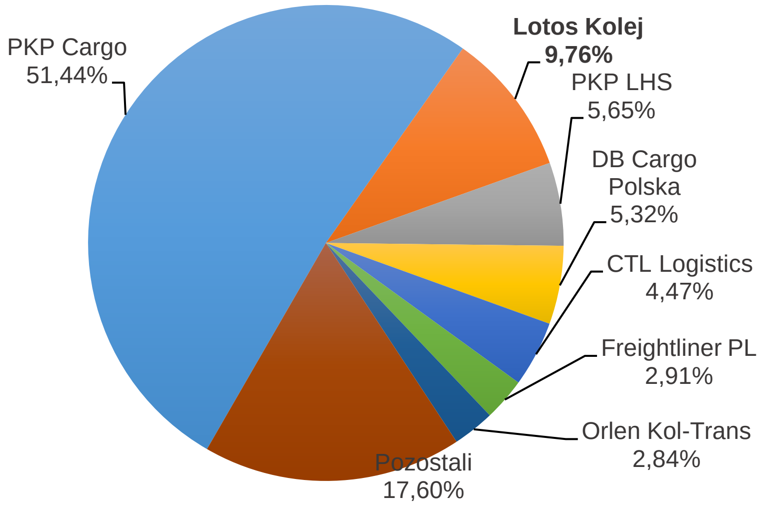
Rail transport services performed by LOTOS Kolej ['000 tonnes]



Source: The LOTOS Group's in-house analysis.

The share of LOTOS Kolej in the Polish rail freight market in terms of tonne-kilometers declined from 10.20% to 9.76% (based on the Office of Rail Transport data for the twelve months of 2017), and despite the 3.62% increase in tonne-kilometres (from 5,166m ntkm in 2016 to 5,353m ntkm in 2017) and the 5.26% increase in total tonnage (from 12,669 thousand tonnes in 2016 to 13,335 thousand tonnes in 2017), the Company maintained the second position among rail cargo carriers. A noteworthy fact is that 2017 was a record year in terms of the above values. Also, it should be mentioned that many new players have emerged on the market. The company has been the market leader in transport of dangerous goods for many years.

LOTOS Kolej's share in domestic rail cargo transport in 2017 (tonne-kilometres)



Source: The LOTOS Group's in-house analysis based on the Office of Rail Transport data, January 2018.

In 2017, LOTOS Kolej expanded transport of grains and fodder under the GMP+ B4 standard, which sets out specific procedures for transporting this type of cargo. Having obtained the certificate required by most exporters of grains and fodder to Western Europe, the Company transported these goods by own means, in specialist rail cars.

In 2017, under a contract with LOTOS Kolej, NEWAG upgraded another two SM42 locomotives to the 6Dg type, thus increasing its fleet of advanced locomotives. In the first half of 2016, LOTOS Kolej made a decision to sell all of its 417F tank cars. Some of the tank cars were sold in 2016, and the remaining ones were disposed of, under the sale agreement in force, in February 2017.

LOTOS Kolej has applied for co-financing for its investment project 'Purchase of modern intermodal rolling stock by LOTOS Kolej Sp. z o.o.' under the Operational Programme Infrastructure and Environment 2014–2020. Eligible costs of the project amount to about PLN 148m, and the requested co-financing is 50%. The complete competition documentation was submitted to the administrator of EU funds, the Centre for EU Transport Projects. Securing of the EU funding is a precondition for launching the project, which will involve the purchase of the following rolling stock:

- 2 electric locomotives,
- 216 flat wagons with a loading length of 80 ft,
- 108 flat wagons with a loading length of 60 ft,

The project is designed to increase LOTOS Kolej's share in the intermodal transport market. The purchased rolling stock is to be gradually put into operation between 2019 and 2022.

SEA TRANSPORT

Freight transport by sea is a vital element of the LOTOS Group logistics chain. The Company enjoys considerable cost advantages because of its direct access to product pipelines linking the Gdańsk refinery to the liquid fuel handling facilities at Port Północny. Maritime transport is Grupa LOTOS' main mode of exporting oil products and also accounts for a significant portion of feedstock deliveries and components used in production processes. Over 7m tonnes of crude oil, petroleum products, and fuel components were loaded and unloaded by Grupa LOTOS at sea ports in 2017; During the year, the Group received or dispatched 268 tankers, including 62 transporting crude oil.

The liquid fuel handling terminal owned by Naftoport can receive tankers with a maximum draught of 15 metres and the capacity of up to 150,000 tonnes of crude oil or petroleum products. This allows Grupa LOTOS to export surplus output and sell it mainly on the markets of Scandinavia, Northern and Western Europe and the Baltic states. Apart from the Naftoport fuel depot, Grupa LOTOS also uses the maritime bulk terminal in Gdynia and the Siarkopol terminal in Gdańsk to handle smaller cargoes.

The proximity of Grupa LOTOS' refinery to the oil handling terminal allows the Company to diversify sources of crude supply and facilitates receipt of oil shipments from the Company's fields in the Baltic Sea and Lithuania, the fields in the North Sea, and from other, more distant sources. In 2017, approximately 4.3m tonnes of crude oil were delivered to Grupa LOTOS by sea.

4.2.4. Logistics – procurement and supply

LOTOS Group's purchases of feedstock and petroleum merchandise and materials by region

	2017		2016	
	PLNm	**share (%)**	**PLNm**	**share (%)**
Domestic purchases	2,719.3	**15.6%**	2,301.0	**16.2%**
Foreign purchases	14,719.0	**84.4%**	11,940.1	**83.8%**
Total	**17,438.3**	**100.0%**	**14,241.1**	**100.0%**

Table 5. **Breakdown of LOTOS Group's purchases**

	2017		2016	
	PLNm	**share (%)**	**PLNm**	**share (%)**
Raw materials	16,635.3	**82.4%**	13,886.9	**83.1%**
Merchandise	1,326.2	**6.6%**	851.9	**5.1%**
Services	1,908.2	**9.5%**	1,759.6	**10.5%**
Materials	313.8	**1.6%**	218.4	**1.3%**
Total	**20,183.5**	**100.0%**	**16,716.8**	**100.0%**

Breakdown of LOTOS Group's purchases of petroleum merchandise

	2017		2016	
	PLNm	share (%)	PLNm	share (%)
Liquid gas	9.1	**1.0%**	0.9	**0.2%**
Gasolines	184.4	**20.5%**	73.2	**15.4%**
Diesel oils	302.1	**33.6%**	165.1	**34.8%**
Crude oil	404.1	**44.9%**	234.8	**49.5%**
Other	0.7	**0.1%**	0.6	**0.1%**
Total	900.4	**100.0%**	474.7	**100.0%**

Breakdown of LOTOS Group's purchases of feedstocks, semi-finished products, chemicals and petroleum materials

	2017		2016	
	PLNm	share (%)	PLNm	share (%)
Crude oil	13,137.3	**79.4%**	11,484.3	**83.4%**
Diesel oil	8.1	**0.0%**	6.7	**0.0%**
MTBE/ETBE gasoline components	117.8	**0.7%**	85.6	**0.6%**
FAME	1,056.8	**6.4%**	866.0	**6.3%**
Gasolines	50.3	**0.3%**	0.0	**0.0%**
Ethyl alcohol	163.7	**1.0%**	163.8	**1.2%**
Additives	90.9	**0.5%**	100.8	**0.7%**
Gasoil	0.0	**0.0%**	24.5	**0.2%**
Diesel oil components	930.6	**5.6%**	222.5	**1.6%**
Natural gas	518.2	**3.1%**	418.5	**3.1%**
Bitumens, bitumen components and additives	83.0	**0.5%**	36.0	**0.3%**
Feedstock for FAME production	371.5	**2.2%**	354.5	**2.6%**
Other	9.8	**0.0%**	3.2	**0.0%**
Total	**16,537.9**	**100.0%**	**13,766.4**	**100.0%**

LOTOS Group’s key suppliers

In 2017, the key suppliers to the LOTOS Group whose supplies accounted for more than 10% of the Group's total revenue were VITOL SA of Switzerland, Joint Stock Company Oil Company Rosneft of Russia, and Tatneft Europe AG of Switzerland, with shares of 19.85%, 19.15%, and 15.18%, respectively, in the LOTOS Group’s purchases.

In 2016, the key suppliers to the LOTOS Group whose supplies accounted for more than 10% of the Group's total revenue were VITOL SA of Switzerland, Joint Stock Company Oil Rosneft of Russia, and Tatneft Europe AG of Switzerland, with shares of 21.78% 19.60%, and 14.53%, respectively, in the LOTOS Group’s purchases.

To the best of the Company’s knowledge, as at the date of issue of this Directors' Report there were no formal links between Grupa LOTOS S.A. and any of the suppliers named above, except for trade contracts.

4.2.5. Summary of key threats and opportunities

The situation in the Downstream segment will be influenced by macroeconomic factors (including continued economic slowdown in China; further strengthening of the US dollar; economic growth rate in the eurozone, etc.) and geopolitical developments (Iraq-Iran tensions, the situation in North Africa, etc.).

Key threats also include the rising competition from Middle East refineries. It is expected that their key market in Europe will be the Mediterranean region, but this will nevertheless have an impact on the fuel supply-demand balance on the continent. Another possible threat is crack spreads (particularly on middle distillates like light fuel oil and diesel oil) falling and staying low.

Opportunities include strong retail demand for fuels. Rising consumption of gasoline by retail customers is likely to be supported by attractive retail prices (resulting from the low and stable feedstock prices expressed in US dollars and the depreciaton of the Polish złoty in relation to the American currency). The shutting down of small and obsolete refineries by European oil companies in an effort to optimise their assets also presents an opportunity for the Downstream segment.

4.3. Downstream – wholesale and retail sale

4.3.1. Competition for the marketing business

The Polish fuel market is supplied from two sources: domestic producers (PKN ORLEN S.A. and Grupa LOTOS S.A.) and importers (members of the Polish Organisation of Oil Industry and Trade (POPiHN), and independent operators). In 2017, fuel output increased by 2% on 2016, and total imports grew by 36% (including 200% increase in imports by POPiHN members, and other market participants's imports unchanged).

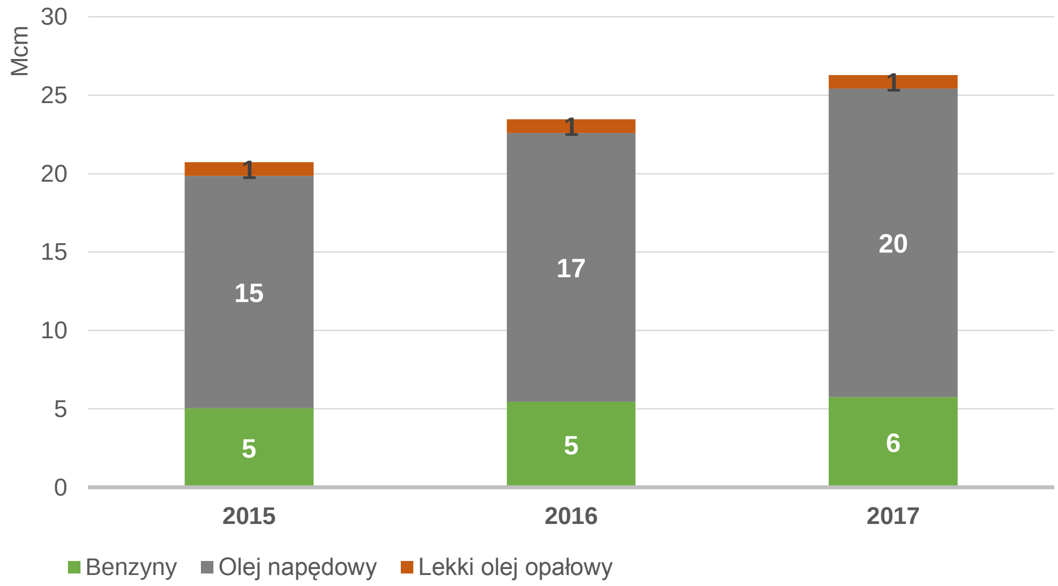
It should be noted that 2017 was the second consecutive year when the effects of the recently implemented fuel legislation package were seen on the market. After three years of decline in registered fuel consumption, caused by a rampant grey market, in 2017, the official consumption of fuels grew by 12% (2.82 mcm), to 26.3 mcm, with the domestic output at 20.5 mcm and imports at 7 mcm.

In 2017, the First Fuel Package of August 1st 2016 was supplemented with further regulations aimed at reducing fuel trading on the grey market in Poland. In 2017, the Transport Package was introduced. The new regulations provide for the obligation to notify the departure and delivery of a consignment (the obligation is both on the dispatching and receiving entity, and also on carriers). Also, the Uniform Control File (UCF) was introduced to monitor business transactions.

Another way to curb the grey market are changes that will be made in 2018 (as part of the amendment to the Polish Act on Biocomponents and Liquid Biofuels) and which will involve the introduction of mandatory blending of fuels. In accordance with the new regulations, the diesel oil traded in Poland will be blended with a biocomponent (in the current year, a dishonest trader can only market diesel oil in the B-0 form, i.e. not containing the biocomponent).

The fuel market legislation enacted to date and its effective enforcement significantly curtailed illegal diesel fuel imports to Poland and led to a significant increase in demand for the fuel from legal sources.

Fuel consumption in Poland



Source: In-house analysis based on Polish Organisation of Oil Industry and Trade (POPiHN) data.

4.3.1. Grey market for fuel in Poland

The greatest expansion of the grey market for fuel trading in Poland was seen in 2012–2014. In 2015–2016 (i.e. until the legislation packages limiting the grey market were introduced), the trend slowly reversed, but the estimated volume of fuel sold illegally still accounted for over a dozen percent of the market. The effects of the illegal trade were most severely felt on the diesel oil market.

Over the years between 2011 and 2013, official diesel oil consumption dropped by 2.3 mcm, while, given its strong correlation with GDP, it should have increased by around 1 mcm in that period. According to an econometric analysis performed in 2014, at the climax of the grey market activity, the volume of illegally traded diesel oil may have totalled about 3.4 mcm.

Introduction of the Fuel and Energy Packages brought a surge in registered demand for all fuels, including in particular diesel oil, the demand for which grew by 30% in August 2016 (the first month under new regulations). Within the 12 months from the entry into force of the new regulations, official demand for diesel oil expanded by 23% year on year.

This large growth in registered demand was attributable to a direct shift of fuel volumes from the grey zone to the official market.

The increased demand was satisfied with production from Polish refineries, which in 2012–2015 had been forced to export diesel oil, and also with intensified officially registered imports of diesel oil to Poland, mainly from Russia, Germany and Lithuania.

After a year from the introduction of the new regulations, i.e. from August 2017, diesel oil consumption growth returned to single-digit levels. In August 2017, the demand for diesel oil went up by 5.4% compared with the previous year, and in September by 4.1% year on year.

Currently, the grey market for fuels is estimated at 2-3% of the market, which is considered to be an acceptable level in a healthy, growing economy.

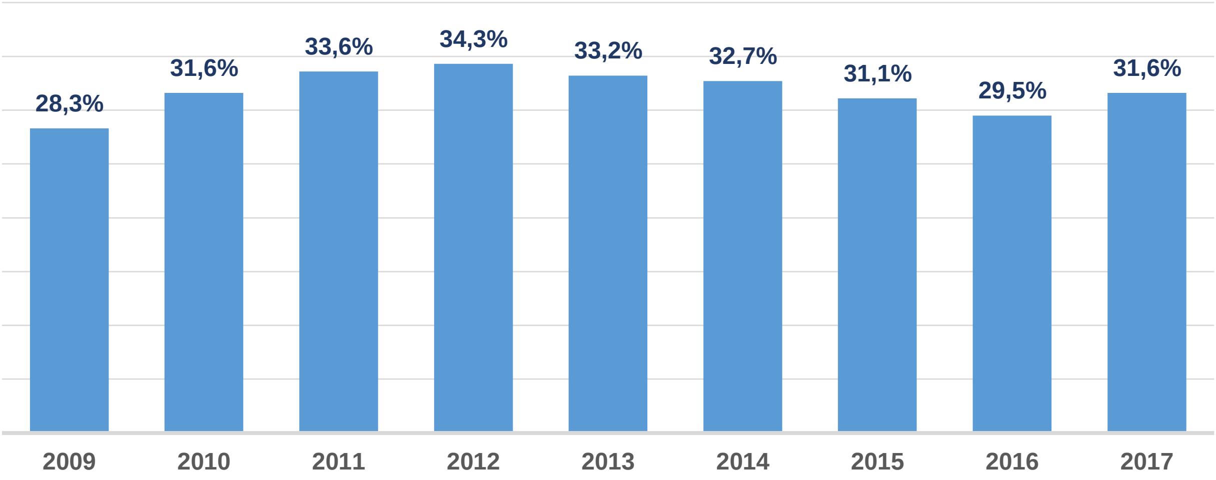
4.3.2. Distribution channels, products, markets

The LOTOS Group's marketing activities in 2017 were carried out by Grupa LOTOS and its subsidiaries: LOTOS Paliwa, LOTOS Oil, LOTOS Asfalt, and LOTOS-Air BP Polska. Grupa LOTOS marketed its products in Poland (sales to foreign companies operating in the country) and on foreign markets (exports by sea and by land), while its subsidiaries targeted their sales at individual sectors, i.e. fuels, lubricants, and bitumens.

The LOTOS Group offers fuels on the domestic retail market exclusively through LOTOS Paliwa. On the wholesale market, the LOTOS Group operates both through Grupa LOTOS (sales of fuels to international corporations and key customers, e.g. under contracts with the Material Reserves Agency and the Military Property Agency) and LOTOS Paliwa (transactions with wholesale customers and independent operators).

In 2017, the LOTOS Group’s share in the domestic fuel market was 31.6%.

LOTOS Group's share in the domestic fuel market



Source: In-house analysis based on Polish Organisation of Oil Industry and Trade (POPiHN) data.

The part of the LOTOS Group's output which is not distributed via its own retail chain is sold both on the domestic wholesale market and on foreign markets.

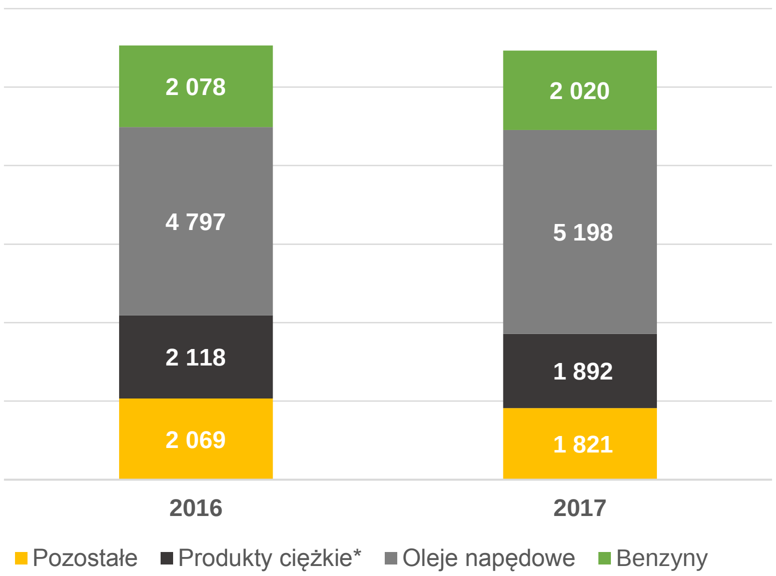
Downstream distribution channels

Retail	Wholesale	Exports
• LOTOS service station network	• international oil companies* • B2B customers** • national institutions***	• trading companies

* International oil companies present on the Polish market, including Statoil, Shell, BP, and Lukoil
** Independent operators with own service stations and presence on local wholesale markets
*** As part of nationwide tenders

The volume of products sold by the LOTOS Group in the Downstream segment in 2017 totalled 10,931 thousand tonnes. Despite the maintenance shutdown at the end of March and beginning of April 2017, the drop in sales was insignificant (1.3%) and resulted chiefly from the downsizing of export sales.

LOTOS Group’s sales by key product categories (‘000 tonnes)



*Heavy fuel oil and bitumen.

Detailed product categories are presented in the table below. Sales of oil and natural gas are presented separately (as part of the Upstream segment's output).

LOTOS Group’s sales by product categories (‘000 tonnes)

	2017		2016		change 2017/2016
	‘000 tonnes	share (%)	‘000 tonnes	share (%)	%
Gasolines	1,555	14.2%	1,557	14.1%	-0.1%
Naphtha	465	4.3%	521	4.7%	-10.8%
Reformate	6	0.1%	45	0.4%	-86.7%
Diesel oils	5,198	47.5%	4,797	43.4%	8.4%
Bunker fuel	62	0.6%	65	0.6%	-4.5%
Light fuel oil	279	2.6%	268	2.4%	4.1%
Heavy products*	1,892	17%	2,119	19%	-10.7%
JET A-1 fuel	445	4.1%	656	5.9%	-32.2%
Lubricants	60	0.5%	60	0.5%	0.0%

Base oils	174	1.6%	214	1.9%	-18.7%
LPG	235	2.1%	247	2.2%	-4.9%
Crude oil (commodity)	259	2.4%	195	1.8%	31.3%
Other	299	2.7%	318	2.9%	-5.9%
Downstream segment's total petroleum products, merchandise and	**10,931**	**100.0%**	**11,061**	**100.0%**	**-1.2%**
Natural gas (toe)	556	-	675	-	-17.7%
Crude oil (upstream)	124	-	151	-	-17.9%

*Source: In-house analysis. * Heavy fuel oil and bitumens.*

Like in the previous years, diesel oil had the largest share in the total sales volume. In 2017, the LOTOS Group sold 5,198 thousand tonnes of diesel oil, representing 47.5% of total sales (up 4pp on 2016). Driven by the growing market share and strong rise in diesel oil consumption in Poland, sales of this fuel went up 8.4% year on year.

The second largest item in the sales structure was gasolines, with a 14.2% share. The LOTOS Group reported gasoline sales volumes of 1,555 tonnes, on a par with the previous year's result.

The last product group accounting for more than 10% of the LOTOS Group's total sales volume was heavy products. The Group sold 1,892 thousand tonnes of this product in 2017, down 11% on 2016. The decrease was mainly due to a change in the application of heavy residue, which was redirected for the manufacture of higher value-added bitumens.

In 2017, the LOTOS Group's Downstream segment sold 8,370 thousand tonnes of products in Poland (2016: 7,026 thousand tonnes) and exported 2,561 thousand tonnes (2016: 4,036 thousand tonnes).

Detailed breakdown of domestic and export sales by product categories is presented in the table below. Sales of oil and natural gas are presented separately (as part of the Upstream segment's output).

LOTOS Group's domestic sales and exports by product categories ('000 tonnes)

		2017		2016		change 2017/2016
		'000 tonnes	share (%)	'000 tonnes	share (%)	%
Domestic sales:	Gasolines	1,360	12.4%	1,142	10.3%	19%
	Naphtha	8	0.1%	0	0%	100%
	Diesel oils	5,161	47.2	4,319	39.0%	19%
	Bunker fuel	62	0.6%	65	0.6%	-5%
	Light fuel oil	279	2.6%	268	2.4%	4%
	Heavy products*	561	5.1%	430	3.9%	30%
	JET A-1 fuel	206	1.9%	145	1.3%	42%
	Lubricants	33	0.3%	38	0.3%	-13%
	Base oils	11	0.1%	6	0.1%	83%
	LPG	235	2.1%	221	2.0%	6%
	Crude oil	259	2.4%	195	1.8%	33%
	Other	194	1.8%	196	1.8%	-1%
Total domestic sales		8,370	77%	7,026	64%	19%
Export sales:	Gasolines	195	1.8%	415	3.8%	-53%
	Naphtha	457	4.2%	521	4.7%	-12%

	Reformate	6	0.1%	45	0.4%	-87%
	Diesel oils	37	0.3%	477	4.3%	-92%
	Heavy products*	1,331	12.1%	1,688	15.3%	-21%
	JET A-1 fuel	239	2.2%	511	4.6%	-53%
	Lubricants	27	0.2%	22	0.2%	23%
	Base oils	163	1.5%	208	1.9%	-22%
	LPG	0	0%	26	0.2%	-100%
	Other	106	1.0%	123	1.1%	-14%
Total export sales		**2,561**	**23%**	**4,036**	**36%**	**-37%**
Total		**10,931**	**100.0%**	**11,061**	**100.0%**	**-1%**
Export sales (toe)	Natural gas (toe)	556	-	675	-	-18%
Export sales (tonnes)	Crude oil (upstream)	124	-	151	-	-18%

*Source: In-house analysis. * Heavy fuel oil and bitumens.*

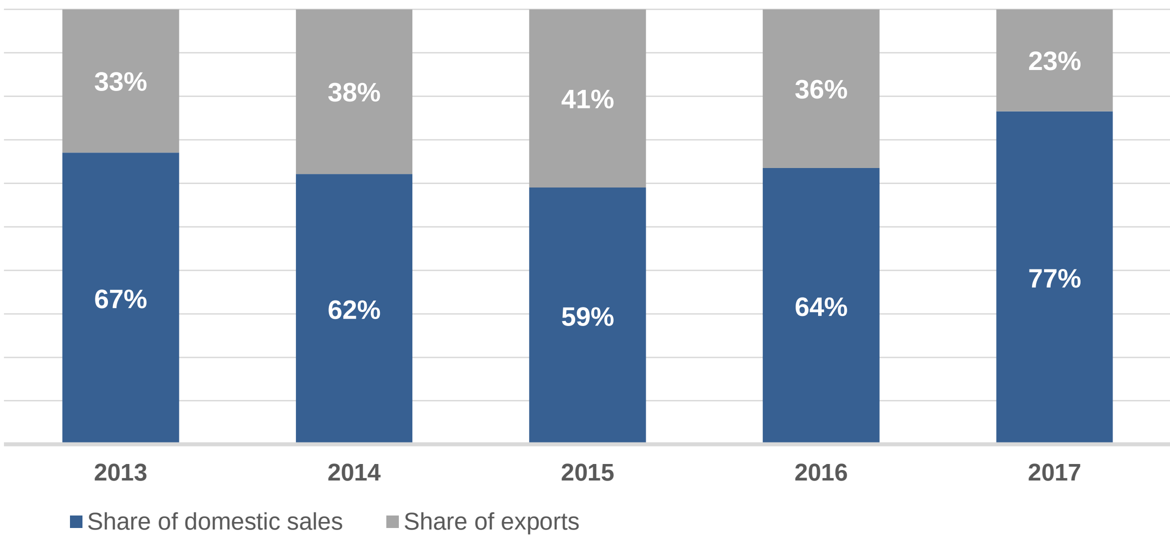
In 2017, domestic sales grew by 19%, driven chiefly by sales of motor fuels (diesel oils and gasolines), supported by effective sales efforts both in retail and wholesale channels on the growing motor fuel market. Despite the maintenance shutdown, the LOTOS Group was able to fully satisfy the growing demand on the Polish fuel market by abandoning less profitable sales of diesel oil delivered to customers by sea (which reduced export sales by 92%). Sales of diesel oils and gasolines increased by 19%.

A significant growth in domestic sales was also reported in the bitumens segment, supported by domestic demand resulting from the implementation of construction projects and lower supplies from Polish and neighbouring countries' refineries. At the same time, less profitable exports of heavy fuel oil were reduced.

2017 was also another year of growth in the domestic sales of aviation fuel, being an effect of increased presence of LOTOS-Air BP on Polish airports. In 2017, the company significantly expanded the scale of its operations in Poland and reported record volumes of fuel sold at each of the five airports where refuelling activities are carried out. Sales growth reported in 2017 was 42%.

Export sales were lower by 37% compared with 2016. This drop was mainly attributable to the maintenance shutdown at the end of March and at the beginning of April, and the redirection of significant volumes to the domestic channel, characterised by higher margins compared with exports.

Downstream segment's domestic sales and exports in 2013−2017 (by volume)



Source: In-house analysis.

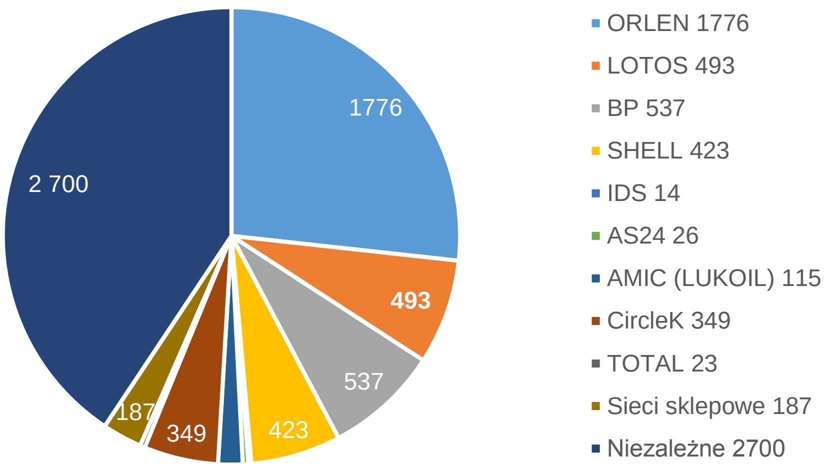
4.3.3. Overview of the retail business in Poland

According to the POPiHN, there were over 6.6 thousand service stations on the Polish fuel market at the end of December 2017. As in previous years, approximately one third of them belonged to Polish companies, 22.4% were owned by international corporations, while 40.6% were owned by independent operators. The chains owned by oil companies were developed by opening both company-owned dealer-operated (CODO) and dealer-owned franchised (DOFO) stations. In 2017, the number of service stations owned by the LOTOS Group did not change, and they remained the third largest service station network in Poland.

In 2017, the total number of service stations in Poland declined by around 160, mainly following a significant drop (down by 200) in the number of sites owned by independent operators. The number of PKN ORLEN's service stations operating under the Bliska economy brand also decreased, by 32 locations, some of which were rebranded as ORLEN stations. In total, the number of ORLEN service stations grew by 10. As for international corporations, the largest increase in the number of stations was reported by BP and TOTAL, up by 14 and 7, respectively. In the case of independent operators, the highest growth (up by 33) was recorded by Anwim stations operating under the Moya brand. In 2017, 15 stations owned by UNIMOT launched their operations under the AVIA brand. The number of service stations operated by retail chains also went up, by 4, with all of the newly opened sites owned by E. Leclerc.

At the end of 2017, there were 86 Motorway Service Areas (MSAs) in Poland, including 20 operated under the LOTOS brand.

Service stations in Poland at the end of 2017

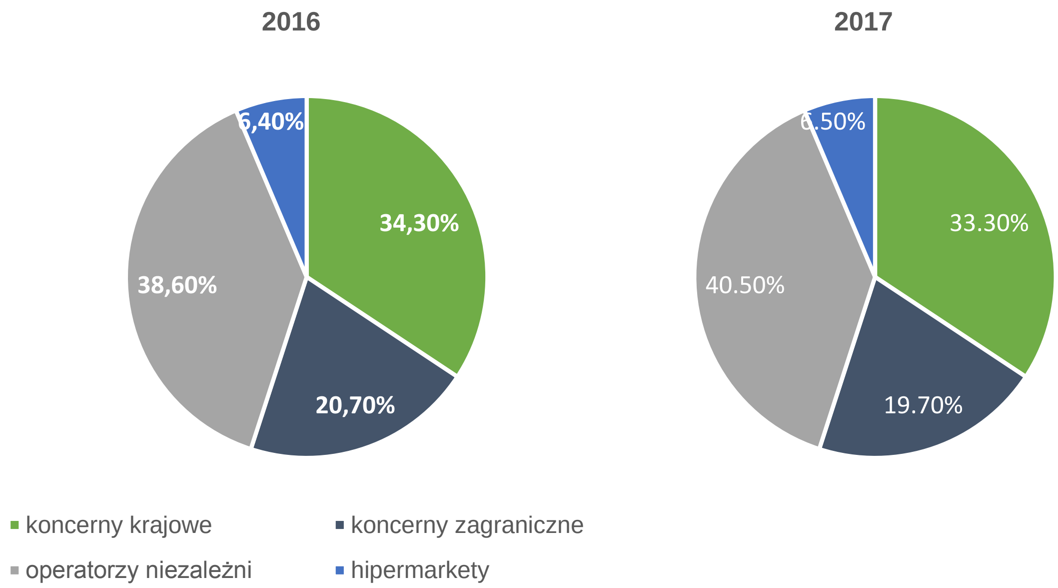


Source: Polish Organisation of Oil Industry and Trade (POPiHN)

Competition

In the four quarters of 2017, the share of domestic oil companies in the retail market fell due to the optimisation of its chain by PKN ORLEN (down from 34.3% in 2016 to 33.3% in 2017). The share of international companies was also down, by 1pp, to 20% in 2017. In contrast, independent operators increased their market share, by almost 2pp in total.

Breakdown of liquid fuel retail sales in 2016 and 2017



Source: Polish Organisation of Oil Industry and Trade (POPiHN)

4.3.4. LOTOS service station network and its competitive position

Grupa LOTOS sells fuels to retail customers through a chain of service stations organised into Economy (LOTOS Optima) and Premium (LOTOS) segments.

2017 saw further consistent implementation of Grupa LOTOS' strategy by LOTOS Paliwa, including in particular higher sales efficiency and continuous improvement of customer service quality.

The measures taken to improve sales efficiency led to an increase in the LOTOS service station chain's share in aggregate retail sales recorded by POPiHN, from 11.0% in 2016 to 11.2% in 2017, while expansion of the chain was maintained at a pace similar to that of the competition.

It should be noted that, compared with POPiHN, LOTOS reported higher growth per service station in terms of:

- Average daily fuel sales: +6.2% (LOTOS) vs +4.9% (POPiHN) (**LOTOS' growth was 26% higher than the average for other petroleum companies**),
- Average monthly store sales: +8.5% (LOTOS) vs + 5.3% (POPiHN) (**LOTOS' growth was 60% higher than the average for other petroleum companies**).

In 2017, the Premium service station network was further standardised, and new locations were added – both CODO stations and DOFO stations, the latter under new franchise agreements.

The Company opened 14 new stations in 2017, including 14 CODO stations and 5 DOFO stations. The network expansion was based on a plan focusing on key locations which offer the highest potential of winning and retaining fleet customers. The need to eliminate gaps identified in the geographic coverage of the LOTOS service station network was also a priority.

To enhance its position in the strategic segment of service stations located on motorways and expressways, in 2017 the Company participated in contract award procedures organised by the General Directorate for National Roads and Motorways (GDDKiA) to select licencees for MSAs built at new sections of motorways and expressways.

In the contract award procedures for the sites listed below LOTOS Paliwa's bids were selected as the best and the company was awarded contracts for the lease of:

1. Mała Holandia MSA on the S7 expressway,
2. Pawliki Zachód MSA on the S7 expressway,
3. Kochlice Wschód MSA on the S3 expressway,
4. Kochlice Zachód MSA on the S3 expressway,
5. Kierzno Północ MSA on the S8 expressway,
6. Kierzno Południe MSA on the S8 expressway.

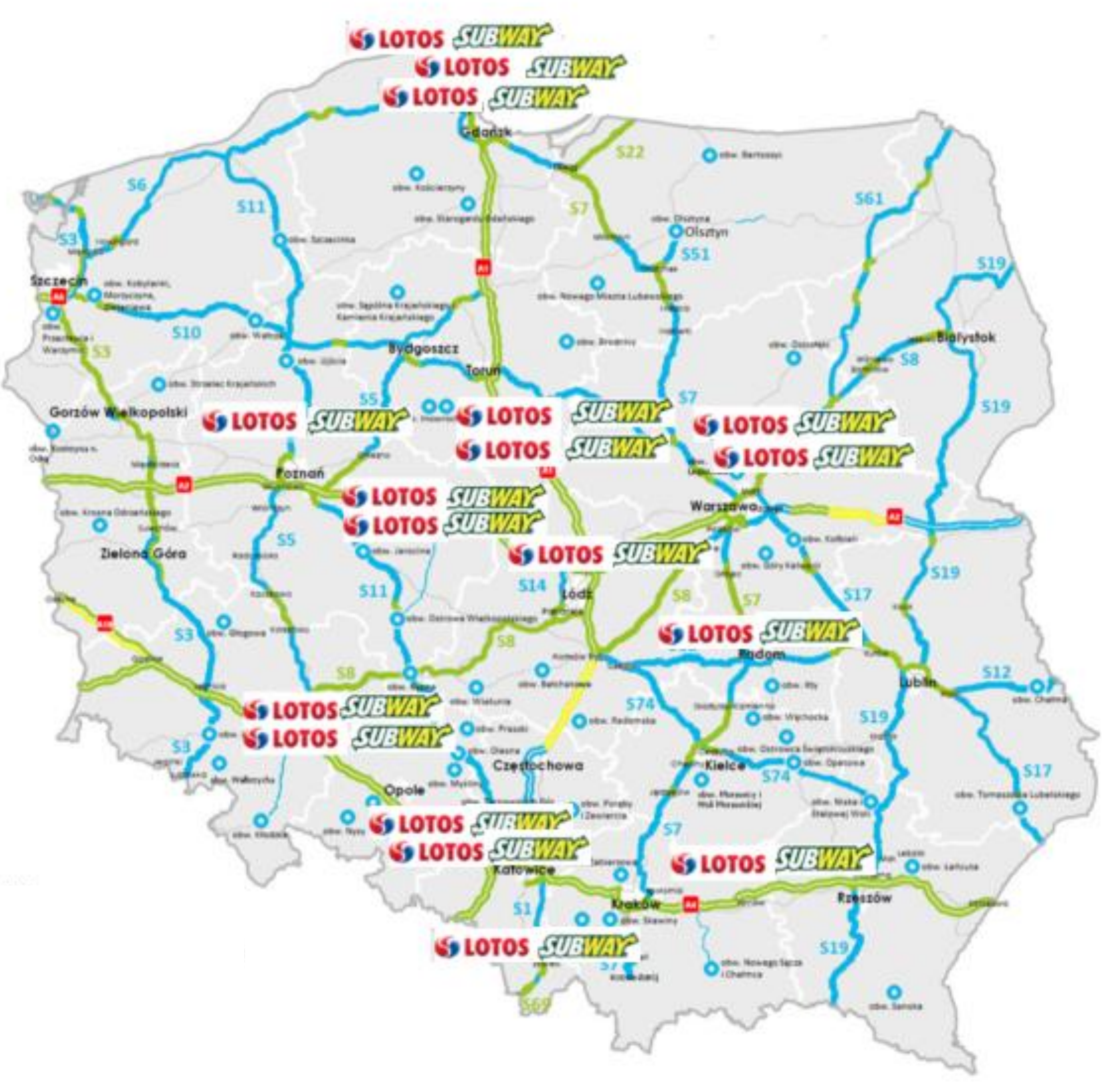
In 2017, the Company focused on improving the efficiency of retail sales, with particular emphasis on enhancing customer service quality at LOTOS service stations. To this end, it launched a comprehensive training programme dedicated to all service station managers. The programme covered not only customer service standards, but also staff recruitment as well as team management and employee motivation. In addition, the Company introduced a new bonus system for station managers, closely tied to their performance. At the busiest service stations, pilot tests were run of quick customer service points that allow customers to pay for the fuel directly at the pump, which enhanced efficiency and standard of customer service and improved the image of the service station chain. All described above

As part of the standardisation of services within the LOTOS chain, Cafe Punkt cafeterias were opened at 10 more DOFO stations, and are now available to motorists at almost 80 DOFO stations. Additionally, four DOFO stations were upgraded and standardised.

In 2017, sales of non-fuel products and services went up by 14% year on year. At the same time, cost optimisation measures pushed up the margin by as much as 23%. In addition, a range of systemic changes were made, such as: introduction of product category management, active price management, and optimisation of procurement.

One of the key image-building efforts in 2017 was continued development of cooperation with an external partner as part of a corporate franchise arrangement. Last year, Subway restaurants were opened at seven service stations. As at December 31st 2016, a total of 18 Subway restaurants operated at LOTOS service stations.

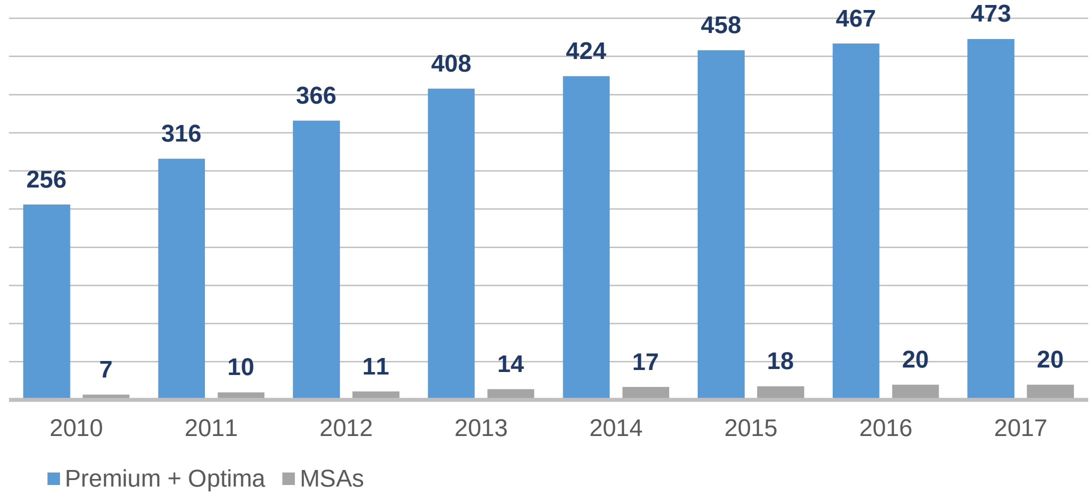
Map of the LOTOS service station chain



Source: In-house analysis.

As at December 31st 2017, 493 service stations operated under the LOTOS and LOTOS Optima brands.

LOTOS service stations



Source: In-house analysis.

2017 saw new initiatives and continuation of earlier projects aimed at enhancing customer service quality, improving operational efficiency, and developing the offering of the LOTOS service stations. The most important of them include:

- Customer satisfaction surveys carried out to check compliance with customer service standards (including active sales) at the service stations (using the Net Promoter Score methodology),
- Launch of a pilot programme to test quick customer service points (enabling customers to pay for the fuel directly at the pump – streamlining and enhancing efficiency of customer service, improving the service quality and the image of the service station chain, increasing stations' ability to serve more motorists during periods of increased customer traffic by shortening queues at the pumps),
- Launch of the PetroRetail application, a new cash desk system (improvement of sales management and broadly understood warehouse operations),
- Stepping up acquisition activities to grow fleet sales,
- Continued cooperation with an external partner as part of a corporate franchise arrangement – Subway restaurants opened at ten new service stations,
- Further development of the food and beverage services offered by CafePunkt cafeterias,
- Organising trainings for station managers and internal coaches.

Successful optimisation efforts improved the financial performance of the LOTOS retail network. Operating profit before depreciation and amortisation excluding non-cash impairment losses (adjusted EBITDA) was PLN 154m in 2017.

Directors' Report
on the operations of Grupa LOTOS S.A. and
the LOTOS Group
for 2017

Financial condition of Grupa LOTOS S.A. and its Group

5. Financial condition of Grupa LOTOS S.A. and its Group

5.1. Discussion of key financial and economic data and assessment of material factors and non-recurring events

5.1.1. Macroeconomic environment

The LOTOS Group's financial performance is to a large extent dependent on external conditions. The key parameters driving the profitability of individual reportable segments are the variables presented in the tables below. Rising Brent crude and UK NBP natural gas prices have a positive effect on the Upstream segment's profitability. On the other hand, growth of the model refining margin (reflecting growing margins for individual products) improves the profitability of the Downstream segment. The effect of the above factors on the consolidated operating results may be changed by movements in the USD/PLN exchange rate as appreciation of the US dollar improves, and its depreciation hurts, the LOTOS Group's operating results.

Annualised macroeconomic data

USD/bbl[9]	2017	2016	2015	2017 / 2016
DATED Brent FOB prices	**54.15**	43.58	52.28	**24.3%**
Brent/Urals spread	**1.40**	2.45	1.83	**-42.9%**
UK NBP natural gas prices	**32.20**	25.84	36.26	**24.6%**
Model refining margin [10]	**7.54**	6.93	7.77	**8.8%**

Margin USD/t	2017	2016	2015	2017 / 2016
Gasoline	**145.93**	137.06	173.64	**6.5%**
Naphtha	**72.18**	54.44	64.33	**32.6%**
Diesel oil (10 ppm)	**87.23**	72.73	113.36	**19.9%**
Light fuel oil	**76.70**	64.72	94.60	**18.5%**
Aviation fuel	**113.02**	92.58	127.73	**22.1%**
Heavy fuel oil	**-111.56**	-123.51	-141.16	**9.7%**

Currency (USD/PLN)[11]	2017	2016	2015	2017 / 2016
PLN/USD exchange rate at year end	**3.48**	4.18	3.90	**-16.7%**
Average PLN/USD exchange rate	**3.78**	3.94	3.77	**-4.1%**

5.1.2. Consolidated statement of comprehensive income

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[9]Source: Thomson Reuters.

[10]*Source*: Grupa LOTOS S.A., based on the methodology presented in→ Current Report No. 26/2016.

[11]*Source*: National Bank of Poland.

In 2017, the LOTOS Group posted PLN 24,185.6m in revenue (up 15.5% on 2016), mainly on the back of higher prices of crude oil and petroleum products on global markets. Average net revenue per tonne/(toe) of products sold in 2017 was PLN 2,083 (up PLN 322/t (toe), or 18.3%, on 2016).

The total volume of petroleum products, merchandise and materials sold in 2017 by the LOTOS Group decreased by approximately 2.3% on 2016. The highest decline was reported for aviation fuel and heavy products in the Downstream segment and for natural gas in the Upstream segment.

Key financial results of the LOTOS Group (PLNm)

	2017	2016	2015	2017-2016	2017/2016
Revenue	**24,185.6**	20,931.1	22,709.4	3,254.5	15.5%
Cost of sales	**-20,194.1**	-17,215.7	-20,249.0	-2,978.4	17.3%
Gross profit	**3,991.5**	**3,715.4**	**2,460.4**	**276.1**	**7.3%**
Distribution costs	**-1,252.3**	-1,291.1	-1,284.9	38.8	-3.0%
Administrative expenses	**-450.0**	-425.9	-459.1	-24.1	5.7%
Other income	**60.3**	107.1	48.3	-46.8	-43.7%
Other expenses	**-121.0**	-250.8	-341.3	129.8	-51.8%
Operating profit/(loss)	**2,228.5**	**1,854.7**	**423.4**	**373.8**	**20.2%**
LIFO-BASED EBIT	**2,057.6**	**1,931.8**	**702.1**	**125.8**	**6.5%**

In 2017, cost of sales of the LOTOS Group stood at PLN 20,194.1m (up 17.3% on 2016). In the same period, the estimated unit cost of sales was PLN 1,739/t (up PLN 291/t or 20.1% on 2016). The unit sales margin in 2017 came in at PLN 344/t (up 9.9% on 2016). The LOTOS Group's consolidated gross profit for 2017 was PLN 3,991.5m (up PLN 276.1m, or 7.3% on 2016).
Distribution costs in 2017 decreased by PLN 38.8m (down 3.0% relative to 2016), driven chiefly by lower average USD/PLN exchange rate, lower sales volumes, and lower foreign sales.
Administrative expenses increased by PL,N 24.1m (up 5.7% on 2016) mainly on higher employee benefits expense.

In 2017, the Group reported net other expenses of PLN -60.7m, including chiefly:

- PLN -32.9m impairment losses on production assets related to the Vezaiciai and Girkaliai fields in Lithuania,
- PLN -23.7m write-off of expenditure related to the Kamień Pomorski area,
- PLN -8.4m inventory write-down on pipe segments at LOTOS Petrobaltic,
- PLN -28.8m impairment losses on service stations and (disputed) fines.
- Revaluation of estimated provision for Heimdal offshore oil and gas production facilities in the North Sea of approximately PLN 13.1m,
- Revaluation of the provision relating to the B3 field of PLN 3.1m,
- Received grants (mainly licenses received free of charge) of PLN 16.8m.

The Group's operating profit for 2017, of PLN 2,228.5m, includes:

- PLN 1,730.7m operating profit in the Downstream segment,
- PLN 507.2m operating profit in the Upstream segment.

The 2017 increase in operating profit was driven mainly by higher average annual prices of crude oil and natural gas, higher margins on petroleum products, and the uptrend in crude oil and petroleum product prices in the second half of 2017.

LOTOS Group's revenue by product category (PLNm)

	2017		2016	
	PLNm	**share (%)**	**PLNm**	**share (%)**
Gasolines	3,682.2	15.2%	3,257.8	15.6%
Naphtha	859.6	3.6%	803.9	3.8%
Reformate	15.7	0.1%	78.8	0.4%
Diesel oils	11,864.5	49.1%	9,776.7	46.7%
Bunker fuel	121.3	0.5%	111.3	0.5%
Light fuel oil	646.9	2.7%	530.8	2.5%
Heavy products	2,314.8	9.6%	1,834.0	8.8%
Aviation fuel	913.1	3.8%	1,151.4	5.5%
Lubricants	297.3	1.2%	276.9	1.3%
Base oils	488.6	2.0%	502.1	2.4%
LPG	496.1	2.0%	428.0	2.0%
Crude oil for resale	432.6	1.8%	247.1	1.2%
Crude oil, final product	252.2	1.0%	270.4	1.3%
Natural gas	574.7	2.4%	529.4	2.5%
Other refinery products, merchandise and materials	424.8	1.7%	403.4	1.9%
Other products, merchandise and materials	463.2	1.9%	401.8	2.0%
Services	488.5	2.0%	439.0	2.1%
Effect of cash flow hedge accounting	-150.5	-0.6%	-111.7	-0.5%
Total	**24,185.6**	**100.0%**	**20,931.1**	**100.0%**

LOTOS Group's net revenue by market

	2017		2016	
	PLNm	**share (%)**	**PLNm**	**share (%)**
Domestic sales:	19,090.5	79.0%	14,540.1	69.5%
- products and services	17,716.3	73.3%	13,692.3	65.4%
- merchandise and materials	1,374.2	5.7%	847.8	4.1%
Export sales:	5,095.1	21.0%	6,391.0	30.5%
- products and services	4,854.3	20.1%	6,158.5	29.4%
- merchandise and materials	240.8	0.9%	232.5	1.1%
Total	**24,185.6**	**100.0%**	**20,931.1**	**100.0%**

LOTOS Group's key customers

In 2016 and 2017, none of the LOTOS Group's customers accounted for more than 10% of total revenue.

Operating segments

Upstream segment's key financial data (PLNm)

	2017	2016	2015	2017-2016	2017/2016
Revenue	**1,358.7**	1,228.5	711.1	130.2	**10.6%**
Operating profit/(loss)	**507.2**	**17.8**	**-59.4**	**489.4**	**2,749.4%**
Depreciation and amortisation	**307.4**	582.0	249.9	-274.6	**-47.2%**
EBITDA	**814.6**	**599.8**	**190.5**	**214.8**	**35.8%**

The higher revenues (up PLN 130.2m on 2016) and higher operating profit (up PLN 489.4m) reported by the Upstream segment in 2017 were primarily driven by growing prices of Brent Dated crude (up 24.3%) and natural gas (up 24.6%) on global markets.

Weighing down on the Upstream segment's operating profit in 2017 were non-recurring items of approximately PLN 50m (listed above in the discussion of net other expenses).

The decrease in the segment's depreciation and amortisation charges follows from a change in the units-of-production method estimates for the assets of offshore oil and gas extraction facilities in Norway following, among other things, from an increase in the Sleipner and Heimdal recoverable reserves at LOTOS Norge, and decrease in hydrocarbon production.

Downstream segment's key financial data (PLNm)

	2017	2016	2015	2017-2016	2017/2016
Revenue	**23,326.4**	20,120.7	22,372.6	3,205.7	**15.9%**
Operating profit/(loss)	**1,730.7**	**1,834.7**	**450.7**	**-104.0**	**-5.7%**
Depreciation	**537.9**	487.4	466.2	50.5	**10.4%**
EBITDA	**2,268.6**	**2,322.1**	**916.9**	**-53.5**	**-2.3%**

The higher revenue posted by the Downstream segment in 2017 relative to 2016 was mainly due to a 17.3% rise in average selling prices, caused by higher prices of petroleum products on global markets, offset by lower USD/PLN exchange rate.
Operating profit reported by the Group in the Downstream segment was PLN 1,730.7m, and its 5.7% decline was partly due to the 'Spring 2017' maintenance shutdown.

In 2017, Downstream segment's depreciation and amortisation charges rose, mainly on depreciation of the spare parts used for the 'Spring 2017' maintenance shutdown project at Grupa LOTOS S.A. (accounted for in accordance with IFRS 16).

Net profit/(loss)

Net profit/(loss) of the LOTOS Group (PLNm)

	2017	2016	2015	2017-2016	2017/2016
Operating profit/(loss)	**2,228.5**	**1,854.7**	**423.4**	**373.8**	**20.2%**
Finance income	**450.0**	26.6	100.6	423.4	**1,591.7%**
Finance costs	**-234.0**	-304.8	-688.2	70.8	**-23.2%**
Share in net profit/(loss) of equity-accounted joint ventures	**3.2**	2.9	-31.1	0.3	**10.3%**
Pre-tax profit/(loss)	**2,447.7**	**1,579.4**	**-195.3**	**868.3**	**55.0%**
Income tax	**-775.9**	-564.2	-68.0	-211.7	**37.5%**
Net profit/(loss)	**1,671.8**	**1,015.2**	**-263.3**	**656.6**	**64.7%**

In 2017, the Group posted a profit on financing activities of PLN 216.0m, chiefly as a result of:

- Net gain on measurement and settlement of market risk hedging derivative instruments of PLN 314.1m (2016: PLN -33.5m),
- Foreign exchange gains of PLN 107.9m (2016: PLN 7.8m),
- Negative net balance of interest on debt, interest income and commission fees of PLN -201.0m (2016: PLN -245.0m).

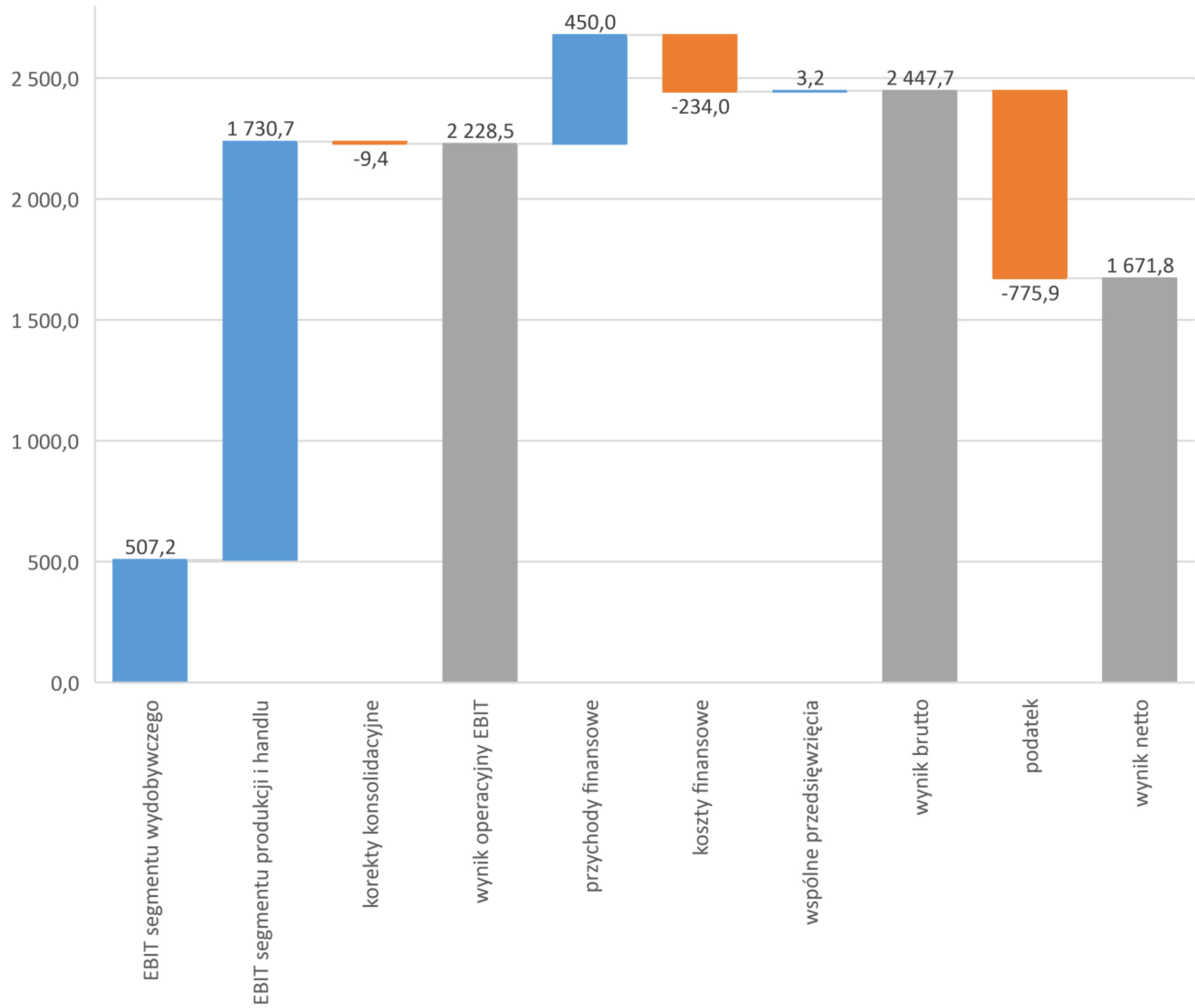
Grupa LOTOS applied cash flow hedge accounting with respect to foreign-currency loans contracted to finance the 10+ Programme, designated as hedges of future USD-denominated petroleum product sales transactions. In the period January 1st−December 31st 2017, foreign exchange gains of PLN 725.4m were charged to cash-flow hedging reserve.

In 2017, the Group's net gain on measurement and settlement of market risk hedging transactions was PLN 314.1m and included:

- Net gain on settlement and measurement of transactions hedging petroleum product prices, including options, of PLN 15.3m,
- Net gain on settlement and measurement of derivative instruments hedging the foreign exchange risk of PLN 289.5m,
- Net gain on settlement and measurement of interest rate hedging IRS transactions of PLN 6.6m,
- Net gain on settlement of futures hedging the risk of changes in prices of carbon dioxide emission allowances of PLN 2.7m.

In 2017, the LOTOS Group posted net profit of PLN 1,671.8m (up 64.7% on 2016).

Items contributing to the LOTOS Group's consolidated financial result (PLNm)



5.1.3. Consolidated statement of financial position

Financial position – assets (PLNm)

	Dec 31 2017	Dec 31 2016	Dec 31 2015	change in 2017	%
Assets	**21,171.2**	**19,326.3**	**19,169.3**	**1,844.9**	**9.5%**
Non-current assets	**12,462.1**	**12,330.7**	**12,437.7**	**131.4**	**1.1%**
Property, plant and equipment of the downstream segment	**8,761.5**	8,261.7	7,845.0	499.8	**6.0%**
Intangible assets of the Downstream segment	**163.2**	170.0	174.7	-6.8	**-4.0%**
Property, plant and equipment of the upstream segment	**2,404.2**	2,390.0	2,723.4	14.2	**0.6%**
Intangible assets of the upstream segment	**304.8**	481.8	489.7	-177.0	**-36.7%**
Equity-accounted joint ventures	**106.5**	98.1	70.7	8.4	**8.6%**
Deferred tax assets	**415.4**	596.0	924.5	-180.6	**-30.3%**
Derivative financial instruments	**2.7**	20.9	8.7	-18.2	**-87.1%**
Other non-current assets	**303.8**	312.2	201.0	-8.4	**-2.7%**
Current assets	**8,709.1**	**6,995.1**	**6,723.2**	**1,714.0**	**24.5%**
Inventories	**3,559.6**	3,333.6	3,235.8	226.0	6.8%
Trade receivables	**2,677.0**	2,251.7	1,550.9	425.3	18.9%
Current tax assets	**1.3**	8.0	12.0	-6.7	-83.8%
Derivative financial instruments	**161.8**	80.0	208.5	81.8	102.3%
Other current assets	**388.7**	577.2	856.3	**-188.5**	**-32.7%**
Cash and cash equivalents	**1,920.7**	744.6	859.7	**1,176.1**	**158.0%**
Assets held for sale	**0.0**	**0.5**	**8.4**	**-0.5**	**-100.0%**

As at December 31st 2017, the LOTOS Group carried total assets of PLN 21,171.2m (up PLN 1,844.9m on December 31st 2016).

<u>The most significant changes in assets included:</u>

- PLN 1,176.1m increase in cash and cash equivalents,
- PLN 425.3m increase in trade receivables, attributable mainly to higher product prices as at the end of 2017 vs 2016,
- PLN 499.8m increase in the Downstream segment's property, plant and equipment due to completion of investment projects (mainly at LOTOS Asfalt Sp. z o.o. – the EFRA project),
- PLN 226.0m increase in inventories on higher prices of product and crude stocks held as at the end of 2017 compared with the stocks held as at the end of 2016,
- PLN 180.6m decrease in deferred tax assets,

- PLN 177.0m decrease in Upstream segment's intangible assets,
- PLN 196.9m decrease in other assets (mainly bank deposits).

Financial position – equity and liabilities (PLNm)

	Dec 31 2017	Dec 31 2016	Dec 31 2015	change in 2017	%
Equity and liabilities	**21,171.2**	**19,326.3**	**19,169.3**	**1,844.9**	**9.5%**
Equity	**10,712.5**	**8,610.9**	**7,712.2**	**2,101.6**	**24.4%**
Share capital	**184.9**	184.9	184.9	0.0	0.0%
Share premium	**2,228.3**	2,228.3	2,228.3	0.0	0.0%
Cash flow hedging reserve	**-225.2**	-812.8	-700.9	587.6	-72.3%
Retained earnings	**8,432.2**	6,945.4	5,928.5	1,486.8	21.4%
Translation reserve	**92.2**	65.0	71.3	27.2	41.8%
Non-controlling interests	**0.1**	0.1	0.1	0.0	0.0%
Non-current liabilities	**4,264.4**	**5,443.7**	**6,031.2**	**-1,179.3**	**-21.7%**
Borrowings, other debt instruments and finance lease liabilities	**2,738.3**	3,980.5	4,454.5	-1,242.2	-31.2%
Derivative financial instruments	**6.7**	36.3	54.3	-29.6	-81.5%
Deferred tax liabilities	**277.7**	57.4	47.6	220.3	383.8%
Employee benefit obligations	**169.3**	168.5	182.2	0.8	0.5%
Other liabilities and provisions	**1,072.4**	1,201.0	1,292.6	-128.6	-10.7%
Current liabilities	**6,194.3**	**5,271.7**	**5,425.9**	**922.6**	**17.5%**
Borrowings, other debt instruments and finance lease liabilities	**1,687.6**	1,576.7	2,544.8	110.9	7.0%
Derivative financial instruments	**72.7**	172.9	110.8	-100.2	-58.0%
Trade payables	**2,201.7**	1,718.2	1,232.5	483.5	28.1%
Current tax payables	**210.0**	49.2	11.8	160.8	326.8%
Employee benefit obligations	**145.3**	135.6	122.2	9.7	7.2%
Other liabilities and provisions	**1,877.0**	1,619.1	1,403.8	257.9	15.9%

Increase in the LOTOS Group's equity as at the end of 2017 to PLN 10,712.5m (up PLN 2,101.6m on 2016) was driven primarily by higher retained earnings (up PLN 1,486.8m), increased by foreign exchange gains on valuation of cash flow hedges recognised in capital reserves, adjusted by the tax effect of PLN 587.6m.

The share of equity in total equity and liabilities increased by 6.0pp year on year, to 50.6%.

Key changes in liabilities (PLN -256.7m):

- PLN 1,131.3m decrease in borrowings, other debt instruments and finance lease liabilities, mainly on account of partial repayment of foreign currency loans and the valuation of foreign currency loans at a lower exchange rate (down 16.7%) at the end of 2017,
- PLN 483.5m increase in trade payables, primarily on higher volumes and prices of crude oil purchased in November and December 2017 compared with the prices paid for crude in the corresponding period in 2016,
- PLN 220.3m increase in deferred tax liabilities,
- PLN 129.8 decrease in negative fair value of derivative instruments,
- PLN 129.3m increase in other provisions and liabilities, mainly liabilities to the state budget on higher VAT, excise tax, and fuel charge,
- PLN 160.8m increase in income tax liabilities.

As at December 31st 2017, the LOTOS Group's financial debt totalled PLN 4,425.9m, down PLN 1,131.3m on December 31st 2016. The ratio of financial debt adjusted for free cash to equity was 23.4% (down 32.5pp on December 31st 2016).

5.1.4. Consolidated statement of cash flows

Cash flows (PLNm)

Cash flows	2017	2016	Change
Cash flows from operating activities	**3,126.5**	2,653.9	472.6
Cash flows from investing activities	**-1,448.7**	-1,003.2	-445.5
Cash flows from financing activities	**-482.7**	-1,201.4	718.7
Change in net cash	**1,189.8**	452.7	737.1
Cash and cash equivalents at beginning of period	**730.8**	278.1	452.7
Cash and cash equivalents at end of period	**1,920.6**	730.8	1,189.8

As at December 31st 2017, the LOTOS Group's cash balance (including current account overdrafts) was PLN 1,920.6m. In 2017, net cash flows added PLN 1,189,8m to cash and cash equivalents.
The Group generated positive cash flows from operating activities of PLN 3,126.4m (up PLN 472.5m on 2016), mainly on net profit before depreciation and amortisation, income tax, and higher trade payables, which were offset by higher trade receivables.
Cash flows from investing activities of PLN -1,448.6m primarily included expenditure on key development projects, including the EFRA investment project.
Main items contributing to net cash flows from financing activities of PLN -482.7m were repayments of borrowings and interest and dividend payments, offset by proceeds from borrowings, proceeds from bonds issued to raise financing for the B8 development project and gain on settlement of financial instruments.

5.1.5. Off-balance sheet items by entity, type and value

Material contingent liabilities

- An unconditional and irrevocable guarantee issued on June 17th 2008 by LOTOS Petrobaltic S.A. for the benefit of the government of Norway, covering the exploration and production activities of LOTOS Exploration and Production Norge AS on the Norwegian Continental Shelf, was effective as at December 31st 2017 and December 31st 2016. In the guarantee, LOTOS Petrobaltic S.A. undertook to assume any financial liabilities which may arise in connection with the operations of LOTOS Exploration and Production Norge AS on the

Norwegian Continental Shelf, consisting in exploration for and extraction of the natural resources from the sea bottom, including their storage and transport using means of transport other than ships.

- On August 8th 2017, Grupa LOTOS received confirmations of acceptance of an excise bond valid for the period from August 20th 2017 to August 19th 2019 for a total lump sum of PLN 240m, issued by the Head of the First Tax Office in Gdańsk. The excise bond was submitted in the form of two promissory notes.

5.1.6. Non-recurring factors and events affecting financial performance

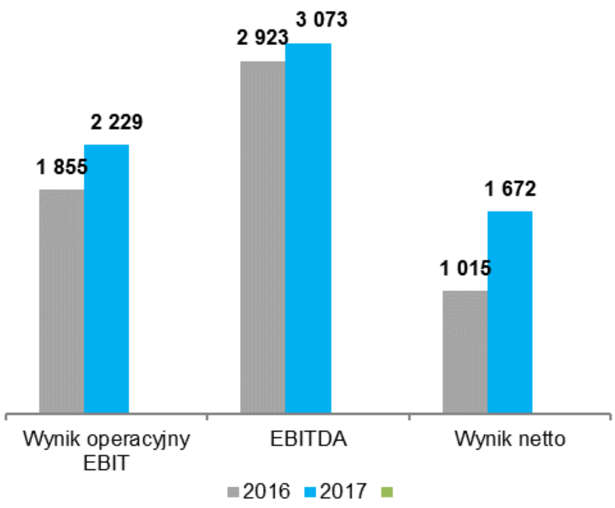
The key factors and non-recurring events affecting results of the Group's operations in 2017 included:

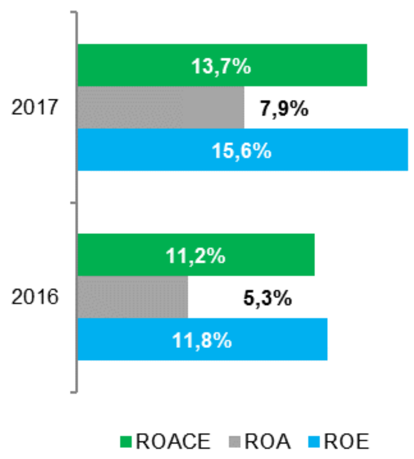
- PLN -32.9m impairment losses on the Lithuanian production assets,
- PLN -23.7m write-off of expenditure related to the Kamień Pomorski area,
- PLN -28.8m net impairment losses on service stations and (disputed) fines.

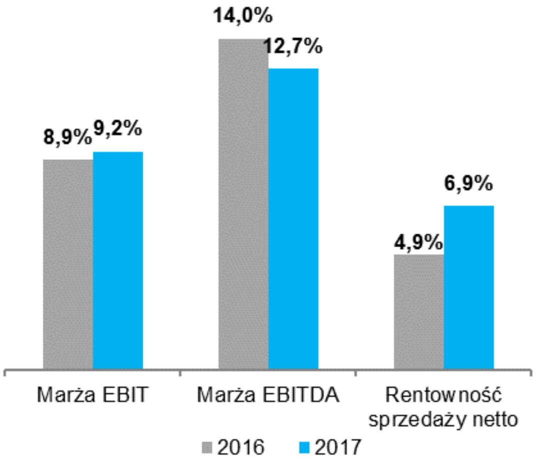
5.1.7. Ratio analysis

A brief assessment of the LOTOS Group's overall economic and financial standing has been prepared in the form of a ratio analysis covering margins, liquidity, turnover and debt levels.

Profitability ratios (PLNm or %)



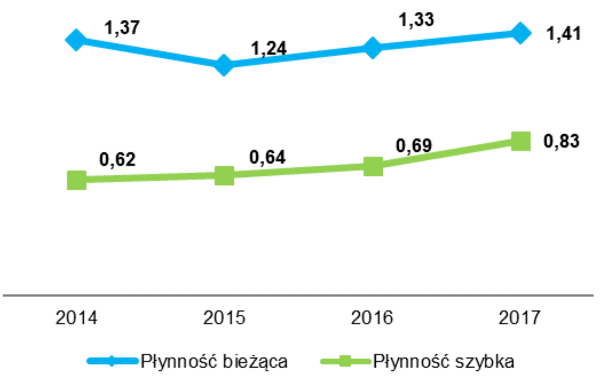


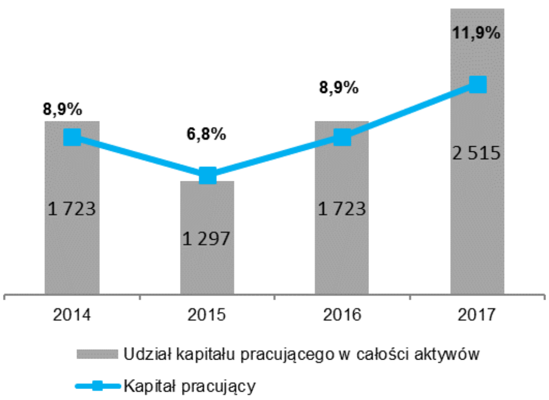


Increase in profitability ratios: higher EBIT/EBITDA and net ratios on improved financial performance

Ratio formulas	
EBIT margin	operating profit/(loss) to net sales
EBITDA	EBIT before amortisation/depreciation
EBITDA margin	EBITDA to net sales
Net margin	net profit/(loss) to net sales
ROE	net profit/(loss) to equity at end of period
ROA	net profit/(loss) to assets at end of period
Return on average capital employed (ROACE)	operating profit/(loss) after tax to equity plus net debt at end of period

Liquidity ratios (PLNm, in absolute terms or in %)



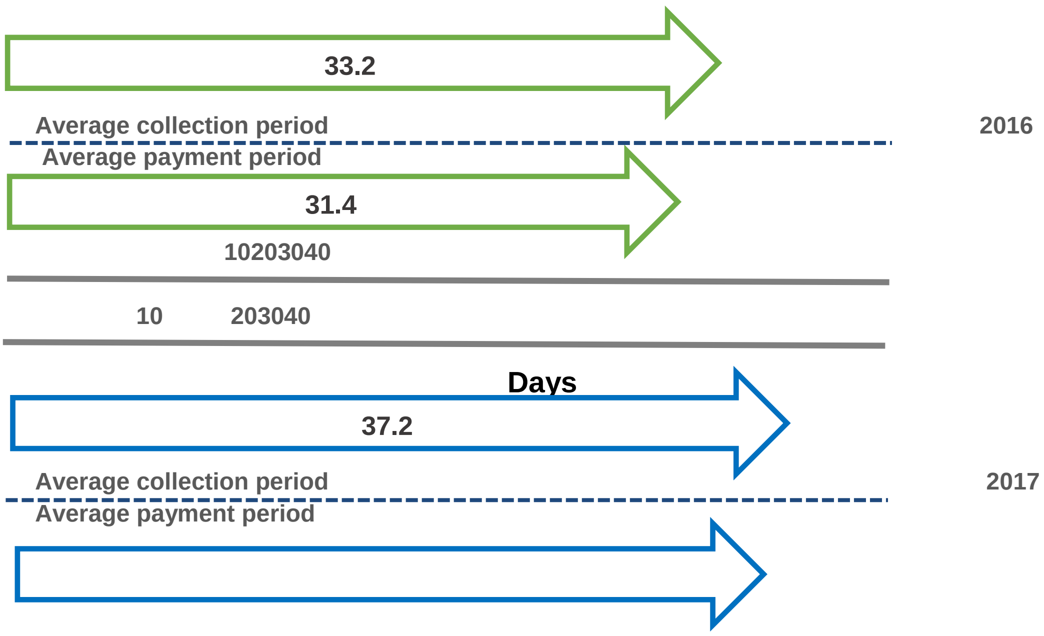


- Current ratio (1.41) was higher year on year (up 6.0%), as current assets increased 24.5% and current liabilities rose 17.5%.
- Quick ratio (0.83) grew year on year (up 20.3%); its year-on-year growth was higher than that of the current ratio as a result of a 6.8% increase in inventories.
- Capital employed was up PLN 791.4m, following an increase in current assets (up PLN 1,714.0m) and in current liabilities (up PLN 922.6m), with higher share of capital employed in total assets.

Ratio formulas

Current ratio	current assets to current liabilities (at end of period)
Quick ratio	current assets less inventory to current liabilities (at end of period)
Capital employed	current assets less current liabilities (at end of period)
Capital employed to total assets	capital employed to total assets (at end of period)

Collection and payment periods (days)

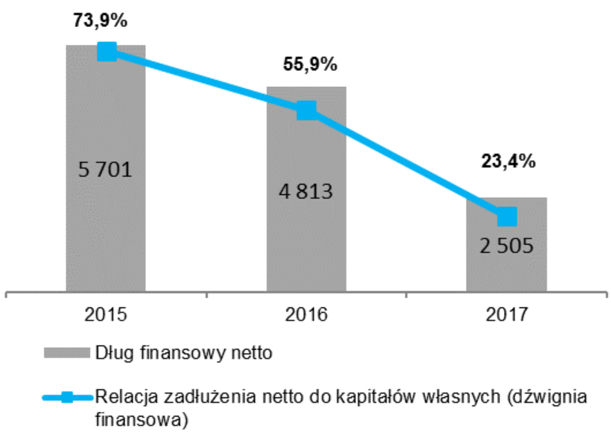


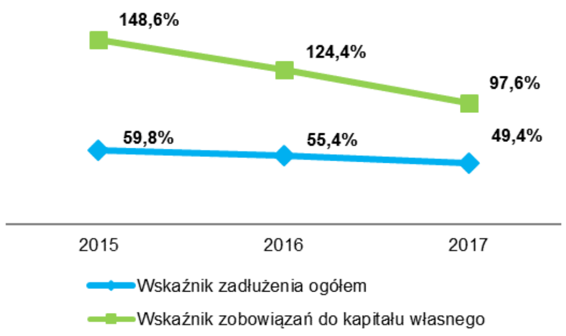
- Average collection period in 2017 was 37.2 days – it lengthened by 4 days on 2016 driven by growth in average trade receivables (up 29.6%) and revenue (up 15.5%).
- Average payment period increased by 4 days, driven by growth in average trade payables (up 32.8%), and cost of sales (up 17.3%).

Ratio formulas

Average collection period (days)	average trade receivables to net sales times 365 (366) days
Average payment period (days)	average trade payables to cost of sales times 365(366) days

Capital structure and debt ratios (PLNm or %)





- decrease in the share of liabilities in the financing of assets by 6.0pp as liabilities decreased by 2.4% and assets increased by 9.5%.
- Decrease of 32.5pp in net financial debt to equity ratio (financial leverage) as net financial debt fell 47.9% while equity rose 24.4%.
- Decrease of 26.8pp in debt to equity ratio as liabilities fell 2.4% and equity grew 24.4%.

Ratio formulas

Total debt ratio	total liabilities to total assets (at end of period)
Net financial debt	long-term and short-term borrowings, other debt instruments, and finance lease liabilities less cash and cash proceeds from the issue of shares (at period end)
Net debt to equity ratio (financial leverage)	net financial debt to equity (at end of period)
Debt to equity ratio	total liabilities to equity (at end of period)

5.1.8. Use of share issue proceeds to implement the issue objectives

In 2017, the LOTOS Group continued to pursue its investment projects using proceeds from the public offering of Series D ordinary bearer shares closed in January 2015. For more details about the projects, see Section 2.

5.1.9. Explanation of differences between actual financial performance and previously published forecasts for 2017

Grupa LOTOS S.A. did not publish consolidated financial guidance for 2017.

5.1.10. Separate results and financial position of Grupa LOTOS S.A.

In 2017, Grupa LOTOS S.A. posted PLN 21,009.2m in net revenue (up 16.0% on 2016); the improvement was mainly attributable to growing prices of petroleum products on global markets. The Company's average net selling price was PLN 1,941/t in 2017 (up PLN 289/t, or 17.5%, on 2016).

The total volume of petroleum products, merchandise and materials sold by the Company in 2017 was 10,821.5 thousand tonnes (down 140.4 thousand tonnes on 2016). In 2017, the share of domestic sales in the total sales volume increased 13.1pp.

Cost of sales came at PLN 18,879.6m (up 21.2% on 2016). The increase of PLN 3,300.7m in cost of sales, with revenue higher by PLN 2,899.2m, resulted in a PLN 401.5m decline of gross profit, to PLN 2,130.3m. The average unit cost of sales was PLN 1,745/t (up PLN 323/t, or 22.8%, on 2016), and was PLN 197/t lower than the average net selling price.

The 10.3% decrease in distribution costs in 2017 was mainly attributable to a 4.1% decline in sales to foreign markets, 4.1% lower average exchange rate of the US dollar, and 1.3% lower sales volumes.

The Company's administrative expenses rose 7.6% in 2017, mainly due to higher employee benefits expense.

Net other income was PLN 2.5m in 2017 (2016: net other expenses of PLN 67.1m).

In 2017, Grupa LOTOS S.A. posted an operating profit of PLN 1,220.7m (down PLN 267.2m on 2016). The decline was mainly due to the 'Spring 2017' maintenance shutdown, which took place in the first half of 2017, lower average US dollar exchange rate in 2017, lower Urals/Brent differential, and higher prices of the gas purchased by the refinery for its own needs.

Statement of comprehensive income of Grupa LOTOS S.A. (PLNm)

	2017	2016	2017-2016	2017/2016
Revenue	**21,009.2**	18,110.0	2,899.2	16.0%
Cost of sales	**-18,878.9**	-15,578.2	-3,300.7	21.2%
Gross profit/loss	**2,130.3**	2,531.8	-401.5	-15.9%
Distribution costs	**-694.8**	-774.9	80.1	-10.3%
Administrative expenses	**-217.3**	-201.9	-15.4	7.6%
Other income	**21.2**	24.6	-3.4	-13.8%
Other expenses	**-18.7**	-91.7	73.0	-79.6%
EBIT	**1,220.7**	1,487.9	-267.2	-18.0%
Finance income	**595.8**	143.0	452.8	316.6%
Finance costs	**-117.7**	-202.8	85.1	-42.0%
Profit/(loss) before tax	**1,698.8**	1,428.1	270.7	19.0%
Income tax	**-279.3**	-267.3	-12.0	4.5%
Net profit/(loss)	**1,419.5**	1,160.8	258.7	22.3%

Key items contributing to the Company's net finance income of PLN 478.1m included:

- Gain from the measurement and settlement of hedging transactions: PLN 257.2,
- Dividends received in 2017: PLN 222.4m,
- Foreign exchange gains: PLN 89.8m,
- Offset by interest on debt, interest income, commission fees, and bank guarantees of PLN -90.0m.

The net finance income posted by Grupa LOTOS in 2017 improved the Company's net profit for 2017 to PLN 1,419.5m.

Grupa LOTOS S.A.'s financial position – assets (PLNm)

	Dec 31 2017	Dec 31 2016	Change	%
Total assets	**15,779.3**	14,530.6	1,248.7	8.6%
Total non-current assets	**8,640.4**	8,327.5	312.9	3.8%
Property, plant and equipment	**6,042.6**	6,045.0	-2.4	0.0%
Intangible assets	**99.9**	104.6	-4.7	-4.5%
Shares	**2,288.5**	1,670.5	618.0	37.0%
Deferred tax assets	**0.0**	18.5	-18.5	-100.0%
Derivative financial instruments	**0.7**	20.8	-20.1	-96.6%
Other non-current assets	**208.7**	468.1	-259.4	-55.4%
Total current assets	**7,138.9**	6,203.1	935.8	15.1%
Inventories	**3,335.5**	3,092.8	242.7	7.8%
Trade receivables	**2,597.1**	2,078.5	518.6	25.0%
Derivative financial instruments	**152.8**	79.8	73.0	91.5%
Other current assets	**225.4**	401.3	-175.9	-43.8%
Cash and cash equivalents	**828.1**	550.7	277.4	50.4%

As at December 31st 2017, the Company's total assets were PLN 15,779.3m.

The key factors that contributed to the PLN 1,248.7m increase in assets included:

- PLN 518.6m increase in trade receivables, mainly on higher prices of refined products,
- PLN 618.0m increase in shares in connection with:
  - acquisition of 100% of shares in LOTOS Upstream in March 2017 and increase of PLN 520.0m in its share capital in December 2017,
  - increase of PLN 98m in the share capital of LOTOS Lab in December 2017,
- PLN 242.7m increase in inventories, including in emergency stocks, on higher prices of products and crude oil,
- PLN 277.4m increase in cash and cash equivalents,
- PLN 435.3m decrease in other assets, including PLN 259.4m in non-current assets and PLN 175.9m in current assets.

Grupa LOTOS S.A.'s financial position – equity and liabilities (PLNm)

	Dec 31 2017	Dec 31 2016	Change	%
Equity and liabilities	**15,779.3**	14,530.6	1,248.7	8.6%
Total equity	**8,892.3**	7,069.6	1,822.7	25.8%
Share capital	**184.9**	184.9	0.0	0.0%
Share premium	**2,228.3**	2,228.3	0.0	0.0%
Cash flow hedging reserve	**-225.2**	-812.8	587.6	72.3%
Retained earnings	**6,704.3**	5,469.2	1,235.1	22.6%
Total non-current liabilities	**2,149.8**	3,312.5	-1,162.7	-35.1%
Bank borrowings	**1,839.8**	3,201.3	-1,361.5	-42.5%
Derivative financial instruments	**6.7**	31.1	-24.4	-78.5%
Deferred tax liabilities	**227.2**	0.0	227.2	-
Employee benefit obligations	**58.6**	61.1	-2.5	-4.1%
Other provisions and liabilities	**17.5**	19.0	-1.5	-7.9%
Total current liabilities	**4,737.2**	4,148.5	588.7	14.2%
Bank borrowings	**899.9**	1,083.6	-183.7	-17.0%
Derivative financial instruments	**72.7**	150.4	-77.7	-51.7%
Trade payables	**2,122.3**	1,598.2	524.1	32.8%
Current tax payables	**22.6**	43.9	-21.3	-48.5%
Employee benefit obligations	**51.9**	48.3	3.6	7.5%
Other liabilities and provisions	**1,567.8**	1,224.1	343.7	28.1%

Grupa LOTOS S.A.'s equity as at the end of 2017 was PLN 8,892.3m (up PLN 1,822.7m on 2016). The increase was driven primarily by PLN 1,419.5m net profit for 2017, adjusted for PLN 184.9m dividend paid, and the recognition in capital reserves of foreign exchange gains on valuation of cash flow hedge, adjusted for the tax effect of PLN 587.6m.

The share of equity in total equity and liabilities rose from 48.7% in 2016 to 56.4% in 2017.

Key factors that contributed to the PLN 574.0m decrease in liabilities included:

- PLN 1,545.2m decrease in bank borrowings, mainly due to repayment of investment loans (PLN 807,0m), combined with the valuation of foreign currency loans at a lower exchange rate (down 16.7%) at the end of 2017,
- PLN 524.1m increase in trade payables, primarily on higher volumes and prices of crude oil purchased in November and December 2017 compared with the prices paid for crude in the corresponding period in 2016,
- PLN 342.2m increase in other provisions and liabilities, mainly liabilities to the state budget on higher VAT, excise tax, and fuel charge,

- PLN 227.2m increase in deferred tax liabilities,
- PLN 102.1m lower negative fair value of derivative instruments.

As at December 31st 2017, the Company's financial debt was PLN 2,739.7m (down PLN 1,545.2m on December 31st 2016). The ratio of financial debt adjusted for free cash to equity was 21.5%, down 31.3pp on December 31st 2016.

Cash flows of Grupa LOTOS S.A. (PLNm)

Cash flows (PLNm)	2017	2016	Change
Cash flows from operating activities	**1,754.1**	1,526.7	227.4
Cash flows from investing activities	**-451.1**	-83.9	-367.2
Cash flows from financing activities	**-1,007.9**	-875.5	-132.4
Change in net cash	**291.1**	568.0	-276.9
Cash and cash equivalents at beginning of period	**536.9**	-31.1	568.0
Cash and cash equivalents at end of period	**828.0**	536.9	291.1

As at December 31st 2017, the Company's cash balance, including current account overdrafts, was PLN 828.0m. In 2017, net cash flows were PLN 291.1m (down PLN 276.9m on 2016).

The Company generated positive cash flows from operating activities of PLN 1,754.1m (up PLN 227.4m on 2016), driven primarily by net profit before depreciation and amortisation.

In 2017, net cash from investing activities was negative, at PLN -451.1m, and mainly included expenditure on purchase of shares in associates (PLN -618.0m) and on purchase of property, plant and equipment (PLN -353.8m), less received dividends (PLN 242.5m), refund of the additional contribution to equity of LOTOS Paliwa (PLN 116.4m) and positive cash flows from cash pooling (PLN 121.6m).

Net cash flows from financing activities of PLN -1,007.9m mainly included repayments of bank borrowings and interest and dividend payments, offset by gain on settlement of derivative financial instruments.

5.2. Key capital expenditure and equity investments in Poland and abroad

5.2.1. Expenditure on property, plant and equipment

In 2017, the LOTOS Group's **capital expenditure** was **PLN 1,445m**, most of which was spent on the construction of a delayed coking unit (EFRA Project), oil and gas production (mainly from the B8 field in the Baltic Sea), and production from the Sleipner and Heimdal area fields in Norway.

The Group also incurred capital expenditure on the purchase of catalysts and components, the expansion and upgrade of the service station network, and the construction of a hydrogen recovery unit (HRU).

LOTOS Group's capital expenditure in 2017 by key downstream projects (PLNm)

Downstream segment	2017
EFRA	**821.9**
Catalysts at the refinery	**96.9**
Expansion of service station network	**32.8**
Hydrogen Recovery Unit (HRU)	**19.5**
Other	**93.4**

LOTOS Group's capital expenditure in 2017 by key upstream projects (PLNm)

Upstream segment	2017
B-8 field	**165.7**
Norway – Sleipner	**79.2**
Norway – Heimdal	**34.6**
Other	**100.6**

5.2.2. Equity investments

In 2017, Grupa LOTOS S.A. did not make any equity investments outside of the group of its related entities; for details, see Section 7.1.2. Ownership changes at the LOTOS Group

5.3. Financing

5.3.1. Bank and non-bank borrowings

LOTOS Group's bank and non-bank borrowings as at December 31st 2017

Lender	Principal amount as per agreement		Outstanding amount (current portion)		Outstanding amount (non-current portion)		Maturity date of the		Financial terms (interest rate, interest payment schedule, etc.)	Security
	PLN (million)	Currency (million)	PLN (million)	Currency (million)	PLN (million)	Currency (million)	current portion	non-current portion		
Bank syndicate (1)	-	**USD 400.0**	696.8	USD 200.1	-	-	Dec 20 2018	-	3M or 6M LIBOR USD, depending on the interest period selected at a given time + bank margin	registered pledge over inventories, registered pledge over bank accounts, assignment of rights under inventory insurance agreements, assignment of rights under inventory storage agreements, voluntary submission to enforcement
Bank syndicate (2)	-	**USD 1,125.0**	410.2	USD 117.5	1,346.3	USD 385.8	Oct 15 2018	15.01.2021	1M, 3M or 6M LIBOR USD, depending on the interest period selected at a given time + bank margin	mortgage, registered pledge over existing and future movables, registered pledge over bank accounts, assignment of rights under insurance agreements relating to the Gdańsk refinery, assignment of licence and sale agreements with a value of over PLN 10m per year, submission to enforcement
Bank syndicate (3)	-	**USD 425.0**	152.9	USD 43.7	493.5	USD 140.9	Oct 15 2018	15.01.2021	fixed interest rate	

Lender	Principal amount as per agreement		Outstanding amount (current portion)		Outstanding amount (non-current portion)		Maturity date of the		Financial terms (interest rate, interest payment schedule, etc.)	Security
	PLN (million)	Currency (million)	PLN (million)	Currency (million)	PLN (million)	Currency (million)	current portion	non-current portion		
Bank syndicate (4)	USD 200.0 or equivalent		0.1	-	-	-	Overdraft facility	-	3M LIBOR for USD funds, 3M WIBOR for PLN funds and 3M EURIBOR for EUR funds + bank margin for each currency as for Credit Facility A. Interest payable every three months, on Jan 15, Apr 15, Jul 15 or Oct 15.	
Bank syndicate (5)	**150.0**	**-**	16.8	-	75.0	-	Dec 31 2018	Jun 30 2023	3M WIBOR + bank margin	mortgages
Bank syndicate (6)	**100.0**	**-**	10.0	-	62.5	-	Dec 31 2018	Mar 31 2025	6M LIBOR + bank margin	registered pledge over inventories, registered pledge over bank accounts, assignment of rights under sale agreements, pledge over shares in subsidiaries
Bank PEKAO S.A.	**20.0**	**-**	5.1	-	-	-	Dec 31 2018	-	3M WIBOR + bank margin	mortgages
PKO BP S.A.	**20.0**	**-**	5.1	-	-	-	Dec 31 2018	-	3M WIBOR + bank margin	mortgages
Fund for Environmental Protection and Water Management in Gdańsk	**6.9**	**-**	0.6	-	4.3	-	Nov 30 2018	Jul 31 2024	0.8 of the rediscount rate on promissory notes, not less than 3%	blank promissory note, assignment of claims

Lender	Principal amount as per agreement		Outstanding amount (current portion)		Outstanding amount (non-current portion)		Maturity date of the		Financial terms (interest rate, interest payment schedule, etc.)	Security
	PLN (million)	Currency (million)	PLN (million)	Currency (million)	PLN (million)	Currency (million)	current portion	non-current portion		
Fund for Environmental Protection and Water Management in Katowice	**1.2**	**-**	0.2	-	0.1	-	Dec 31 2018	May 31 2019	0.95 of the rediscount rate on promissory notes, not less than 3%	assignment of receivables
Consortium of financial institutions (7)	**300.0**	**-**	0.2	-	-	-	Dec 31 2018	-	3M LIBOR or 6M LIBOR + bank margin	ceiling mortgage; registered pledges over inventories, all assets and rights, and on receivables; power of attorney over bank accounts; representation on voluntary submission to enforcement; assignment of rights under project agreements, insurance policies, trade contracts; pledge over the parent's shares in LOTOS Asfalt Sp. z o.o.; assignment of rights under conditional loan agreement
			44.5	USD 12.8	-	-	Dec 31 2018	-		
	-	**USD 357.0**	-	-	624.1	USD 212.5	-	Dec 31 2024		
Bank Millennium S.A.	**50.9**	**-**	5.0	-	32.2	-	Dec 31 2018	Apr 30 2025	3M WIBOR + bank margin	first-ranking mortgage and registered pledge, assignment of receivables and assignment of rights under insurance policies
PKO BP S.A.	**100.0**	-	63.1	-	-	-	Dec 31 2018	-	1M WIBOR + margin	registered and financial pledges over shares and assignment of rights under insurance policies
Agencja Rozwoju Przemysłu S.A.	**100.0**	-	63.1	-	-	-	Dec 31 2018	-	1M WIBOR + bank margin	registered and financial pledges over shares, assignment of rights under insurance policies and blank promissory note
PKO BP S.A.	**-**	**USD 80.0**	76.3	USD 21.9	-	-	Dec 31 2018	-	1M LIBOR + bank margin	pledge, guarantee

Lender	Principal amount as per agreement		Outstanding amount				Maturity date of the		Financial terms (interest rate, interest payment schedule, etc.)	Security
			(current portion)		(non-current portion)					
	PLN (million)	Currency (million)	PLN (million)	Currency (million)	PLN (million)	Currency (million)	current portion	non-current portion		
PKO BP S.A.	**-**	**USD 105.0**	99.6	USD 28.6	-	-	Dec 31 2018	-	1M LIBOR + bank margin	pledge, guarantee
Luminor Bank AB	**-**	**USD 20.0**	25.6	USD 7.4	-	-	Dec 31 2018	-	6M LIBOR USD + bank margin	registered pledge over inventories, registered pledge over bank accounts, assignment of rights under sale agreements, pledge over shares of subsidiaries
Luminor Bank AB	**-**	**USD 10.0**	18.2	USD 5.3	-	-	Jun 30 2018	-	6M LIBOR USD + bank margin	
Funds in bank deposits securing payment of interest and principal*	-	-	(360.1)	USD (103.4)	-	-	-	-	-	-
			169.3	**-**	**174.1**	**-**				
TOTAL			**1,164.0**	**USD 333.9**	**2,463.9**	**USD 739.2**				
			1,333.3	**-**	**2,638.0**	**-**				

Bank margins on the borrowings are within the range of 0.85pp. – 4.00pp.

Bank syndicate (1): Pekao S.A., Société Générale S.A., Bank Handlowy w Warszawie S.A., mBank S.A., Industrial and Commercial Bank of China (Europe) S.A. (Spółka Akcyjna) Polish Branch, Intesa Sanpaolo S.p.A. Spółka Akcyjna Polish Branch, Banco Santander S.A., CaixaBank S.A. Polish Branch, SMBCE Ltd; the composition of the syndicate changed following the execution of an annex to the credit facility agreement on November 29th 2017, as described in more detail below.

Bank syndicate (2): Banco Bilbao Vizcaya Argentaria S.A., MUFG Bank (Europe) N.V., Pekao S.A., BNP Paribas Fortis SA/NV, Credit Agricole CIB (formerly Calyon), DNB Bank Polska S.A., ING Bank Śląski S.A., KBC Bank NV London, PKO BP S.A., Société Générale S.A., Bank Zachodni WBK S.A., BGŻ BNP Paribas Bank Polska S.A., Sumitomo Mitsui Banking Corporation Europe Ltd., Bank Gospodarstwa Krajowego.

Bank syndicate (3): Banco Bilbao Vizcaya Argentaria S.A., BNP Paribas Fortis NV.

Bank syndicate (4): Pekao S.A., PKO BP S.A., BNP Paribas S.A. Polish Branch, ING Bank Śląski S.A., BGŻ BNP Paribas Bank Polska S.A.
Bank syndicate (5): Pekao S.A., PKO BP S.A.
Bank syndicate (6): Pekao S.A., mBank S.A.
Consortium of financial institutions (7): Bank Gospodarstwa Krajowego, Bank Millennium S.A., Pekao S.A., Bank Zachodni WBK S.A., PKO BP S.A., Powszechny Zakład Ubezpieczeń S.A., Powszechny Zakład Ubezpieczeń na Życie S.A. and Société Générale S.A.

*As at December 31st 2017, Grupa LOTOS S.A. offset a financial asset (cash reserved for repayment of the facilities) against a financial liability under the facilities and, in accordance with IAS 32 *Financial Instruments: presentation*, it disclosed the relevant net amount in the statement of financial position (the Company holds a valid legal title to set off the amounts and intends to realise the asset and settle the liability simultaneously). Accumulation of funds for the repayment of credit facilities is expressly provided for in the documentation relating to the investment facilities obtained to finance the 10+ Programme, as well as the inventory financing and refinancing facility. The Company is required to set aside and maintain funds for repayment of principal and interest due over the next six months. The purpose of adopting the net-basis presentation approach is to reflect the expected future cash flows from settlement of two or more financial instruments.

Bank borrowings of the parent

Inventory financing and refinancing facility

As at December 31st 2017, the nominal amount drawn under the credit facility for the refinancing and financing of inventories, advanced by Bank syndicate (1), was PLN 696.3m (USD 200m).

Amendments to the inventory refinancing and financing facility

On November 29th 2017, an annex was signed to the inventory financing and refinancing facility agreement of October 10th 2012. Under the annex, the term of the agreement was extended by 12 months (i.e. until December 20th 2018) and the facility amount was increased from USD 345m to USD 400m. The financial covenants were adjusted to current market conditions.

Moreover, as a result of the annex, the composition of the syndicate granting the facility changed. The following banks joined the syndicate: Intesa Sanpaolo S.p.A. Spółka Akcyjna Polish Branch, Banco Santander S.A., CaixaBank S.A. Polish Branch, and SMBCE Ltd.

Amendments to the credit facility agreement took effect as of December 20th 2017.

Investment facilities

As at December 31st 2017, the nominal amount outstanding under the investment facilities advanced by bank syndicates (2) and (3) to finance the 10+ Programme was PLN 2,414.6m (USD 693.6m). As at December 31st 2016, the amount was PLN 3,794.7m (USD 908m).

Working-capital facilities

The working-capital facility was made available to Grupa LOTOS S.A. under an agreement with bank syndicate (4) in the form of overdraft facilities and is used by the Company on an as-needed basis.

The parent has access to working-capital facility financing totalling PLN 450m. As at December 31st 2017 and December 31st 2016, the Company carried no liabilities under these facilities.

Bank borrowings of other Group companies

As at December 31st 2017, the aggregate liabilities outstanding under credit facility agreements of other Group companies were PLN 1,163.3m (December 31st 2016: PLN 798.03m). The outstanding amount comprised mainly liabilities incurred by LOTOS Asfalt Sp. z o.o. and LOTOS Paliwa Sp. z o.o., as well as by the Upstream segment companies including LOTOS Exploration and Production Norge AS, SPV Baltic Sp. z o.o., and AB LOTOS Geonafta.

Agreement for the financing of the EFRA Project

On June 30th 2015, LOTOS Asfalt Sp. z o.o. and a consortium of financial institutions signed a credit facility agreement (and auxiliary agreements) under which the company obtained additional funds necessary to finance the EFRA Project.

On May 11th 2017, the amount of the investment facility made available under the agreement of June 30th 2015 between LOTOS Asfalt Sp. z o.o. and a consortium of financial institutions was reduced. As a result, the total facility amount available to be drawn was lowered from USD 382m to USD 357m. The reduction was requested by LOTOS Asfalt Sp. z o.o. in line with its rights under the agreement.

As at December 31st 2017, the amount of outstanding liabilities under the above facility was PLN 668.9m (December 31st 2016: PLN 93.3m).

Bank borrowings of LOTOS Paliwa Sp. z o.o.

Liabilities of LOTOS Paliwa Sp. z o.o. under bank borrowings include primarily amounts outstanding under investment facilities granted by PKO BP S.A., Pekao S.A and mBank S.A. for the refinancing and financing of service station acquisitions.
As at December 31st 2017, the amount of outstanding liabilities under the investment facility agreements was PLN 174.4m (December 31st 2016: PLN 208.1m).

Bank borrowings of LOTOS Exploration and Production Norge AS

As at December 31st 2017, LOTOS Exploration and Production Norge AS disclosed PLN 99.6m (USD 28.6m) in liabilities under the investment facility taken out to finance the acquisition of Heimdal assets, provided by PKO BP S.A. (agreement of December 11th 2013). As at December 31st 2016, the amount of outstanding liabilities under the agreement was PLN 180.4m (USD 43m).

In addition, LOTOS Exploration and Production Norge AS uses another facility, provided by PKO BP S.A., to finance its day-to-day operating and investing activities. As at December 31st 2017, the amount of outstanding liabilities under the facility was PLN 76.3m (USD 21.9m), and as at December 31st 2016 it was PLN 139.5m (USD 33.3m).

Bank borrowings of SPV Baltic Sp. z o.o.

On January 31st 2014, SPV Baltic Sp. z o.o. signed an investment facility agreement with Nordea Bank Polska S.A. (currently PKO BP S.A.) to finance the purchase of a drilling rig (agreement of December 20th 2013). As at December 31st 2017, the amount of outstanding liabilities under the credit facility was PLN 63.1m (December 31st 2016: PLN 74.1m).

As one of the covenants under an investment credit facility agreement concluded by SPV Baltic Sp. z o.o. with PKO BP was not complied with, the non-current portion of liabilities under the facility of PLN 51.1m was presented under current liabilities. As at December 31st 2017, the bank did not accelerate the facility. As at the date of preparation of the financial statements, the company had a letter from the bank stating that the bank waived its right to treat the non-compliance with the covenant as an event of default.

Bank borrowings of AB LOTOS Geonafta

On June 29th 2015, AB LOTOS Geonafta and Nordea Bank AB Lithuanian Branch (at present Luminor Bank AB) signed an annex to the credit facility agreement of September 27th 2012, under which Nordea Bank AB Lithuanian Branch granted to AB LOTOS Geonafta:

- a long-term credit facility of up to USD 20m,
- a working-capital facility of up to USD 10m,

to refinance its existing credit facilities.

As at December 31st 2017, the amount of outstanding liabilities of AB LOTOS Geonafta under the agreement was PLN 43.8m (USD 12.6m). As at December 31st 2016, the amount was PLN 60.3m (USD 14.3m).

In addition, as one of the covenants under credit facility agreements of AB LOTOS Geonafta was not complied with, the long-term portion of liabilities under those credit facilities of PLN 8.5m was presented under current liabilities. As at December 31st 2017, the bank did not accelerate the facilities. As at the date of preparation of the financial statements, the company had a letter from the bank stating that the bank waived its right to treat the non-compliance with the covenant as an event of default.

Non-bank borrowings

The Group's non-bank borrowings include mainly liabilities of SPV Baltic Sp. z o.o. (an upstream company) under a loan agreement executed with Agencja Rozwoju Przemysłu S.A. on January 31st 2014 to finance the purchase of a drilling rig (contract of December 20th 2013). As at December 31st 2017, the amount of outstanding liabilities under the loan was PLN 63.1m (December 31st 2016: PLN 74.1m).

As one of the covenants under the loan agreement concluded by SPV Baltic Sp. z o.o. with Agencja Rozwoju Przemysłu was not complied with, the non-current portion of liabilities under the loan of PLN 51.1m was presented under current liabilities. As at December 31st 2017, the lender did not accelerate the loan. As at the date of preparation of the financial statements, the company had a letter from Agencja Rozwoju Przemysłu stating that the it waived its right to treat the non-compliance with the covenant as an event of default.

Liabilities under loans advanced to other Group companies include loans of LOTOS Kolej Sp. z o.o and RCEkoenergia Sp. z o.o., contracted to co-finance the upgrades of locomotives and the upgrade of a dust removal unit at the CHP plant.

5.3.1. Other financing agreements

Financing of the B8 project

On October 19th 2016, B8 Spółka z ograniczoną odpowiedzialnością Baltic Spółka komandytowo-akcyjna ("B8 SPV"), Fundusz Inwestycji Infrastrukturalnych – Dłużny Fundusz Inwestycyjny Zamknięty Aktywów Niepublicznych ("PFR") and Bank Gospodarstwa Krajowego ("BGK") entered into the following financing agreements for the development of the B8 oil field on the Baltic Sea:

- Senior Note Programme Agreement,
- Subordinated Note Programme Agreement,
- Accounts Agreement,
- Powers of Attorney over the Issuer's Accounts,
- Investment Agreement,
- Bank Guarantee Facility Agreement.

Under the Senior Note Programme Agreement, B8 SPV will issue notes to finance further development of the B8 field, including the purchase of project-related assets from LOTOS Petrobaltic, and VAT liabilities.

On February 15th 2017, B8 SPV received the final confirmation of fulfilment of the conditions precedent to disbursement of the financing specified in the subordinated and senior note programme agreements. On February 27th, BGK and PFR accepted an invitation to purchase notes issued by B8 SVP, and on March 1st 2017 B8 SVP issued the first tranche of notes under the senior note programme for PLN 109.8m (USD 26.9m), and under the subordinated note programme (for PLN 101m), as well as notes to cover VAT liabilities (for PLN 85.3). As at December 31st 2017, the liability under the outstanding notes issued by B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A., net of issue costs, was PLN 201.3m.

5.3.2. Intercompany loans

LOTOS GROUP'S INTERCOMPANY LOANS AS AT DECEMBER 31ST 2017:

Lender	Borrower	Principal as per loan agreement		Amount outstanding (as at December 31st 2017) (current portion)		Amount outstanding (as at December 31st 2017) (non-current portion)		Maturity date of the		Financial terms (interest rate, interest payment schedule, etc.)	Security	Date of the agreement
		PLN (million)	Currency (million)	PLN (million)	Currency (million)	PLN (million)	Currency (million)	current portion	non-current portion			
LOTOS Petrobaltic S.A.	Energobaltic Sp. z o.o.	**9.9**	**-**	5.0	-	-	-	Jan 31 2018/Feb 28 2018/Mar 31 2018/Apr 30 2018/May 31 2018/Jun 30 2018/	Dec 31 2018	1M WIBOR + margin	blank promissory note with a 'protest waived' clause and promissory note declaration	Oct 30 2013
LOTOS Petrobaltic S.A.	LOTOS Norge AS	**832.5**	**USD 273.2**	-	-	316.3	USD 90.8	-	Jan 31 2019	6M LIBOR + margin	blank promissory note with a 'protest waived' clause and promissory note declaration	Aug 26 2008
LOTOS Petrobaltic S.A.	LOTOS Norge AS	**Loan conversion from USD to NOK**	**NOK 26.2**	-	-	305.3	NOK 720.2	-	Jan 31 2019	6M LIBOR + margin	blank promissory note with a 'protest waived' clause and promissory note declaration	May 8 2015
LOTOS Petrobaltic S.A.	AB LOTOS Geonafta	**53.1**	**EUR 12.0**	-	-	19.8	EUR 4.7	-	Dec 31 2020	6M EURIBOR + margin	blank promissory note with a 'protest waived' clause and promissory note declaration	Dec 17 2010
LOTOS Petrobaltic S.A.	SPV Baltic Sp. z o.o.	**46.3**	**-**	-	-	52.4	-	-	Jan 31 2022	6M WIBOR + margin	Blank promissory note	Jan 27 2014

Lender	Borrower	Principal as per loan agreement		Amount outstanding (as at December 31st 2017)				Maturity date of the		Financial terms (interest rate, interest payment schedule, etc.)	Security	Date of the agreement
				(current portion)		(non-current portion)						
		PLN (million)	Currency (million)	PLN (million)	Currency (million)	PLN (million)	Currency (million)	current portion	non-current portion			
LOTOS Petrobaltic S.A.	SPV Baltic Sp. z o.o.	**42.6**	**USD 14.0**	-	-	57.8	USD 16.6	-	Jan 31 2022	6M LIBOR + margin	Blank promissory note	Dec 23 2013
LOTOS Petrobaltic S.A.	B8 Sp. Z o.o. SKA	**8.5**	**-**	-	-	9.4	-	-	Dec 31 2022	3M WIBOR + margin	Blank promissory note	Ocy 20 2015
AB LOTOS Geonafta	LOTOS Norge AS	**69.6**	**USD 20.0**			90.5	USD 26.0		Dec 31 2019/Mar 31 2020	3M LIBOR + margin	Promissory note	Oct 24 2011
Grupa LOTOS S.A.	LOTOS Upstream Sp. z o.o.	**2.5**	**-**					Oct 31 2017 – full repayment in 2017	-	Variable interest rate, 6M WIBOR plus 3.85% margin	Blank promissory note with a promissory note declaration	Apr 28 2017
Grupa LOTOS S.A.	LOTOS Petrobaltic S.A	**36.0**		39.2	-	-	-	Jan 31 2018	-	6M LIBOR + margin	Blank promissory note	Feb 1 2016
Grupa LOTOS S.A.	LOTOS Petrobaltic S.A	**54.0**		58.8	-	-	-	Jan 31 2018	-	6M LIBOR + margin	Blank promissory note	May 31 2016
Grupa LOTOS S.A.	LOTOS Petrobaltic S.A.	**84.3**	**USD 22.0**	-	-	81.8	USD 23.5	-	Dec 31 2019	3M LIBOR + margin	Blank promissory note	Sep 26 2016
Kambr Navigation Company Limited	Miliana Shipmanagement Limited	**0.8**	**USD 0.2**	0.3	USD 0.1	0.1	USD 0.0	Dec 31 2018	Jun 30 2019	1M LIBOR + margin	None	May 29 2013
Petro Icarus Company Limited	Miliana Shipmanagement Limited	**4**	**USD 1.1**	1.4	USD 0.4	0.6	USD 0.2	Dec 31 2018	Jun 30 2019	1M LIBOR + margin	None	May 29 2013
Granit Navigation Company Limited	Miliana Shipmanagement Limited	**0.6**	**USD 0.2**	0.2	USD 0.1	0.1	USD 0.0	Dec 31 2018	Jun 30 2019	1M LIBOR + margin	None	May 29 2013

Lender	Borrower	Principal as per loan agreement		Amount outstanding (as at December 31st 2017) (current portion)		Amount outstanding (as at December 31st 2017) (non-current portion)		Maturity date of the		Financial terms (interest rate, interest payment schedule, etc.)	Security	Date of the agreement
		PLN (million)	Currency (million)	PLN (million)	Currency (million)	PLN (million)	Currency (million)	current portion	non-current portion			
Bazalt Navigation Company Limited	Miliana Shipmanagement Limited	**0.6**	**USD 0.2**	0.2	USD 0.1	0.1	USD 0.0	Dec 31 2018	Jun 30 2019	1M LIBOR + margin	None	May 29 2013
Granit Navigation Company Limited	Miliana Shipmanagement Limited	**2.3**	**USD 0.6**	1.2	USD 0.4	1.6	USD 0.4	Dec 31 2018	Jun 30 2020	1M LIBOR + margin	None	Dec 10 2014
Petro Icarus Company Limited	Miliana Shipmanagement Limited	**12.4**	**USD 3.6**	5.3	USD 1.5	6.6	USD 1.9	Dec 31 2018	Jun 30 2020	1M LIBOR + margin	None	Dec 10 2014
Kambr Navigation Company Limited	Miliana Shipmanagement Limited	**2.5**	**USD 0.7**	1.3	USD 0.4	1.6	USD 0.5	Dec 31 2018	Jun 30 2020	1M LIBOR + margin	None	Dec 10 2014
Bazalt Navigation Company Limited	Miliana Shipmanagement Limited	**2.1**	**USD 0.6**	1.1	USD 0.3	1.4	USD 0.4	Dec 31 2018	Jun 30 2020	1M LIBOR + margin	None	Dec 10 2014
Miliana Shipping Group	Miliana Shipmanagement Limited	**0.6**	**USD 0.2**	0.3	USD 0.1	0.3	USD 0.1	Dec 31 2018	Dec 31 2018	1M LIBOR + margin	None	Aug 25 2016
Petro Aphrodite	Miliana Shipmanagement Limited	**0.7**	**USD 0.2**	0.3	USD 0.1	0.4	USD 0.1	Dec 31 2018	Jun 30 2020	1M LIBOR + margin	None	Aug 19 2016
Miliana Shipmanagement Limited	St. Barbara Nav.	**3.8**	**USD 1.1**	0.9	USD 0.3	2.3	USD 0.7	Dec 31 2018	Feb 28 2023	1M LIBOR + margin	None	Nov 10 2016
Grupa LOTOS S.A.	Energobaltic Sp. z o.o.	**10.0**		10.4	-	-	-	-	Jun 30 2018	6M WIBOR + margin	Blank promissory note	Dec 19 2016
			TOTAL	**125.9**	**USD 3.8**	**948.4**	**USD 161.2**					

Lender	Borrower	Principal as per loan agreement		Amount outstanding (as at December 31st 2017) (current portion)		Amount outstanding (as at December 31st 2017) (non-current portion)		Maturity date of the		Financial terms (interest rate, interest payment schedule, etc.)	Security	Date of the agreement
		PLN (million)	Currency (million)	PLN (million)	Currency (million)	PLN (million)	Currency (million)	current portion	non-current portion			
				-	- EUR		EUR 4.7					
				-	- NOK		NOK 720.2					
				125.9		948.4						

<u>Notes of Miliana Shipmanagement Ltd. purchased by Technical Ship Management Sp. z o.o</u>

On November 8th 2016, MILIANA Shipmanagement Ltd. issued notes for PLN 1.8m, which were purchased by Technical Ship Management Sp. z o.o. in a private placement transaction. The notes are scheduled to mature on November 7th 2018.

<u>Notes of LOTOS Exploration and Production Norge purchased by LOTOS Asfalt Sp. z o.o.</u>

The issue proceeds were used to finance development of the PL316 and 316B production licences (the YME field) and for general corporate purposes related to oil exploration and production operations. As at December 31st 2017, LOTOS Exploration and Production Norge AS's total debt of USD 93m under the notes (principal and accrued interest) was repaid in full.

5.3.3. Financial resources management

In 2017, LOTOS Group companies discharged all of their financial liabilities towards trading partners.

In the period from January 1st to December 31st 2017, LOTOS Group companies used loans and investment and working capital facilities, including in particular overdraft facilities, and had liabilities arising under notes in issue and finance leases.

Under the credit facilities incurred to finance the 10+ Programme and the facility for the refinancing of inventories, Grupa LOTOS S.A. is required to maintain the Tangible Consolidated Net Worth ratio at or above the level specified in the facility agreements.

Under the refinancing facility, the Company is also required to maintain the Loan to Pledged Inventory Value ratio at or above the level specified in the facility agreement.

As at December 31st 2017 and December 31st 2016, the covenants were fully complied with.

5.4. Management Board's representations

5.4.1. On compliance of the full-year financial statements and the Directors’ Report on the Operations of Grupa LOTOS S.A. and the LOTOS Group

The Management Board of LOTOS S.A., consisting of:

Marcin Jastrzębski – President of the Management Board, Chief Executive Officer
Mateusz Aleksander Bonca – Chief Financial Officer
Jarosław Kawula – Chief Refining and Marketing Officer

hereby represent that, to the best of their knowledge, the annual financial statements of Grupa LOTOS S.A. and the annual consolidated financial statements of the LOTOS Group for 2017 as well as the comparative data were prepared in compliance with the applicable accounting standards and give a true, clear and fair view of the assets, financial standing and financial results of Grupa LOTOS S.A. and the LOTOS Group.

Furthermore, the Management Board of Grupa LOTOS S.A. represents that the Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2017 gives a true view of the LOTOS Group's development, achievements and position, and includes a description of key risks and threats.

5.4.2. On selecting a qualified auditor of financial statements

The Management Board of Grupa LOTOS S.A. represents that the qualified auditor of the consolidated financial statements of the LOTOS Group for 2017 and the financial statements of Grupa LOTOS S.A. for 2017 was appointed in accordance with the applicable laws, and that the auditing firm and the qualified auditors who performed the audit met the conditions necessary to issue an impartial and independent auditor's opinion in accordance with the applicable regulations and professional standards.

For information on the LOTOS Group’s auditor rotation policy, see the ‘Investor relations’ website

5.5. Policies applied in the preparation of full-year consolidated financial statements

The LOTOS Group’s consolidated financial statements and Grupa LOTOS S.A.’s separate financial statements have been prepared in accordance with the International Financial Reporting Standards (“IFRSs”) endorsed by the European Union, issued and effective as at December 31st 2017.

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

- IFRS 16: *Leases*, issued on January 13th 2016 (effective for annual periods beginning on or after January 1st 2019),
- Clarifications to IFRS 15: *Revenue from Contracts with Customers*, issued on April 12th 2016 (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IFRS 4: *Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts*, issued on September 12th 2016 (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IAS 12: *Recognition of Deferred Tax Assets for Unrealised Losses*, issued on January 19th 2016 (effective for annual periods beginning on or after January 1st 2017),
- Amendments to IAS 7: *Disclosure Initiative*, issued on January 29th 2016 (effective for annual periods beginning on or after January 1st 2017).

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

- IFRS 17: *Insurance Contracts*, issued on May 18th 2017 (effective for annual periods beginning on or after January 1st 2021),
- IFRIC Interpretation 22: *Foreign Currency Transactions and Advance Consideration*, issued on December 8th 2016 (effective for annual periods beginning on or after January 1st 2018),
- IFRIC Interpretation 23: *Uncertainty over Income Tax Treatments*, issued on June 7th 2017 (effective for annual periods beginning on or after January 1st 2019),
- Amendments to IAS 2: *Classification and Measurement of Share-Based Payment Transactions*, issued on June 20th 2016 (effective for annual periods beginning on or after January 1st 2018),
- Amendments introduced as part of the Annual Improvements cycle 2014−2016, issued on December 8th 2016 − amendments to IFRS 12 and IFRS 1 (effective for annual periods beginning on or after January 1st 2017), and amendments to IAS 28 (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IAS 40: *Transfer of Investment Property*, issued on December 8th 2016 (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IAS 9: *Prepayment Features with Negative Compensation*, issued on October 12th 2017 (effective for annual periods beginning on or after January 1st 2019),
- Amendments to IAS 28: *Long-term Interests in Associates and Joint Ventures*, issued on October 12th 2017 (effective for annual periods beginning on or after January 1st 2019).
- Amendments introduced as part of the Annual Improvements cycle 2015−2017 (issued on December 12th 2017), effective for annual periods beginning on or after January 1st 2019,
- Amendments to IAS 19 Plan Amendment, Curtailment or Settlement, issued on February 7th 2018 (effective for annual periods beginning on or after January 1st 2019).

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 2017.

The Management Board’s analysis and assessment, performed as at December 31st 2017, of the impact of the new and amended standards on the Group’s accounting policies and future financial statements covered in particular the effect of the new IFRS 9, IFRS 15 and IFRS 16, as their application may result in changes to the Group’s accounting and financial reporting policies in 2018−2019.

The consolidated and separate financial statements were 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.

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

Directors' Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2017

Risks in the LOTOS Group

6. Risks in the LOTOS Group

The Enterprise Risk Management (ERM) in place across the LOTOS Group supports successful delivery of its strategy and business processes, in particular by ensuring that:

- Risks are identified and evaluated, with performance figures and possible deviations planned and forecast in the context of a volatile and uncertain environment,
- Business decisions are made on an informed basis, taking risk into account,
- The Group's risk profile is actively managed by mitigating risks to the achievement of its objectives and capturing opportunities.

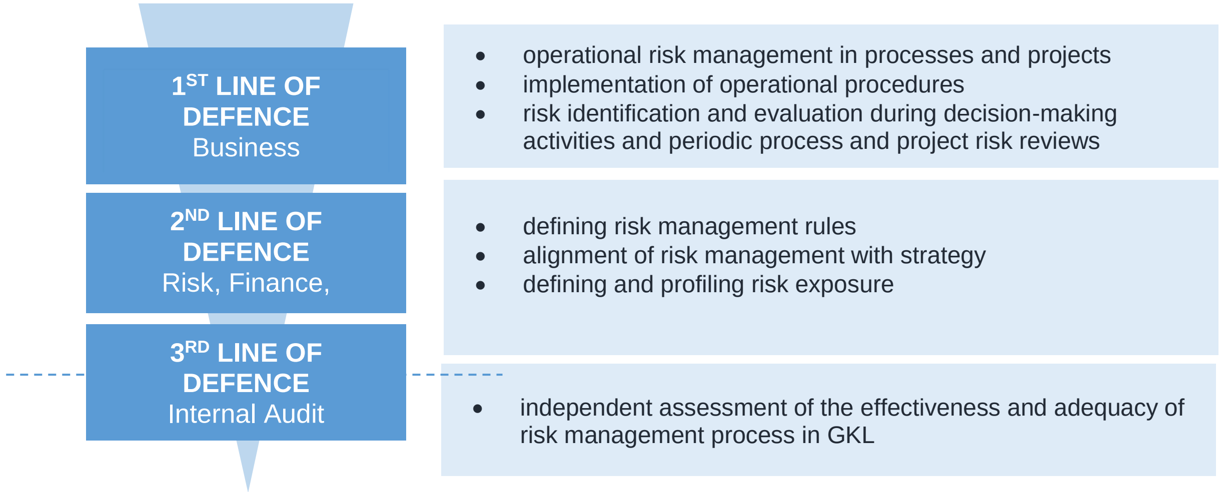
The above principles have been implemented at the LOTOS Group pursuant to its Enterprise Risk Management Policy and are laid down in an applicable procedure applied by all of its companies.

6.1. Risk management model

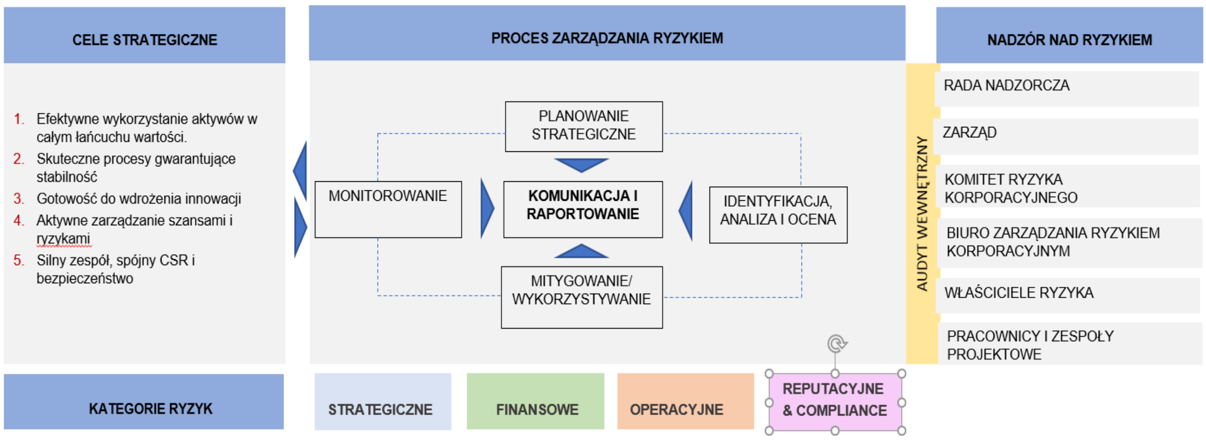
Operational (current) risk management functions are embedded in existing business processes (first line of defence), in line with the nature of particular activities and the potential risk impact on the Group's performance.

The second line of defence consists of specialised corporate functions, such as Risk Management, Compliance and Finance, which oversee and assess the operational risk management functions.

At the top level, known as the third line of defence, the adequacy and effectiveness of the ERM system is periodically evaluated by the Internal Audit function.



Structure of the enterprise risk management (ERM)



6.1.1. Active risk management as a strategic objective

The fast-changing environment and innovation-based growth of the LOTOS Group require seeking continuous improvement and ensuring highly active risk management.

Active risk and opportunity management has been included in the strategic objectives for 2017-2022 and is implemented through two strategic initiatives:

- Risk management to optimise value for stakeholders,
- Building a strong culture of open dialogue and early response to risk symptoms, with more effective risk appetite management in the long run.

In 2017, the Group defined future development directions for the ERM in line with best market practices. Changes were introduced in the organisational structure of Grupa LOTOS S.A. (including the establishment of the Enterprise Risk Management Office) and improvements were made in the conceptual framework and operation of the ERM across the LOTOS Group. ERM activities are focused on key business risks, in particular on forecasting their impact on the company's operations, thus allowing development of pro-active measures that may help mitigate or exploit risks or their consequences. This key functionality of the ERM is currently being enhanced by the LOTOS Group.

In 2017, the following improvements were made by the LOTOS Group to its risk management:

- The TOP RISK category was added, comprising critical risks to the organisation, which will be given priority by the Management Boards of Group companies and will also be analysed by the Enterprise Risk Management Committee and reported to the Management Board of Grupa LOTOS S.A,
- Risk evaluation matrices were modified with respect to impact assessment criteria for financial and reputation risks,
- A new opportunity evaluation matrix was added to enable identification and taking advantage of the most promising opportunities from the point of view of the Group's strategy,
- Risk management coordinators were appointed at LOTOS Group companies, who will be responsible for developing, supporting and coordinating risk identification and evaluation efforts in their respective companies as well as for communicating risks across the Company,
- Formal processes were streamlined and focus was shifted to taking pro-active/ risk mitigating measures.

Enterprise risk management measures are implemented by the LOTOS Group with the support of the ERM Portal, an internal IT system which is continuously developed and improved.

6.1.2. Risk management process

At the corporate level, risks and opportunities are managed through a process comprising:

- Risk identification – risks are identified in the context of annual strategic and operating objectives,
- Risk analysis and evaluation – risks are evaluated in the annual and long-term perspectives in terms of their potential consequences for the LOTOS Group's financial standing and reputation, aggregated into impact on such non-financial parameters as the LOTOS Group's image, the environment and people's well-being;
- Establishing risk treatment plan – for each material risk, an operational management procedure as well as controls and protection measures are defined. For TOP RISKS, detailed risk management charts are prepared, which cover relevant risk mitigation and exploitation activities, as well as risk treatment plans to be followed in case of materialisation of such risk,
- Implementation of risk mitigation and opportunities enhancement measures – performing tasks defined in risk treatment plans and monitoring their progress on an ongoing basis,
- Monitoring of risk indicators – for top risks, key risk indicators (KRIs) are defined, which allow risk exposure levels and risk materialisation probability to be monitored in accordance with relevant rules,
- Risk reviews – periodically (every six months), all identified risks are reviewed and reevaluated,
- Communication and reporting – standards for communicating and reporting the results of risk management are in place at every stage of the process. The Management and Supervisory Boards receive regular, quarterly reports on existing risks to the organisation and on the effectiveness of risk mitigation or exploitation measures,
- The effectiveness and adequacy of the ERM are assessed and its future development directions are defined on an annual basis.

6.1.3. Risk oversight – ERM participants

OVERSIGHT LEVEL	ROLE
Supervisory Board	• monitors the effectiveness of the enterprise risk management
Management Board	• determines risk appetite in the context of the adopted strategy • takes key decisions regarding TOP RISKs, including resources and the ERM
Enterprise Risk Management Committee	• provides opinions on and recommends measures applicable to TOP RISKs and the ERM, including risk appetite • monitors the performance of planned tasks • the Committee consists of representatives of key corporate functions
Enterprise Risk Management Office	• coordinates and supports enterprise risk management measures taken by Risk Owners at the LOTOS Group • supports risk coordinators at LOTOS Group companies • collates information on risks to the organisation • is responsible for coordinating and developing enterprise risk management
Risk owners	• manage individual risks, which includes defining risk treatment plans, monitoring risk levels, and overseeing risk mitigation and opportunities enhancement measures
Project teams/individuals	• identify new risks • implement risk mitigation or opportunities enhancement measures
Internal Audit Office	• identifies and evaluates risks to the LOTOS Group's operations • verifies relevant controls and examines their effectiveness • assesses the effectiveness of the enterprise risk management as part of the organisational maturity assessment

6.2. Risk categories in the LOTOS Group

The key risks to the LOTOS Group's business comprise strategic, operational, financial, reputation and compliance risks. Those risks create uncertainty as to whether the Group's strategic or operating objectives will be achieved.

Strategic risks

In 2017, the key risks affecting both current and long-term performance were risks associated with strategic and growth projects, such as EFRA (Delayed Coking Unit) and development of the B8 and Norwegian fields.

Simultaneous implementation of major development projects in two key business areas, i.e. production and refining, requires key budget expenditure, project schedule and work progress to be continuously monitored. The expected benefits of the projects are a key element of the new strategy adopted by the LOTOS Group.

By regularly monitoring the progress of, and risks related to, strategic projects, the LOTOS Group is able to anticipate the situation and thus implement supportive measures and take advantage of emerging opportunities. As part of project management, the LOTOS Group applies portfolio management practices, directing capital flows to where they are needed, depending on the Company's condition and environment.

The LOTOS Group is always exposed to risk from megatrends. In 2017, the Group enjoyed favourable market conditions, including wide crack spreads and increasing oil prices. These megatrends allowed the LOTOS Group to seize emerging opportunities and improve performance. Key to the LOTOS Group are also regulatory risks, both at the national and European level. The legal environment and proposed regulation amendments are continuously monitored to mitigate their potential adverse impact and take advantage of related opportunities (e.g. in the growing electromobility market).

Financial risks

Liquidity and ability to finance operations are crucial to any company, allowing it not only to carry on its core business on an ongoing basis, but also to invest in development and meet long-term liabilities.

As it is carrying out major investment projects and continues to discharge previously incurred investment liabilities (10+ Programme), the LOTOS Group is constantly monitoring its liquidity and debt ratios. In 2017, it enjoyed a high liquidity ratio, which allowed it to finance development projects in line with its strategic objectives.

Operational risks

The LOTOS Group continuously monitors risks specific to each of its various operating segments. Operating activities are associated with a number of risks, which are mitigated and exploited by the Group's personnel on a daily basis.

Special focus is placed on assessment of safety, environmental and technical risks in order to ensure secure operating processes. The Company also attaches great weight to ensuring customer satisfaction through top-quality logistics and sales processes. The LOTOS Group continues to introduce new risk mitigation measures to enhance occupational health and safety and ensure that its operations are carried out with respect for the natural environment.

Reputation & Compliance

The LOTOS Group operates in a very complex legal and regulatory environment. In order to minimise compliance risk, dedicated compliance units have been established in all companies of the Group to support relevant risk management measures.

Great value is also attached to good and mutually beneficial relations with the Group's key stakeholders, including shareholders, investors, society, the environment, employees, suppliers, and financial institutions. Internal processes (including reporting and communication) are continuously enhanced to ensure the highest level of transparency in our relations with stakeholders, particularly in our dialogue concerning risks involved in the Group's business and their mitigation.

Strategic

Strategic projects
Regulatory
Megatrends
Geopolitical
Technological
Competency

Operational

HSE
Exploration
Production
Refining
Sales
Logistics
Procurement
Financial operations
IT
Force majeure (e.g. natural disasters)
Security

Financial

Market
Liquidity
and financing
Credit

Reputation & Compliance

Legal
Employees
Investors
Customers
Social and environmental

Detailed overview of key risks to the LOTOS Group

Minor risk	●○○	Moderate risk ●●○	Major risk ●●●
Stable risk	→	Risk increasing ↗	Risk decreasing ↘
NON-FINANCIAL CATEGORIES:	P personnel; S social	AC anti-corruption; NE natural environment	HR human rights

	CATEGORY	BRIEF DESCRIPTION OF RISK	RISK MITIGATION/ RESPONSE MEASURES	POTENTIAL ADVERSE IMPACT OF RISK	RISK LEVEL	TREND
	STRATEGIC RISKS					
1.	**Risk in strategic projects**	Delayed delivery of strategic projects such as EFRA, B8 field development or hydrogen recovery unit (HRU)	• Comprehensive, step-by-step project planning • Careful selection of qualified contractors • Project implementation in accordance with the Group's project management rules and standards • Systematic risk review for each project • Monitoring of progress made on projects, forecasting of project parameters, and mitigation of emerging risks	• Delayed delivery of target financial results	●●●	↗
2.	**Geopolitical risk**	Disrupted or delayed supplies of crude oil or other essential feedstocks	• Diversification of oil supplies • Maintaining adequate levels of work-in-process stocks • Providing for relief measures in supply contracts in case a delivery route becomes unavailable	• Unscheduled downtime • Reduced revenue and profits	●●○	→
3.	**Regulatory risk**	Adverse impact from amended legislation or failure to comply with new national or EU regulations	• Effective Compliance Department • Monitoring of new regulations and ensuring compliance • Taking advantage of opportunities arising from new regulations	• Increased finance costs of achieving compliance with new regulations • Non-compliance fines	●●○	→

4.	**Risk from megatrends**	Fluctuating supply and demand trends on the fuel market	• Performing long-term trend analyses and updating strategy to mitigate adverse effects or seize new opportunities to gain a competitive advantage (e.g. in electric mobility) • Implementation of development projects to expand and diversify the existing asset portfolio • Implementation of development projects to improve the flexibility of production/refinery processing operations	• Significant impact on financial performance	●●○	→
	FINANCIAL RISKS					
5.	**Liquidity and financing risk**	Mismanagement of working capital and constrained financing capacity	• Assessing and forecasting the Group's cash flows and liquidity • Analysis of financing sources available to the Group • Diversification of financing sources. • Optimising liquidity and debt across the Group • Effective management of strategic project portfolio	• Weaker operating performance • Reduced number of profitable investments • Suspended, delayed or abandoned development projects	●●●	→
6.	**Market risk**:	Fluctuating prices of feedstock and petroleum products, fluctuating foreign exchange and interest rates	• Following the adopted feedstock and petroleum product price risk management policy and currency risk management policy • Monitoring market risk exposure on a daily basis • Selecting a trading strategy in line with policy objectives, current market situation and applicable risk limits	• Deteriorated liquidity and financial performance • Impeded implementation of strategic projects	●●●	→ (risk with positive impact on the Group's financial performance in 2017)
7.	**Credit risk**	Insolvent trading partners or counterparties in financial contracts	• Monitoring of partners' ratings and financial standing • Setting trade credit limits and limits for counterparties in financial contracts in accordance with internal procedures • Employment of diverse financial tools to minimise risk	• Deteriorated liquidity and financial performance	●●○	→
	OPERATIONAL RISKS					
8.	**Exploration risk**	Incorrect estimation of resources, including incorrect estimation of hydrocarbon resources and	• Conduct of numerous geological and reservoir engineering studies depending on the well (exploratory, appraisal, or appraisal and production well)	• Loss of opportunity or investing in an unsuccessful project, resulting in drilling a	●●○	→

		reserves discovered by exploration wells; or drilling of dry wells (without hydrocarbon flows)	• A number of decision points included in each project phase (initial phase, execution phase, well results analysis and reservoir evaluation, design phase) to minimise dry well risk • Applying international probability-of-success (PoS) standards	dry well and consequent losses • Incurring high exploration costs		
9.	**Production risk** P NE	Risk of drilling or production failure, resulting in reduced availability of affected infrastructure	Implementing a range of measures to mitigate such risks as blowout, well failure, oil spill, fire, and collision at sea and to monitor their effective oversight, including: • monitoring of process parameters • equipment performance tests • use of appropriate safety measures • compliance with applicable safety and operating procedures	• Reduced production, disrupted operations • Harm to people and damage to the environment • Damage to reputation • Revenue erosion and site restoration costs, with a negative impact on financial performance		
10.		Geological reservoir risk and downhole equipment-related risk	• Reservoir analysis (updating integrated static and dynamic models) and assessing well and pump performance on an ongoing basis • Taking measures to achieve projected production volumes • Compliance with review schedules • Having equipment routinely inspected by certifying institutions (Polish Register of Shipping, Mining Authority, Technical Inspection Office). • Following an optimal spare part storage policy and compliance with the adopted machinery and equipment maintenance policy • Improving staff qualifications	• Failure to achieve projected production volumes, • Reduced revenue and profits		
11.	**Refining risk**	Failure of refinery processing units	• Inspecting the technical condition of processing equipment and components in line with maintenance schedules • Developing a risk based inspection (RBI) plan • Having equipment inspected by the Technical Inspection Office and Company Technical Inspection • Identifying Critical Equipment subject to special inspection rules • Carrying out annual Failure Prevention Plans and Maintenance/Overhaul Plans • Improving staff qualifications, including simulation-based training	• Production downtime or reduced availability of processing units • Loss of ability to make deliveries to customers • Reduced revenues and profits		

12.	**HSE risk**
	P
	NE
	HR
		Accidents along the entire production cycle and logistics chain (including road and rail accidents during product transport and aircraft accidents during rig crews transport)	• Regular inspections of OHS compliance at the workplace
			• Raising employees' awareness of and commitment to safety culture by taking various initiatives
			• Implementation of the annual Health and Safety Plan for the LOTOS Group
			• For EFRA Project: developing the "EFRA Project Safety Rules" (in the form of a booklet), running a newsletter, the Incentive Programme to award employees who do their work safely; weekly OHS reviews together with the Project management team
			• In the area of air safety:
			  ○ High safety requirements for aircraft fleet – AOC and E12 certificates, IFR approval.
			  ○ Ongoing monitoring of weather conditions and proper logistics of passenger transport by sea, to minimise risks.
			  ○ Reviewing the terms and conditions of contracts with carriers, to ensure appropriate quality and safety of transport.
				• Harm to people and damage to the environment
				• Damage to reputation and costs of recovery from reputational crisis
				• Site restoration and compensation costs
				• Disrupted operations, reduced revenue and profits
					●●○	→

13.	**Security risk**	Destruction of critical infrastructure in an act of terrorism	• Periodical drills to check security and communication systems • Implemented procedures in case of physical security or protection breaches • Participation in the Government Centre for Security's training • Communication with the Provincial Emergency Management Centre	• Inability to conduct principal business • Suspension of operations, reduced revenue and profits	●●○	→
14.	**IT risk**	External or internal interference with IT and OT systems (cyber attack) and failures caused by insufficient resources and inefficient IT processes	• IT security audits • In-house procedures for system security management • Regular security tests on ICT infrastructure • Raising employees' awareness of cyber security issues (training, information, tests) • Support from ABW CERT	• Disruptions in key business processes, including threat to business continuity • Loss of confidentiality, availability and integrity of data and systems • Reduced revenue and profits	●●○	→
15.	**Procurement risk** S	Buying from an unreliable supplier participating in VAT "carousel fraud"	• Detailed checks of trade partners • Inclusion of relevant clauses in contracts with trade partners • Due diligence	• VAT liabilities • Weaker financial performance	●●●	↘

	REPUTATION AND COMPLIANCE RISKS					
16.	**Legal risk** AC HR	Misconduct understood as a deliberate act or omission which constitutes violation of the law or a breach of the LOTOS Group's internal regulations, committed to secure an unlawful gain or causing the Company to sustain undue losses (including corrupt practices).	• Misconduct Risk Management Programme, which consists in the coordination of misconduct prevention and detection measures implemented in individual business processes, misconduct prevention education, identification and assessment of misconduct risks, as well as overall evaluation of the organisation's resilience to misconduct. • Ethical Conduct Programme, which is pursued through the Code of Ethics, the Ethics Officer and the Ethics Hotline, as well as training activities.	• Financial losses for the LOTOS Group • Loss of reputation		
17.		Violation of data protection laws	• Establishment of internal data protection standards, including as part of the Security Policy, and data protection procedures • Audits, also by external auditors, to verify whether the organisation observes the applicable rules and how it is prepared to comply with the new GDPR requirements • Raising employees' awareness (training, meetings)	• Fines • Loss of reputation		
18.	**Environmental risk** S NE	Leakage from vessels carrying crude oil / products made by the LOTOS Group	• Working with service providers that observe the performance standards set out in resolutions of the International Maritime Organization (IMO) and comply with the maritime security conventions • Including clauses on technical condition of ships in contracts with trading partners and providers of sea transport services • Working with shipowners that are members of the International Tanker Owners Pollution Federation Ltd. (ITOPF) and hold the required insurance certificates • Membership in the International Oil Pollution Compensation Fund (IOPCF)	• Environmental pollution • Loss of reputation • Financial losses due to loss of cargo • Reduced revenue and profits		
19.		Oil spill on rig	• Maintaining offshore equipment in good technical condition to minimise the risk of accidents on rigs • Taking steps to control the risk of formation fluid invasion at the stage of planning and conducting well drilling operations • Holding annual drills in oil spill control • Selecting the right anti-spill equipment	• Environmental pollution • Loss of reputation • Cost of removing damage • Disrupted operations • Reduced revenue and profits		

20.		Periodical spikes in emissions from the refining process	• Constantly monitoring the process and emission parameters • Maintaining high technical standards; BAT requirements • Implementation of environmental management plans	• Loss of reputation • Fines		
21.	**Employees risk** P	Employees resisting changes introduced in the LOTOS Group	• In the case of restructuring – open communication with employees, trade unions and works council about the planned changes • Communicating the restructuring plans to media • Opportunities for employees to gain new qualifications/ retrain • Offering support in the event of a change of workplace and relocation; financial assistance • Outplacement and support in finding new job outside the LOTOS Group • Ongoing monitoring of employee sentiment	• Lower loyalty and motivation, project delays • Loss of reputation • Limited potential to develop competence		
22.		Difficulties with recruitment of qualified staff and retention of competent and experienced employees	• Building a knowledge management system to enable effective knowledge sharing/transfer and develop staff competencies necessary to achieve near- and long-term business goals • Management staff development programme • Building an engaging work environment to enhance productivity • Creating space for development and innovation within the organisation • Building a good employer image inside and outside the organisation	• Increased expenditures on employer promotion, recruitment, and programmes preventing employee departures		
23.	**Social risk** S HR	Social protests against the Group's projects	• Maintaining good relations with stakeholders. Holding meetings to inform stakeholders about the Group's projects • Open communication on the Group's current operations and projects • Maintaining good relations with industry, local, nationwide and foreign media • Working with the supervisory bodies and public authorities to prevent crises that may arise in the course of legislative procedures, whether Polish or EU.	• Development project delays • Loss of reputation • Reduced revenue and profits		

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for 2017

Organisation and management at Grupa LOTOS S.A. and the LOTOS Group

7. Organisation and management at Grupa LOTOS S.A. and the LOTOS Group

7.1. Ownership links and management rules

7.1.1. Divisions of Grupa LOTOS S.A.

Grupa LOTOS S.A. has no divisions (establishments) within the meaning of the Polish Accounting Act.

7.1.2. Changes in organisational or capital links between Grupa LOTOS S.A. and other entities

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.

The Group also holds shares in equity-accounted joint ventures (for more information, see Note 14 to the consolidated financial statements).

Key information on the Group entities and on the Group's ownership interests in those entities as at December 31st 2017 is presented below. The ownership interests did not change relative to December 31st 2016.

Name	Registered office	Description of business	Group's ownership interest	
			Dec 31 2017	Dec 31 2016
Parent				
Downstream segment				
• Grupa LOTOS S.A.	Gdańsk	Manufacturing and processing of refined petroleum products (mainly fuels) and their wholesale	Not applicable	Not applicable
Direct fully-consolidated subsidiaries				
Upstream segment				
• LOTOS Upstream Sp. z o.o. (parent of another group: LOTOS Upstream Group) (1)	Gdańsk	Activities of head offices and holdings	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%
Downstream 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	Manufacturing 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) (2)	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 (3)				
• Infrastruktura Kolejowa Sp. z o.o.	Gdańsk	Dormant	100.00%	100.00%
• LOTOS Foundation	Gdańsk	Socially beneficial activity 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	Description of business	Group's ownership interest	
			Dec 31 2017	Dec 31 2016
Indirect fully-consolidated subsidiaries				
Downstream segment				
GK LOTOS Lab Sp. z o.o.				
• LOTOS Vera Sp. z o.o.	Gdańsk	Manufacture of cars	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%
Upstream segment				
LOTOS Upstream Group				
• LOTOS Exploration and Production Norge AS	Norway, Stavanger	Oil exploration and production on the Norwegian Continental Shelf, provision of services incidental to oil and gas exploration and production	100.00%	99.99%
• 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%	99.99%
• UAB Genciu Nafta	Lithuania, Gargždai	Crude oil exploration and production	100.00%	99.99%
• UAB Manifoldas	Lithuania, Gargždai	Crude oil exploration and production	100.00%	99.99%
LOTOS Petrobaltic Group				
• Aphrodite Offshore Services N.V.	Curaçao	Sea transport services (dormant)	99.99%	99.99%
• 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	Exploration for and production of crude oil and natural gas	99.99%	99.99%
• Miliana Shipholding Company Ltd. (parent of another group: Miliana Shipholding Company Group)	Nicosia, Cyprus	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%
• Miliana Shipmanagement Ltd.	Nicosia, Cyprus	Provision of sea transport and related services	99.99%	99.99%
• Miliana Shipping Group Ltd. (parent of another group: Miliana Shipping Group Group)	Nicosia, Cyprus	Management of own assets	99.99%	99.99%
• Bazalt Navigation Co. Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
• Granit Navigation Company Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
• Kambr Navigation Company Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
• St. Barbara Navigation Company Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%

Name	Registered office	Description of business	Group's ownership interest	
			Dec 31 2017	Dec 31 2016
• Petro Icarus Company Ltd.	Nicosia, Cyprus	Ship chartering	99.99%	99.99%
• Petro Aphrodite Company Ltd.	Nicosia, Cyprus	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) On March 10th 2017, Grupa LOTOS S.A. acquired 100% of shares in LOTOS Upstream Sp. z o.o., for a total price of PLN 6 thousand.

(2) On November 6th 2017, LOTOS Lab Sp. z o.o. acquired 100% of shares in Lucea 3 Sp. z o.o. (currently: LOTOS Vera Sp. z o.o.) for a total price of PLN 6 thousand.

(3) The companies were excluded from consolidation due to immateriality of the amounts disclosed in their financial statements as at December 31st 2016 (IFRS 10 *Consolidated Financial Statements*).

7.1.3. Ownership changes at Grupa LOTOS S.A. and the LOTOS Group

Below are discussed changes in the Group's structure in 2017.

B8 spółka z ograniczoną odpowiedzialnością BALTIC S.K.A. – registration of share capital increase

On March 2nd 2017, the Extraordinary General Meeting of B8 spółka z ograniczoną odpowiedzialnością BALTIC S.K.A. passed a resolution to increase the company's share capital from PLN 987,817,450.00 to PLN 1,220,243,450.00, i.e. by PLN 232,426,000 through the issue of:

a) 23,134,132 Series E ordinary registered shares with a par value of PLN 10.00 per share;

b) 108,468 Series F ordinary registered shares with a par value of PLN 10.00 per share.

The new shares in the increased share capital were acquired by LOTOS Petrobaltic S.A. with the pre-emptive rights of the Company's general partner, i.e. B8 sp. o.o., waived. The new shares were paid for with both cash and a non-cash contribution. The amount of LOTOS Petrobaltic S.A.'s cash contribution was PLN 1,084.680.00. The contribution was required pursuant to the conditions set out in the financing agreements with BGK S.A. and PFR S.A.

On March 10th 2017, the share capital increase was registered in the Business Register of the National Court Register.

LUPS Sp. z o.o. – acquisition of 100% shares, registration of change of the company's name, share capital increase

On March 10th 2017, Grupa LOTOS S.A. acquired from Kancelaria Prawna Domański i Wspólnicy sp.k. a 100% interest (50 shares) in LUPS Spółka z ograniczoną odpowiedzialnością of Gdańsk, for a total price of PLN 6 thousand, i.e. PLN 120.00 per share. On April 7th 2017, the District Court for Gdańsk-Północ registered the new consolidated text of the company's Articles of Association, including a change of the company's name to LOTOS Upstream Sp. z o.o. On December 8th 2017, the Extraordinary General Meeting of LOTOS Upstream Sp. z o.o. passed a resolution to increase the company's share capital from PLN 5,000 to PLN 520,005,000, i.e. by PLN 520,000,000 through the issue of 5,200,000 new shares with a par value of PLN 100 per share. All the new shares were acquired by Grupa LOTOS against a cash contribution of PLN 520,000,000.

On February 6th 2018, the share capital increase was registered in the Business Register of the National Court Register.

On February 21st 2018, the General Meeting of LOTOS Upstream Sp. z o.o. issued its consent the establishment of a foreign subsidiary, LOTOS E&P UK Limited based in London (United Kingdom), with a share capital of GBP 15,000 (to conduct production operations on the British Shelf).

Baltic Gas Sp. z o.o. i Wspólnicy sp.k. – payment made as part of agreed cash contribution; increase in contribution amount agreed on by limited partners

On March 24th 2017, LOTOS Petrobaltic S.A. made a payment of PLN 187,995.43 to Baltic Gas spółka z ograniczoną odpowiedzialnością i Wspólnicy sp. k. as part of the agreed cash contribution (under the partners' resolution of October 22nd 2015) (total amount of all contributions paid: PLN 80,833,806.58). On May 31st 2017, the partners in the company passed resolutions to increase the agreed contribution amount:

a) LOTOS Petrobaltic S.A. (LPB) – from PLN 81,869,711 to PLN 86,396,383, i.e. by PLN 4,526,672;
b) CalEnergy Resources Poland Sp. z o.o. (CER) – from PLN 98,933,897 to PLN 109,645,403, i.e. by PLN 10,711,506.

Additional payments towards the agreed contribution amount will be made at the general partner's request. By June 30th 2017, at the general partner's request, LPB and CER had made additional payments of PLN 2,771,532.18 and PLN 4,800,706.38, respectively. On September 29th 2017, LOTOS Petrobaltic S.A. made a cash payment of PLN 2,434,257.25 to Baltic Gas spółka z ograniczoną odpowiedzialnością i Wspólnicy spółka komandytowa as part of the agreed contribution (following the partners' decision of May 31st 2017).

As at October 31st 2017, total contributions made by LOTOS Petrobaltic S.A. amounted to PLN 86,039 thousand.

Baltic Gas Sp. z o.o. – share capital increase

On May 31st 2017, the company's shareholders LOTOS Petrobaltic S.A. (a 50% interest) and CalEnergy Resources Poland sp. z o.o. (a 50% interest) passed a resolution to increase the company's share capital from PLN 220,440 to PLN 245,000, i.e. by PLN 24,600, through the issue of 492 new shares with a par value of PLN 50 against a cash contribution. Pursuant to the resolution, each of the shareholders, LOTOS Petrobaltic S.A. and CalEnergy Resources Poland Sp. z o.o., acquired shares in the company with a total par value of PLN 12,300.

Infrastruktura Kolejowa Sp. z o.o. – contribution to equity

On September 28th 2017, the Extraordinary General Meeting of Infrastruktura Kolejowa Sp. z o.o. passed a resolution to obligate Grupa LOTOS, as the company's sole shareholder, to make an additional contribution to equity of PLN 20,000. Fulfilling its obligation under the resolution, on September 29th 2017 Grupa LOTOS made a contribution to the company's equity in the full amount.

Lucea 3 Sp. z o.o. – acquisition of 100% shares; share capital increase and amendments to articles of association

On November 6th 2017, LOTOS Lab Sp. z o.o. acquired from MWW Trustees Spółka z ograniczoną odpowiedzialnością a 100% interest (100 shares) in Lucea 3 Spółka z ograniczoną odpowiedzialnością of Warsaw, for a total price of PLN 6 thousand, i.e. PLN 60.00 per share. On December 13th 2017, the Extraordinary General Meeting of Lucea 3 Sp. z o.o. passed a resolution to increase the company's share capital from PLN 5,000 to PLN 40,000,000, i.e. by PLN 39,995,000 through the issue of 799,900 new shares with a par value of PLN 50 per share. All the new shares were acquired by LOTOS Lab Sp. z o.o. (the company's only shareholder) against a cash contribution of PLN 39,995,000. On December 13th 2017, the Extraordinary General Meeting of Lucea 3 Sp. z o.o. passed a resolution to amend the company's Articles of Association and change its name from Lucea 3 Sp. z o.o. to LOTOS Vera Sp. z o.o.

As at the date of this Directors' Report, neither the share capital increase nor the amendments to the company's Articles of Association, including the change of its name, had been registered.

LOTOS Lab Sp. z o.o. – share capital increase

On December 6th 2017, the Extraordinary General Meeting of LOTOS Lab Sp. z o.o. passed a resolution to increase the company's share capital from PLN 1,000,000 to PLN 99,000,000, i.e. by PLN 98,000,000, through the issue of 196,000 new shares with a par value of PLN 500 per share. All the new shares were acquired by Grupa LOTOS against a cash contribution of PLN 98,000,000.

On January 16th 2018, the share capital increase was registered in the Business Register of the National Court Register.

LOTOS Exploration and Production Norge AS – share capital increase

On December 12th 2017, the General Meeting of LOTOS Exploration and Production Norge AS passed a resolution on private placement with LOTOS Upstream Sp. z o.o. of 900,000,000 warrants, each carrying the right to acquire one Series B share with a par value of NOK 1.00 per share. In the exercise of rights attached to the warrants, on December 18th 2017, LOTOS Upstream sp. z o.o. made a declaration of acquiring 777,085,104 Series B shares with a value of NOK 1 per share. The new shares were paid for with a cash contribution of NOK 777,085,104. Accordingly, LOTOS E&P Norge AS' share capital increased from NOK 2,233,718,441 to NOK 3,010,803,545.

The share capital increase at LOTOS E&P Norge AS was registered on January 18th 2018.

Upstream segment's reorganisation

On April 19th 2017, LOTOS Petrobaltic S.A. (as the seller) and LOTOS Upstream sp. o.o. (as the buyer) entered into a conditional agreement for sale of all shares in LOTOS Exploration and Production Norge AS of Stavanger, Norway. The purchase price was PLN 91.7m.

On September 29th 2017, the parties executed an annex to the agreement whereby the deadline for satisfying the conditions precedent was extended to December 31st 2017.

Given that all the conditions precedent had been met, on December 12th 2017 the parties settled the agreement of April 19th 2017, and thus on December 12th 2017 LOTOS Upstream Sp. z o.o. acquired 2,233,718,440 Series B shares in LOTOS E&P Norge AS held by LOTOS Petrobaltic S.A.

On June 12th 2017, LOTOS Petrobaltic S.A. (as the seller) and LOTOS Upstream Sp. o.o. (as the buyer) entered into a conditional agreement for sale of 72,800 shares in AB LOTOS Geonafta of Gargždai, Lithuania. The purchase price was PLN 59.6m.

On September 29th 2017, the parties executed an annex to the agreement whereby the deadline for satisfying the conditions precedent was extended to December 31st 2017.

Given that all the conditions precedent had been met, on December 12th 2017 the parties settled the agreement of June 12th 2017, and thus on December 12th 2017 LOTOS Upstream Sp. z o.o. acquired 72.800 shares in AB LOTOS Geonafta held by LOTOS Petrobaltic S.A.

On December 20th 2017, the General Meeting of Aphrodite Offshore Services N.V. of Curaçao resolved to put the company in liquidation. Moonlight Foundation was appointed as the company's liquidator. The liquidator paid USD 1,380 thousand to the sole shareholder (LOTOS Petrobaltic S.A.) as an interim distribution of the liquidation amount. The other assets held by the liquidated company will be distributed after all its liabilities have been settled and the liquidation costs have been covered.

On January 29th 2018, the liquidation procedure of Aphrodite Offshore Services N.V. was closed, but the liquidation amount remained undistributed pending final payment of the company's costs and tax liabilities, if any, for 2017.

On December 19th 2017, a plan of cross-border merger through acquisition was adopted, with LOTOS Petrobaltic S.A. of Gdańsk as the acquirer and Miliana Shipholding Company Ltd. of Nicosia, Cyprus (a wholly-owned subsidiary of LOTOS Petrobaltic S.A.) as the acquiree. Following the acquisition of Miliana Shipholding Company Ltd. by LOTOS Petrobaltic S.A., all the acquiree's assets and liabilities will be transferred to the acquirer, and the acquiree will be deleted from the relevant register. The acquirer will assume all the rights and obligations of the acquiree by way of universal succession, with its legal form, name and registered office unchanged.

Since LOTOS Petrobaltic S.A. is the sole shareholder of Miliana Shipholding Company Ltd., the planned merger may be a simplified process. The merger plan was published on LOTOS Petrobaltic S.A.'s website and in the Cyprus Official Government Gazette on December 28th and December 29th 2017, respectively.

On January 8th 2018, the Management Boards of Miliana Shipholding Company Ltd. andMiliana Shipping Group Ltd., both registered in Cyprus, approved a merger plan for these companies. As a result of the merger through acquisition, Miliana Shipholding Company Ltd. (the sole shareholder of the acquiree) will acquire Miliana Shipping Group Ltd. In consequence, all the acquiree's assets and liabilities will be transferred to the acquirer, and the acquiree will be deleted from the relevant register.

7.1.4. Changes in key management policies of Grupa LOTOS S.A. and its subsidiaries

Except changes in the composition of the Management Board and in the Company's organisational structure, there were no other changes of key management policies of Grupa LOTOS S.A. and the LOTOS Group. As regards the management of its group companies: the numbers of their management board members were increased, supervisory boards were appointed, and segmental management carried out through a dedicated member of the Grupa LOTOS S.A. management board was departed from. These measures implemented the provisions of the Act on State Property Management.

7.2. Employment at the LOTOS Group

7.2.1. Structure of the LOTOS Group workforce

Breakdown of the LOTOS Group workforce by type of position

Company	Number of employees as at Dec 31 2017	
	Blue-collar jobs	White-collar jobs
Grupa LOTOS S.A.	493	952
LOTOS Paliwa Sp. z o.o.	0	269
LOTOS Kolej Sp. z o.o.	691	325
LOTOS Oil S.A.	91	179
LOTOS Lab Sp. z o.o.	14	112
LOTOS Serwis Sp. z o.o.	314	147
LOTOS Straż Sp. z o.o.	76	14
LOTOS Asfalt Sp. z o.o.	121	121
LOTOS Asfalt Sp. z o.o.	0	1
LOTOS Ochrona Sp. z o.o.	158	25
LOTOS Air BP Polska Sp. z o.o.	41	16
LOTOS Infrastruktura S.A.	40	31
LOTOS Terminale S.A.	63	50
RC Ekoenergia Sp. z o.o.	42	30
LOTOS Biopaliwa Sp. z o.o.	23	15
LOTOS Petrobaltic S.A.	151	211
Energobaltic Sp. z o.o.	0	26
LOTOS E&P Norge AS	3	27
AB LOTOS Geonafta	50	9
UAB Genciu Nafta	1	1
UAB Manifoldas	0	3
Miliana Shipping Ltd	0	0
Technical Ship Management	0	7
SPV Baltic Spółka z o.o.	6	5
	2337	2560

Company	Number of employees as at Dec 31 2017	
	Blue-collar jobs	White-collar jobs
Total		4897

Breakdown of Grupa LOTOS S.A. workforce by sex (as at December 31st 2017)

Job type	Men	Women	Total
blue-collar jobs	493	0	493
white-collar jobs	494	458	952
Total	987	458	1445

Breakdown of the LOTOS Group workforce by sex (as at December 31st 2017)

Job type	Men	Women	Total
blue-collar jobs	2261	76	2337
white-collar jobs	1518	1042	2560
Total	3779	1118	4897

Headcount at the LOTOS Group in 2012-2017

Workforce	Dec 31 2012	Dec 31 2013	Dec 31 2014	Dec 31 2015	Dec 31 2016	Dec 31 2017
Grupa LOTOS S.A.	1,349	1,345	1,350	1,364	1,406	**1,445**
The LOTOS Group	5,015	4,983	5,106	4,850	4,936	**4897**

7.2.2. Control systems for employee stock option plans

In 2017, the LOTOS Group did not operate any employee stock option plan.

7.2.3. Agreements between the Company and the management staff; remuneration, awards and benefits paid to the management and supervisory staff of Grupa LOTOS S.A.

Remuneration paid to members of the Management Board of Grupa LOTOS S.A. for 2017 (PLN)

Management Board members	Short-term employee benefits (salaries)	Management Board – subsidiaries*	Total remuneration paid
Paweł Olechnowicz	283,424.36	0	**283,424.36**
Marek Sokołowski	282,505.74	0	**282,505.74**
Mariusz Machajewski	722,624.16	127,213.85	**849,838.01**
Maciej Szozda	25,682.34		**25,682.34**
Zbigniew Paszkowicz	256,823.40		**256,823.40**
Mateusz Bonca	633,618.40	90,944.67	**724,563.07**
Marcin Jastrzębski	741,397.32	90,944.67	**832,341.99**
Robert Pietryszyn	102,729.36		**102,729.36**
Przemysław Marchlewicz	128,411.70		**128,411.70**
Kawula Jarosław	667,906.63		**667,906.63**
Total	**3,845,123.41**	**309,103.19**	**4,154,226.60**

Annual bonuses for Management Board members (PLN)

Management Board members	Current liabilities under annual bonus for 2017
Marcin Jastrzębski	460,164.96
Mateusz Bonca	427,508.60
Jarosław Kawula	513,010.32
Total	**1,400,683.88**

Payment of the annual bonus is conditional on the achievement of targets set for the Management Board members.

Remuneration paid to members of the Supervisory Board of Grupa LOTOS S.A. for 2017 (PLN)

Supervisory Board members	Total remuneration paid
Ciach Piotr	79,268.04
Figura Dariusz	79,268.04
Golecki Mariusz	79,268.04
Kozłowska-Chyła Beata	89,837.16
Lewandowska Katarzyna	79,268.04
Lewandowski Adam	79,268.04
Szklarczyk-Mierzwa Agnieszka	79,268.04
Total	**565 445.40**

7.3. Environmental protection

Environmental protection efforts

In 2017, in addition to safe completion of the maintenance shutdown at the Grupa LOTOS refinery in Gdańsk, the environmental protection activities focused on the continuation of efforts commenced in 2016 with a view to ensuring the refinery's compliance with the requirements of the Commission Implementing Decision of 9 October 2014 establishing the best available techniques (BAT) conclusions for the refining of crude oil and gas in accordance with Directive No. 2010/75/EU of the European Parliament and of the Council on industrial emissions (the BAT conclusions). Already on the document's publication date, the Grupa LOTOS refinery units met almost all of its stringent requirements, with further work required only in two areas.

The first one concerns the scope and method of monitoring pollutant emissions from the refinery units. Before the requirements of the BAT conclusions came into force, refiners had been required to measure emissions from process emitters twice a year: in winter (October–March) and summer (April–September) and, depending on the findings – often based on other process parameters – determine the level of annual emissions. Measurements were performed for four key pollutants defined by law (sulfur dioxide (SO_2), nitric oxides (NO_x), carbon monoxide (CO) and particulate matter (PM).

Following the entry into force of the new requirements, the Grupa LOTOS refinery in Gdańsk will be required, with the use of special systems, to start:

- continuous measurements of SO_2, NO_x, CO and PM emissions on two process emitters, due to the aggregate capacity of interlinked process units;
- continuous measurements of SO_2 emissions on two process emitters, because of the exhaust gas from the Claus unit.

In addition, the BAT conclusions require refiners to periodically monitor emissions of polychlorinated dibenzodioxins and furans (PCDD/F) on the outlets of catalytic reforming units, as these compounds are formed during catalyst regeneration at units in which the catalytic reforming process is carried out. There are two units of this type at Grupa LOTOS – one where the catalyst is regenerated periodically, and a newer one – in which portions of catalyst are regenerated on a continuous basis. To enable the performance of PCDD/F measurements in line with the standards, measurement systems had to be installed on the exhaust gas ducts of both units.

The new EU law also requires monitoring of fugitive emissions of volatile organic compounds (VOC) from equipment leaks at the refinery units. Fugitive emissions of VOC are unfavourable as they result in feedstock losses, have a negative impact on staff's health and the environment, and – in extreme cases – may cause explosions. VOC emissions are to be monitored based on several methods:

- Detection and measurement of hydrocarbon concentrations using portable devices called sniffers;
- Optical gas imaging using infrared imaging cameras;
- Periodic estimation of emission amounts based on regularly updated calculation coefficients.

The other area concerns the need to implement at the Grupa LOTOS refinery a programme for detection and repair of leaks in the process units, i.e. LDAR (Leak Detection and Repair Programme). Its purpose is to detect and repair any leaks which may occur during the operation of refinery unit components, in particular pumps, manual and automatic valves, bolts, flanges, etc. Essentially, the purpose of LDAR is to monitor those components in order to detect and repair any leaks as quickly as possible, while maintaining the highest possible cost effectiveness of such measures. The greatest challenge in developing LDAR comes from the need to catalogue all unit components potentially affected by leaks and organise such information in electronic databases. The estimated number of such components at the Grupa LOTOS refinery in Gdańsk is 100,000. For obvious reasons, a decision was made that the required monitoring of fugitive emissions will be made as part of LDAR.

In addition to the BAT conclusions, another event related to environmental protection that may have a significant impact on the Company's business was the promulgation of the new Water Law and establishment thereunder of a new entity, the Polish Waters State Water Management Agency, which has taken over most of the competence related to water and wastewater management from province marshals, replacing the existing national and regional water management authorities. Key risks associated with the enactment of the new law and establishment of the new entity include:

- The new entity's potentially new approach to water and wastewater management at large enterprises;
- Uncertainty surrounding the method of calculating fees for abstracting water from the environment.

Other material events related to environmental management at the LOTOS Group in 2017:

- Amendments to integrated permits held by Grupa LOTOS and LOTOS Asfalt to include the EFRA units;
- Submission of an application to amend the CO_2 emission permit for LOTOS Asfalt in connection with the launch of EFRA units; at the time of preparing this Directors' Report, the marshal's draft decision was not yet final pending amendments to the integrated permit.

LOTOS Asfalt also plans to apply for allocation of additional free CO_2 emission allowances in connection with significant expansion of its production capacity. The application will be submitted after the launch and a reasonable period of stable operation of all EFRA units.

Environmental footprint of the LOTOS Group's facilities

The spring 2017 maintenance shutdown at the Grupa LOTOS refinery in Gdańsk affected its environmental impact in two ways. On the one hand, the month-long shutdown helped reduce annual emissions of CO_2 and other emissions incidental to energy generation, but on the other hand the maintenance work produced more than the usual quantities of waste.

It should also be noted that in 2017 the prices of natural gas (one of the key components of the refinery's fuel gas) in relation to the prices of heavy fuel oil (residue from crude oil processing) were such that the former fuel was far more economically viable. The refinery's fuel gas is a much cleaner energy carrier than heavy fuel oil – its combustion generating significantly lower emissions of sulfur oxides and PM. In 2017, the refinery's furnaces were only fuelled with gas, which significantly reduced air emissions, especially of SO_x and PM. As in previous years, the Grupa LOTOS CHP plant was fuelled only with natural gas throughout the year.

As the majority of environmental impact data must be reported to the authorities by the end of February and March, some of it was not yet available at the time when this Directors' Report was being prepared. The tables below contain only data which was available at the beginning of February 2018.

Air emissions

Carbon dioxide emissions from Grupa LOTOS and LOTOS Asfalt units

Company	Annual CO_2 emissions [Mg]	
	2016	2017
Grupa LOTOS	1,899,938	1,717,335
CHP plant	282,019	249,951
Refinery units	1,617,919	1,467,384
LOTOS Asfalt	12,041	11,962
Gdańsk Plant	7,966	7,633
Jasło Plant	4,075	4,329

Emission of air pollutants from Grupa LOTOS units

Unit	Annual emissions [Mg]							
	2016				2017			
	SO2	NO_x	PM	CO	SO2	NO_x	PM	CO
CHP plant	1	87	1	7	4	210	5	18
Refinery units	1613	775	133	281	231	634	72	286

7.4. Material agreements and court proceedings in 2017

7.4.1. Material related-party transactions executed on non-arms' length terms

In the year ended December 31st 2017, no related-party transactions were concluded on non-arms' length terms.

7.4.2. Agreement with qualified auditor of financial statements

Based on resolutions passed by the Grupa LOTOS Supervisory Board on December 17th 2009, October 31st 2012 and July 31st 2015, Ernst &Young Audyt Polska spółka z ograniczoną odpowiedzialnością sp. k., entered in the register of entities qualified to audit financial statements maintained by the Polish Chamber of Statutory Auditors (formerly: National Chamber of Statutory Auditors) under entry No. 130, was selected as the qualified auditor to audit the Company's financial statements for the years 2010-2012, 2013–2015 and 2016–2017.

Under the agreement executed with Grupa LOTOS S.A. on July 30th 2013 (including annexes), Ernst & Young Audyt Polska sp. z o.o. sp. k. of Warsaw performed the following services:

- Review of the separate and consolidated financial statements for the first six months of 2013, 2014, 2015, 2016, and 2017,
- Audit of the full-year separate and consolidated financial statements for 2013, 2014, 2015, 2016, and 2017.

Total fees for audit, review and verification procedures performed by Ernst & Young Audyt Polska sp. z o.o. sp. k. in 2017 (PLNm)

	2017
Audit of full-year separate and consolidated financial statements of selected companies of the LOTOS Group, including: [1]	0.9
Grupa LOTOS S.A.	0.2
Assurance services, including:	0.2
Grupa LOTOS S.A.	0.2
Tax advisory services	-
Other services, including:	0.02
Grupa LOTOS S.A.	-
Total	1.1

[1] Fees for the audit of accounts of selected LOTOS Group companies are paid under separate agreements between the auditor and each of the LOTOS Group companies.

Fees for the audit, assurance services, tax advisory services and other services for LOTOS Exploration and Production Norge AS, and AB LOTOS Geonafta due to, respectively, Ernst & Young AS and UAB Ernst & Young Baltic (companies of the Ernst & Young Group) for 2017 amounted to PLN 0.92m.

In 2016, total fees for the audit, review and verification procedures amounted to PLN 2.0m (Grupa LOTOS S.A.: PLN 1m), of which: for the audit of full-year separate and consolidated financial statements of selected companies of the LOTOS Group – PLN 1.1m (Grupa LOTOS S.A.: PLN 0.3m), for assurance services – PLN 0.8m (Grupa LOTOS S.A.: PLN 0.7m), and other services – PLN 0.1m (Grupa LOTOS S.A.: PLN 0.01m).

7.4.3. Court, arbitration or administrative proceedings

In 2017 no court, arbitration or administrative proceedings were pending where the value of claims of or against Grupa LOTOS S.A. or its subsidiaries would equal or exceed 10% of the Company's equity. For information on material litigation, see Note 29.1 to the consolidated financial statements.

Directors' Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2017

Grupa LOTOS shares

8. Grupa LOTOS shares

8.1. Grupa LOTOS shares on the Warsaw Stock Exchange

Grupa LOTOS shares have been listed on the Warsaw Stock Exchange since June 9th 2005.

ISIN	Warsaw Stock Exchange	Thomson Reuters	Bloomberg
PLLOTOS00025	**LTS**	**LTSP.WA**	**LTS PW**

The share capital of Grupa LOTOS S.A. is PLN 184,873,362 and is divided into 184,873,362 shares, with a par value of PLN 1 per share, including:

- 78,700,000 Series A ordinary bearer shares,
- 35,000,000 Series B ordinary bearer shares,
- 16,173,362 Series C ordinary bearer shares,
- 55,000,000 Series D ordinary bearer shares.

Each share confers the right to one vote at the Company's General Meeting.

The Company's market capitalisation as at the end of 2017 was approximately PLN 11bn.

Grupa LOTOS share price (PLN) and trading volume (number of shares)

In 2017, Grupa LOTOS shares were constituents of the following indices:

Return indices

- WIG − comprises all stocks traded on the WSE Main Market which satisfy the basic eligibility criteria
- WIG-PALIWA − comprises WIG index companies operating in the fuels sector
- WIG Poland − comprises only shares of Polish companies included in the WIG index
- WIG RESPECT − comprises socially responsible companies included in the WIG index

Price indices

- WIG 20 − calculated based on the value of the 20 largest and most liquid stocks traded on the WSE Main Market
- WIG 30 − calculated based on the value of the 30 largest and most liquid stocks traded on the WSE Main Market
- mWIG40 − calculated based on the value of the 40 largest and most liquid stocks traded on the WSE Main Market

* Return index − calculated to reflect the prices of constituent stocks as well as dividend and rights income.

* Price index − calculated to reflect only the prices of constituent stocks, excluding dividend income.

Grupa LOTOS shares

	2012	2013	2014	2015	2016	2017
Free float shares (million shares)	129.87	129.87	129.87	184.87	184.87	184.87
Share price (PLN)						
Low	21.30	32.97	24.05	23.83	24.10	37.00
High	43.78	45.45	40.96	33.15	40.40	68.85
Close	41.20	35.45	25.50	27.00	38.25	57.70
Rate of return at end of period (%)	76.82	-13.96	-28.07	4.40	44.00	50.30

	2012	2013	2014	2015	2016	2017

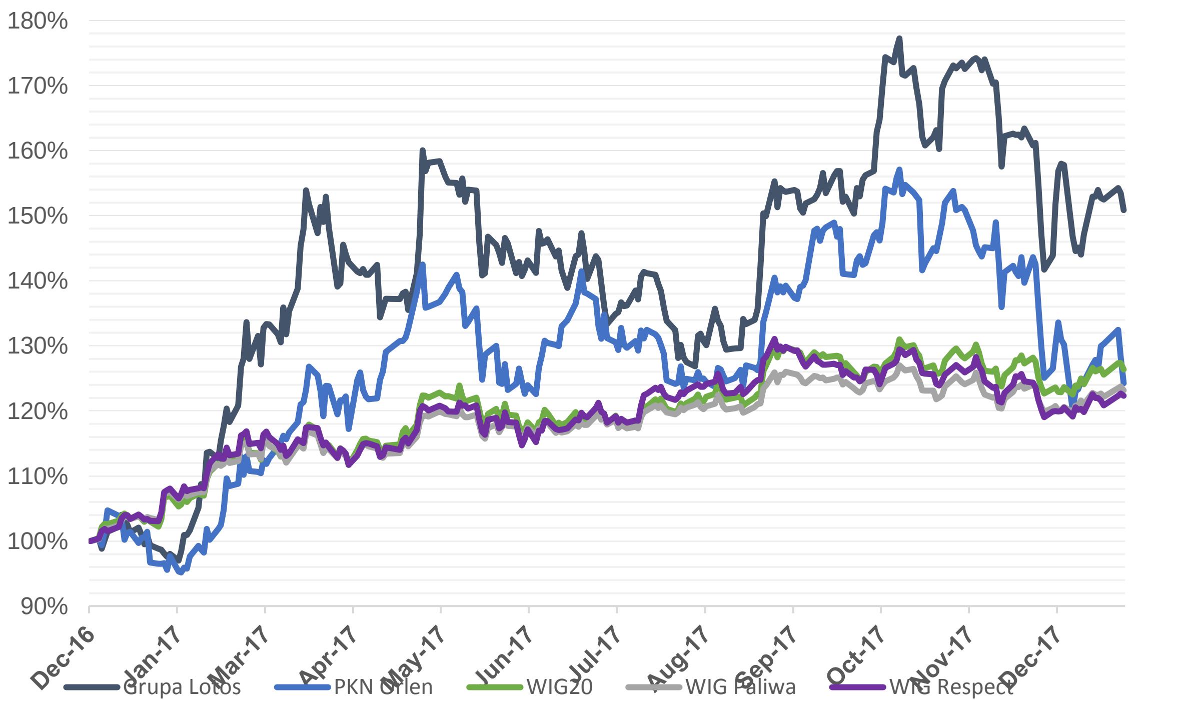
Trade in shares						
Trading value (PLNm)	2,013.15	2,211.43	1,588.52	2,227.56	2,229.86	5,061.58
Share in trade (%)	1.07	1.00	0.77	1.10	1.10	2.16
Average trading volume per session	282,163	229,877	203,839	314,239	292,032	372,519
Average number of trades per session	810	877	851	1,534	1,569	2,739

	2012	2013	2014	2015	2016	2017
Company valuation						
Capitalisation (PLNm)	5,351.00	4,603.89	3,311.69	4,991.58	7,075.10	10,667.19
Book value (PLNm)	9,066.40	9,189.60	8,258.50	7,712.20	8,610.90	8,610.9
EV (PLNm)	11,642.30	10,319.79	9,627.39	11,131.30	13,373.40	13,172.2
Valuation of shares						
Earnings per share (PLN)	7.11	0.30	-	-	5.50	9.00
P/E (x)	5.80	118	-	-	6.90	6.40
P/BV (x)	0.59	0.50	0.40	0.65	0.82	1.23
EV/EBITDA (x)	11.58	12.85	-	10.22	4.58	4.30

*In-house analysis based on WSE and Company data.
* EV (Enterprise Value) − market capitalisation plus debt, non-controlling interests, and preferred shares, minus cash and cash equivalents.
* P/E – Price/Earnings
* P/BV – Price/Book Value
* EV/EBITDA − Enterprise Value/EBITDA

Grupa LOTOS share price in 2017

Grupa LOTOS share price performance vs index performance in 2017



* Rebased (100 = closing price at December 30th 2016)

<u>Brokers' recommendations on Grupa LOTOS shares</u>

Recommendations on Grupa LOTOS shares are issued by 15 investment firms (including brokerage houses and investment banks):

Recommendations on Grupa LOTOS shares issued by brolerage houses

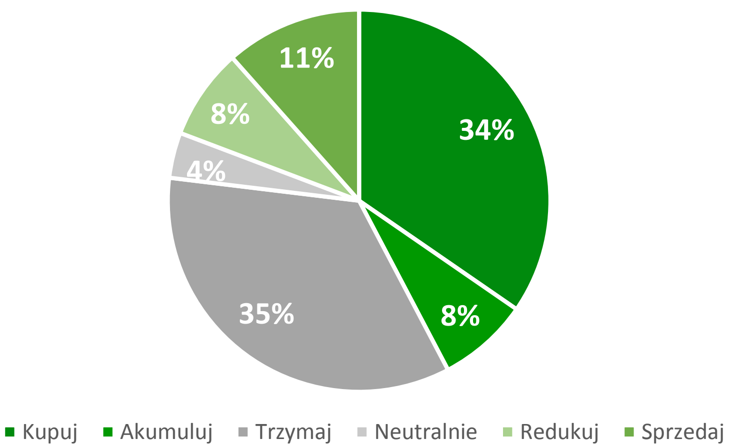
Based in Poland	Based abroad
Citi	HSBC
DM mBanku	Erste Bank
DM BZ WBK	Raiffeisen Centrobank
DM BOŚ	Societe Generale
DM PKO BP	Wood & Co.
DM BDM	Haitong Bank
DI Investors	
DM Trigon	
Ipopema Securities	

To the Company's knowledge, brokers issued 26 recommendations on the Company shares in 2017:

- 9 BUY recommendations
- 2 ACCUMULATE recommendations
- 9 HOLD recommendations
- 1 NEUTRAL recommendations
- 2 REDUCE recommendations
- 3 SELL recommendations

* BUY	total expected rate of return will exceed 15% in 12 months.
*ACCUMULATE	total expected rate of return will be between 5% and 15% in 12 months.
* HOLD	total expected rate of return will be between -5% and +5% in 12 months.
* REDUCE	total expected rate of return will be between -5% and -15% in 12 months.
* SELL	total expected rate of return will be more than -15% in 12 months.

Breakdown of broker recommendations on Grupa LOTOS shares in 2017



The target price of Grupa LOTOS shares in brokers' research reports ranged from PLN 34.27 to PLN 84.50, compared with PLN 24.00 to PLN 41.20 in 2015. The average target price in 2017 was PLN 59.59 (2016: PLN 31.26).

Grupa LOTOS shares traded within the range: from PLN 37.00 to PLN 68.85. The closing price on the last day of 2017 was PLN 57.70.

Recommendations and moving average of target prices against the market price of the Company shares

8.2 Dividend

On June 14th 2017, the Annual General Meeting of Grupa LOTOS S.A. passed a resolution on the allocation of the Company's 2016 profit. In particular, the Meeting resolved to distribute PLN 184,873,362.00 as dividend to the shareholders.

The pre-tax dividend per share was PLN 1.

The number of shares in respect of which dividend would be paid was 184,873,362. The Annual General Meeting also set the dividend record date for September 12th 2017 and the dividend payment date for September 29th 2017.

Dividend and dividend yield (PLN)

Financial year	Dividend	Dividend per share	Share price at year end	Dividend yield
2005	0.0	0.0	44.2	-
2006	40,932,000.0	0.4	49.3	0.7
2007	0.0	0.0	44.5	-
2008	0.0	0.0	12.0	-
2009	0.0	0.0	31.8	-
2010	0.0	0.0	36.4	-
2011	0.0	0.0	23.3	-
2012	0.0	0.0	41.2	-
2013	0.0	0.0	35.5	-
2014	0.0	0.0	27	-
2015	0.0	0.0	38.25	
2016	**184,873,362.0**	**1.0**	**57.70**	**1.7**

* Dividend yield – dividend per share to price per share.

Historical dividend per share (PLN)

Financial year	Dividend per share	% of net profit	Dividend record date	Dividend payment date
2005	0.0	0.0	-	-
2006	0.4	10.1	Jun 11 2007	not later than Jul 31 2007
2007	0.0	0.0	-	-
2008	0.0	0.0	-	-
2009	0.0	0.0	-	-
2010	0.0	0.0	-	-
2011	0.0	0.0	-	-
2012	0.0	0.0	-	-
2013	0.0	0.0	-	-
2014	0.0	0.0	**-**	**-**
2015	0.0	0.0		
2016	**1.0**	**10.0**	**Sep 12 2017**	**Sep 29 2017**

* Dividend record date – the date on which the list of shareholders entitled to receive dividend for a given financial year is determined.

* Dividend payment date – the date on which dividend is paid to the Company's shareholders.

8.3 Share buyback

Grupa LOTOS S.A. did not buy back any of its shares in 2018.

8.4. Aggregate number and par value of all Grupa LOTOS shares and shares in the issuer's related entities, held by Grupa LOTOS Management and Supervisory Board members (separately for each person)

To the best of the Company's knowledge, as at February 27th 2017 the Management and Supervisory Board members did not hold any shares in Grupa LOTOS S.A.'s related companies.

8.5. Agreements which may give rise to future changes in shareholding structure

The Management Board of Grupa LOTOS S.A. has no knowledge of any agreements which may give rise to future changes in the number of shares held by the existing shareholders and bondholders.

Directors' Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2017

Corporate governance

9. Corporate governance

9.1. Shareholding structure

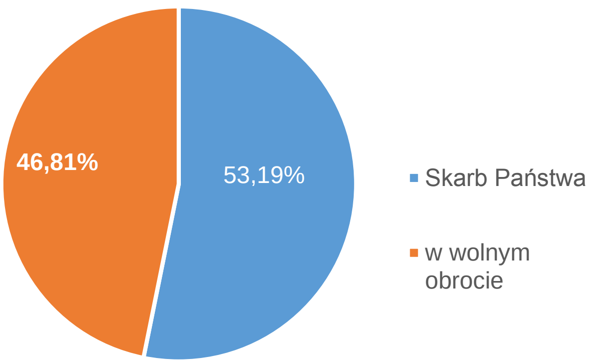
9.1.1. Major holdings of shares

In 2017, the share capital of Grupa LOTOS S.A. did not change relative to 2016 and comprised 184,873,362 fully paid-up ordinary shares with a par value of PLN 1 per share. Each Company share confers the right to one vote at the General Meeting and carries the right to dividend.

Share capital and voting rights at the General Meeting held by majority shareholders of Grupa LOTOS as at December 31st 2017

Shareholder	Interest in share capital/total voting rights at the GM
State Treasury	53.19%
Nationale Nederlanden OFE	5.73%
PZU OFE	5.02%
Other	36.06%
Total	**100.0%**

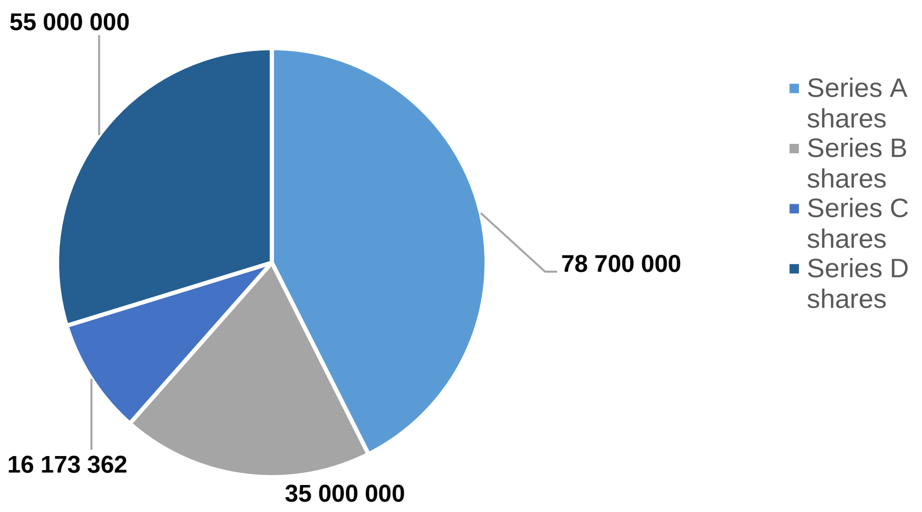
Shareholding structure of Grupa LOTOS S.A. as at December 31st 2017



Share capital

The share capital of Grupa LOTOS S.A. comprises 184,873,362 fully paid-up ordinary shares with a par value of PLN 1 per share. Each share carries the right to one vote at the General Meeting and the right to dividend.

Structure of Grupa LOTOS share capital



Shareholders holding at least 5% of total voting rights at the General Meetings convened in 2017:

Extraordinary General Meeting held on March 17th 2017

Entity	Number of Grupa LOTOS shares held	% of total voting rights at GM	% ownership interest
State Treasury	98,329,515	73.88%	53.19%
OFE PZU Złota Jesień	9,250,000	6.95%	5.00%
Nationale Nederlanden OFE	9,000,000	6.76%	4.87%

Annual General Meeting held on June 14th 2017

Entity	Number of Grupa LOTOS shares held	% of total voting rights at GM	% ownership interest
State Treasury	98,329,515	71.94%	53.19%
Nationale Nederlanden OFE	9,200,000	6.73%	4.98%
OFE PZU Złota Jesień	7,800,000	5.71%/	4.22%

Special rights giving control of Grupa LOTOS S.A. non-commensurate with the shareholding

The Company has not issued any securities conferring special control powers. As at the issue date of this Directors' Report, the Company has no information on any shareholder agreements on joint exercise of voting rights (for more information, see Section 5.1.4).

Limitations on exercise of voting rights at the General Meeting of Grupa LOTOS S.A.

One share in Grupa LOTOS S.A. confers the right to one vote at its General Meeting. However, pursuant to the Company's Articles of Association, the voting rights of Company shareholders are limited so that none of them can exercise more than 10% of total voting rights at the Company as at the day on which the General Meeting is held, with the proviso that for the purpose of determining the obligations of buyers of major shareholdings provided for in the Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organised Trading and Public Companies of July 29th 2005, and the Act on Insurance Activity of May 22nd 2003, such limitation of voting rights is deemed non-existent.

9.1.2. Holders of securities which confer special control powers, and description of such powers

Grupa LOTOS S.A. has not issued any securities conferring special control powers.

9.1.3. Special rights of the State Treasury and their exercise

The Act on Special Rights Vested in the Minister Competent for the State Treasury and How Those Rights Should Be Exercised at Certain Companies or Groups of Companies Operating in the Power, Crude Oil and Gas Fuels Sectors, dated March 18th 2010 (Dz.U. No. 65, item 404) ('the Act'), instituted a special officer responsible for the protection of critical infrastructure.

In accordance with the Act, the Company's Management Board, acting in consultation with the minister competent for the State Treasury and the Head of the Government Centre for Security, has the right to appoint and remove from office a special officer responsible for critical infrastructure protection at the Company. The special officer's duties include, in particular, providing the minister competent for the State Treasury with information on the execution by the Company's governing bodies of any of the acts in law referred to above, providing the Head of the Government Centre for Security with information on critical infrastructure whenever requested, and – together with the Head of the Government Centre for Security – providing to and receiving from other entities information on any threats to the critical infrastructure.

The special officer responsible for protection of critical infrastructure is authorised to request from company governing bodies any documents or explanations regarding the issues referred to above, and, having reviewed them, is required to submit the same to the minister competent for the State Treasury and the Head of the Government Centre for Security, along with the officer's written position and the grounds for it.

On July 11th 2011, Grupa LOTOS S.A. received a notification to the effect that its assets have been included in the list of assets, facilities, units, equipment, and services comprising critical infrastructure. As a result, on August 23rd 2011 the Management Board of Grupa LOTOS S.A. appointed a Critical Infrastructure Protection Officer.

Under the Act, the minister competent for the State Treasury has the right to raise objections to passed resolutions, or to any other act in law performed, by the Company's Management Board with respect to any of the assets included in the single list of facilities, units, equipment, and services comprising critical infrastructure, referred to in Art. 5b.7.1 of the Crisis Management Act of April 26th 2007, if such constitute a material threat to the operation, continuity of operation and integrity of critical infrastructure, including:

- In the power sector – infrastructure used for the purpose of generation or transmission of electricity,
- In the oil sector – infrastructure used for the purpose of production, refining, processing, storage and transmission via pipelines of crude oil and petroleum products, as well as seaports used for handling crude oil and petroleum products,
- In the gas fuels sector – infrastructure used for the purpose of production, refining, processing, storage and transmission via gas pipelines of gas fuels, as well as LNG terminals.

The minister competent for the State Treasury may also raise an objection with respect to any resolution by the Company's governing bodies providing for:

- dissolution of the Company,

- changes in the intended use or discontinuation of use of any of the Company's assets (1) included in the single list of facilities, units, equipment, and services comprising critical infrastructure, referred to in Art. 5b.7.1 of the Polish Crisis Management Act of April 26th 2007,
- change in the Company's principal business activity,
- sale or lease of the Company's business or its organised part, or creation of any proprietary interest therein,
- adoption of a budget, plan of investment activities, or a long-term strategic plan,
- relocation of the Company's registered office abroad,

if the implementation of any such resolution could constitute a material threat to the security, continuity or integrity of critical infrastructure operations.

9.1.4. Limitations on the exercise of voting rights at the General Meeting

One share in Grupa LOTOS S.A. confers the right to one vote at its General Meeting. However, pursuant to the Company's Articles of Association, the voting rights of Company shareholders are limited so that none of them can exercise more than 10% of total voting rights at the Company as at the day on which the General Meeting is held, with the proviso that for the purpose of determining the obligations of buyers of major shareholdings provided for in the Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organised Trading and Public Companies of July 29th 2005, and the Act on Insurance Activity of May 22nd 2003, such limitation of voting rights is deemed non-existent.

The above limitation does not apply to:

1) shareholders who as at the date of the General Meeting's resolution imposing the limitation on voting rights are holders of shares conferring more than 10% of total voting rights at the Company;

2) shareholders acting together with shareholders referred to in Article 67.1 above under agreements concerning joint exercise of voting rights.

For the purpose of limiting the voting rights referred to above, the voting rights of shareholders bound by a parent-subsidiary relationship are aggregated in the following manner:

1) A shareholder is any person, including a parent and a subsidiary of such person, directly or indirectly entitled to exercise voting rights at the General Meeting under any legal title, including persons who do not hold shares in the Company, in particular usufructuaries, pledgees, holders of rights under depositary receipts, as defined in the Act on Trading in Financial Instruments of July 29th 2005, as well as persons entitled to participate in the General Meeting despite having disposed of their shareholdings after the record date.

2) A parent or a subsidiary is any person which:

   1. meets the relevant criteria set forth in Art. 4.1.4) of the Commercial Companies Code, or

   2. is a parent, a subsidiary or both a parent and a subsidiary within the meaning of the Act on Competition and Consumer Protection of February 16th 2007, or

   3. is a parent, ultimate parent, subsidiary, lower-tier subsidiary, jointly-controlled entity or both a parent (including an ultimate parent) and a subsidiary (including a lower-tier subsidiary and a jointly-controlled entity) within the meaning of the Accounting Act of September 29th 1994, or

   4. exerts (in the case of a parent) or is subject to (in the case of a subsidiary) decisive influence within the meaning of the Act on the Transparency of Financial Relations between State Authorities and State-

Controlled Enterprises, as well as on Financial Transparency of certain Entrepreneurs, of September 22nd 2006, or

5. whose voting rights conferred by Company shares held directly or indirectly are aggregated with voting rights of other person or persons pursuant to the Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organised Trading and Public Companies of July 29th 2005, in connection with the holding, disposal or acquisition of major shareholdings in the Company.

Shareholders whose voting rights are aggregated or reduced pursuant to the rules described above, are jointly referred to as a Grouping. The aggregation of voting rights shall consist in adding up all voting rights held by individual shareholders comprising a Grouping. The reduction of voting rights involves decreasing the total number of voting rights at the General Meeting held by shareholders comprising a Grouping.

The reduction of voting rights shall be made as follows:

1) the number of voting rights of the shareholder holding the highest number of voting rights in the Company from among all the shareholders comprising a Grouping is reduced by the number of voting rights in excess of 10% of the total number of voting rights in the Company held by all the shareholders in the Grouping;

2) if, despite the reduction referred to above, the total voting rights held by the shareholders comprising the Grouping exceeds 10% of total voting rights at the Company on the date the General Meeting, the number of voting rights held by the other shareholders in the Grouping is further reduced. Such further reduction shall be made in a sequence established based on the number of voting rights held by individual shareholders comprising the Grouping (from the highest to the lowest). The number of voting rights of the Grouping shall be further reduced until the number of voting rights held by shareholders comprising the Grouping does not exceed 10% of the total vote at the Company;

3) if the sequence for the purpose of the reduction of voting rights cannot be established because one or more shareholders hold the same number of voting rights, the voting rights of shareholders holding the same number of voting rights are reduced proportionally, with fractional numbers rounded down to the whole number of shares. To the extent not provided for above, the rules set forth in the preceding items apply accordingly;

4) in any case, a shareholder whose voting rights have been limited retains the right to exercise at least one vote;

5) the limitation of voting rights also applies to shareholders absent from the General Meeting.

In order to determine the basis for aggregation or reduction of voting rights, each of the Company’s shareholders, the Management Board, the Supervisory Board, and individual members of these bodies, as well as the Chairperson of the General Meeting, may request that a Company shareholder subject to the limitation of voting rights disclose whether it is a parent or a subsidiary of any other Company shareholder within the meaning of the Company's Articles of Association. The authority referred to in the previous sentence also includes the right to request a Company shareholder to disclose the number of voting rights held individually or jointly with other shareholders with respect to which it is a parent or a subsidiary within the meaning of the Company's Articles of Association. A person who fails to perform or improperly performs the above disclosure obligation may exercise its voting rights from a single share only, until the disclosure obligation is duly fulfilled, and any attempts to exercise its voting rights from the remaining shares are ineffective.

When in doubt, the provisions on the restriction of voting rights shall be interpreted in accordance with Art. 65.2 of the Civil Code.

The limitation of voting rights expires once the shareholding of a Company shareholder who as at the date of the General Meeting’s resolution imposing the limitation of voting rights held shares conferring more than 10% of total voting rights at the Company falls below 5% of the Company’s share capital.

Subject to the relevant provisions of the Commercial Companies Code, a material change in the Company's business profile may be introduced without a buyout of Company shares held by the shareholders who do not agree to such change.

9.1.5. Restrictions on transfer of securities

There are no restrictions on transfer of title to any Grupa LOTOS shares. **at Grupa LOTOS**

9.2. The Company's governing bodies

Corporate governance hierarchy of Grupa LOTOS S.A. as at December 31st 2017

9.2.1. General Meeting of Grupa LOTOS S.A.

The powers and proceedings of the General Meeting (GM) of Grupa LOTOS S.A. are defined in detail in the Company's → Articles of Association (consolidated text of April 20th 2017) and the → Rules of Procedure for the General Meeting (consolidated text of August 26th 2009). Both documents are available in the → Corporate Governance section of the Company's website.

General Meetings are held at the Company's registered office and are convened by the Management Board of Grupa LOTOS S.A., as provided for in the Articles of Association or in the Commercial Companies Code, by publishing an announcement on the Company's website and in the manner determined for publication of current reports, in accordance with the provisions of the Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organised Trading and Public Companies.

In 2017, the Annual General Meeting (AGM) was held on June 14th.

Extraordinary General Meetings (EGM) may be convened by the Management Board on its own initiative, by the Supervisory Board (if the Supervisory Board deems it appropriate), or by shareholders representing at least half of the Company's share capital or at least half of total voting rights at the Company.

A shareholder or shareholders representing at least 1/20 of the Company's share capital may request that an EGM be convened and that certain items be placed on its agenda. If an EGM is not convened within two weeks of the submission of such a request to the Management Board, the Registry Court may authorise the requesting shareholders to convene an Extraordinary General Meeting.

A request to convene a General Meeting and put particular items on its agenda, made by parties entitled to do so, should be presented with grounds. A shareholder or shareholders representing at least 1/20 of the Company's share capital may, before a GM, submit to the Company draft resolutions for items which have been or are to be placed on the agenda of the General Meeting.

In 2017, the Extraordinary General Meeting (EGM) was held on March 17th.

Only persons who are the Company shareholders sixteen days prior to the date of a General Meeting (i.e. on the date of registration of participation in the GM) are entitled to participate in the General Meeting. Holders of rights under registered shares or provisional certificates (świadectwa tymczasowe) as well as pledgees and usufructuaries holding voting rights are entitled to participate in the General Meeting, provided that they are entered in the Share Register on the registration date. A Shareholder may participate in a General Meeting and exercise voting rights in person or by proxy. The proxy is obliged to disclose to the shareholder any circumstances leading to any actual or potential conflict of interest and may vote exclusively in line with the voting instructions issued by the appointing shareholder.

Any matter to be discussed at a General Meeting is subject to prior consideration by the Supervisory Board. No resolution may be passed on matters not included in the agenda of the General Meeting, unless the Company's entire share capital is represented at the GM and no objections to the adoption of such resolution are raised by any of the persons participating in the GM, with the exception of motions to convene an Extraordinary General Meeting and procedural motions. Resolutions of a General Meeting are adopted by an absolute majority of votes, unless the Articles of Association or Commercial Companies Code provide otherwise. Resolutions and proceedings of a General Meeting are recorded by a notary public. The minutes of the GM are signed by the Chairman of the GM and the notary public.

9.2.2. Supervisory Board of Grupa LOTOS S.A.

The Supervisory Board of Grupa LOTOS S.A. operates under the Company's Articles of Association (consolidated text of April 20th 2017) and the Rules of Procedure for the Supervisory Board of Grupa LOTOS S.A. (consolidated text of July 14th 2017) (→ http://inwestor.lotos.pl/226/lad_korporacyjny/dokumenty_spolki). Procedures for and the scope of powers and duties of the Supervisory Board of Grupa LOTOS S.A. are described in detail in the Rules of Procedure for the Supervisory Board of Grupa LOTOS S.A. (consolidated text of July 14th 2017).

The Supervisory Board may comprise five to nine members, appointed for a joint three-year term of office by the General Meeting in a secret ballot, by an absolute majority of votes, from an unlimited number of candidates. The number of Supervisory Board members is determined by the General Meeting. The Chairperson of the Supervisory Board is appointed by the General Meeting, while the Deputy Chairperson and the Secretary are elected by the Supervisory Board from among its other members. Any or all Supervisory Board members may be removed at any time prior to expiry of their term of office. As long as the State Treasury remains a shareholder in the Company, the State Treasury, represented by the minister competent for energy, is entitled to directly appoint and remove one member of the Supervisory Board.

The Supervisory Board of Grupa LOTOS S.A. exercises ongoing supervision of the Company's business, across all areas of its operations. It performs its duties collectively, but may set up ad hoc or standing committees to supervise specific areas of the Company's activities or investigate specific issues. Standing committees of the Supervisory Board include the Audit Committee, Strategy and Development Committee, and Organisation and Management Committee.

By way of Resolution No. 21 and in accordance with Art. 11.1 of the Company's Articles of Association, the Annual General Meeting (AGM) held on June 30th 2014 set the number of members of the Supervisory Board of the then current 9th joint term of office (expired in 2017) at seven.

Following these changes, the composition of the Supervisory Board of the 9th term of office as at January 1st 2017 was as follows: Beata Kozłowska-Chyła, Katarzyna Lewandowska, Agnieszka Szklarczyk-Mierzwa, Piotr Ciach, Dariusz Figura, Mariusz Golecki, Adam Lewandowski.

In view of the approaching expiry of the 9th term of office of the Company's Supervisory Board, the Annual General Meeting (AGM) held on June 14th 2017, by way of Resolution No. 30 and in accordance with Art. 11.1 of the Company's Articles of Association, set the number of members of the Supervisory Board of the 10th joint term of office (expiring in 2020) at eight. The following persons were appointed to the Supervisory Board: Beata Kozłowska-Chyła, Katarzyna Lewandowska, Agnieszka Szklarczyk-Mierzwa, Piotr Ciach, Dariusz Figura, Mariusz Golecki, Adam Lewandowski.

Accordingly, from June 14th 2017 to December 31st 2017 and until the date of issue of this Directors' Report, the composition of the Supervisory Board was as follows: Beata Kozłowska-Chyła, Katarzyna Lewandowska, Agnieszka Szklarczyk-Mierzwa, Piotr Ciach, Dariusz Figura, Mariusz Golecki, Adam Lewandowski.

As at the date of issue of this Directors' Report, the State Treasury as a shareholder had not exercised its right to directly appoint and remove one member of the Supervisory Board.

Composition of the Supervisory Board of Grupa LOTOS S.A. (9th term)

Supervisory Board members	Position in the Supervisory Board of the 9th term
Beata Kozłowska-Chyła	Member from May 25th 2016 to June 28th 2016
	Chairperson from June 28th 2016 to June 14th 2017
Katarzyna Lewandowska	Member from January 27th 2016 to February 24th 2016
	Deputy Chairperson from February 24th 2016 to June 14th 2017
Agnieszka Szklarczyk-Mierzwa	Member from June 28th 2016 to July 21st 2016
	Secretary from July 21st 2016 to June 14th 2017
Dariusz Figura	Member from January 27th 2016 to June 14th 2017
Mariusz Golecki	Member from June 28th 2016 to June 14th 2017
Piotr Ciach	Member from December 22nd 2016 to June 14th 2017
Adam Lewandowski	Member from December 22nd 2016 to June 14th 2017

Composition of the Supervisory Board of Grupa LOTOS S.A. (10th term)

Beata Kozłowska-Chyła **Member, Chairperson since June 14th 2017**

Member of the current Grupa LOTOS S.A. Supervisory Board since December 22nd 2016. From June 28th 2016, she served as the Chairperson of the Supervisory Board of the 9th term. On June 14th 2017, she was appointed by the Annual General Meeting of Grupa LOTOS S.A. to the Supervisory Board of the 10th joint term of office to serve as its Chairperson.

According to her representation, she meets the independence criteria.

Beata Kozłowska-Chyła holds a post-doctoral degree in law (Habilitated Doctor) and is a lecturer at the Faculty of Law and Administration of the University of Warsaw, of which she is a graduate. In 1994–1997, she completed legal training to be formally qualified as legal counsel and was entered in the list of legal counsels maintained by the District Chamber of Legal Counsels in Warsaw. She served as acting director of a state-owned enterprise Uzdrowisko Konstancin in Konstancin-Jeziorna. She also worked as Deputy Head of the Legal and Licensing Department at the Pension Fund Supervisory Authority (UNFE), and was an adviser to the Minister of Finance. She was a member of the Supervisory Board, and then of the Management Board of PZU S.A. In addition, she sat on the Supervisory Boards of TFI PZU S.A. and PTE PZU S.A., as well as Telewizja Polska S.A. She provided legal advice at Legal Counsel Office. Since 2010, she has been Recommended Arbitrator of the Court of Arbitration at the Polish Chamber of Commerce in Warsaw. She is the author of numerous scholarly publications on companies law, securities law, and ownership transformation and privatisation processes at state-owned enterprises. She is also the author of expert opinions prepared for the Lower Chamber of the Polish Parliament, including an expert opinion on draft act on supervision of the financial market. She is a lecturer at the Faculty of Law and Administration of the University of Warsaw.

Piotr Ciach **Member from June 14th 2017 – July 14th 2017,**

Deputy Chairperson since July 14th 2017

Member of the Grupa LOTOS S.A. Supervisory Board since December 22nd 2016. On June 14th 2017, he was appointed by the Annual General Meeting of Grupa LOTOS S.A. to the Supervisory Board of the 10th joint term of office.

He is a graduate of the Faculty of Law at the Maria Curie-Sklodowska University in Lublin. He completed an MBA programme run by the Gdańsk Foundation for Management Development in cooperation with the IAE Aix-en-Provence Graduate School of Management. He holds the position of Division Head at the Supervision Department of the Ministry of Energy.

Currently, he is a member of the Supervisory Board of Spółka Restrukturyzacji Kopalń S.A. He sat on the Supervisory Boards of such companies as Polski Holding Obronny Sp. z o.o., Międzynarodowy Korporacja Gwarancyjna Sp. z o.o., Telefony Podlaskie S.A., Polska Grupa Zbrojeniowa S.A., and Tauron PE S.A.

Katarzyna Lewandowska **Member from June 14th 2017 to July 14th 2017,**

Secretary since July 14th 2017

Member of the Grupa LOTOS S.A. Supervisory Board of the 9th term from January 27th 2016. On June 14th 2017, she was appointed by the Annual General Meeting of Grupa LOTOS S.A. to the Supervisory Board of the 10th joint term of office.

She is a graduate of the Warsaw School of Economics. From 1996, she worked for the Ministry of State Treasury, where she gained extensive experience in the area of owner supervision over companies in various industries, including the defense industry, entities managing sea ports of primary importance to the national economy, an entity discharging the State Treasury's responsiblities in the area of the state's monopoly over numerical and cash lotterie, and companies in the hard coal sector. Currently she works at the Department of Supervised and Subordinated Entities at the Ministry of Enterprise and Technology.

She has many years' experience in the field of companies law and owner supervision; she also sat on supervisory boards of commercial-law companies. Currently, she serves as the Chairperson of the Supervisory Board of PZU S.A.

Agnieszka Szklarczyk-Mierzwa **Member since June 14th 2017**

Member of the Grupa LOTOS S.A. Supervisory Board of the 9th from June 28th 2016. Member of the Grupa LOTOS S.A. Supervisory Board of the 9th from June 28th 2016. On June 14th 2017, she was appointed by the Annual General Meeting of Grupa LOTOS S.A. to the Supervisory Board of the tenth joint term of office.

Graduate of law from the Jagiellonian University in Kraków (Faculty of Law and Administration, 2004), and the National School of Public Administration in Warsaw (2007). She is a legal counsel, having completed her professional training at the Regional Chamber of Legal Counsels in Warsaw. In 2007−2009, Agnieszka Szklarczyk-Mierzwa worked as a chief specialist at the Department of International Cooperation and European Law at the Ministry of Justice. In 2009−2015, she was a chief specialist at the Oil and Gas Department at the Ministry of Economy. Currently, she serves as Division Head at the Oil and Gas Department of the Ministry of Energy. Ms Szklarczyk-Mierzwa has experience in international public and private law, EU law, as well as business and energy law, with particular expertise in the regulatory aspects of and international cooperation in fuel security.

Dariusz Figura **Member since June 14th 2017**

Member of the Grupa LOTOS S.A. Supervisory Board of the 9th term from January 27th 2016. On June 14th 2017, he was appointed by the Annual General Meeting of Grupa LOTOS S.A. to the Supervisory Board of the tenth joint term of office.

According to his own representation, he meets the independence criteria.

Graduate of the Warsaw University of Technology (Faculty of Electronics and Information Technology), he completed an Executive MBA programme at Warsaw Business School of the Warsaw University of Technology (joint programme with the HEC School of Management - Paris, London Business School and Norwegian School of Economics).

Dariusz Figura has spent his entire professional career to date working in the private sector, including at large international corporations and as a UNIDO consultant.

Currently, he serves as a vice president at an IT company, in charge of finance, IT maintenance and risk management.

Mariusz Golecki **Member since June 14th 2017**

Member of the Grupa LOTOS S.A. Supervisory Board of the 9th term from June 28th 2016. On June 14th 2017, he was appointed by the Annual General Meeting of Grupa LOTOS S.A. to the Supervisory Board of the tenth joint term of office.

Habilitated Doctor of Law, professor and Head of Cognitive Research on Law at the University of Łódź (the Law and Administration Faculty). His field of expertise covers economic and behavioural analysis of law, comparative law and theory of law. Since 2011, he has worked as a lecturer at the Warsaw School of Economics (European Master in Law and Economics programme) and has been a member of the management board of the Polish Association of Law and Economics.

Graduate of the Faculty of Law and Administration, University of Warsaw (1998), and Faculty of Law, University of Cambridge (Trinity College, 2002). In 1998−2000, Mariusz Golecki served as an adviser at the Ministry of Culture and Fine Arts/National Heritage. In 2000 and 2001, he worked as an expert at the Programme Department of the Prime Minister Chancellery and the Ministry of Finance. In 2002–2003, Mr Golecki was a European Commission scholar at the Institute of Law and Economics, University of Hamburg, in 2004–2008 he worked as an assistant professor at the Economics Department of the Wyższa Szkoła Biznesu – National Louis University in Nowy Sącz, and in 2008–2009 he was a visiting professor at the Centre for European Legal Studies of the Faculty of Law at the University of Cambridge. In 2010, he was a visiting professor at the International Christian University of Tokyo and held the Jean Monnet Chair for EU Law at the Keio University in Japan. In 2013−2014, Mr Golecki was also a visiting professor at the Faculty of Law of the University of Debrecen, Hungary.

In 2015–2017, he was an attorney-at-law with the Warsaw Bar Association, and since January 2017 has worked for the General Counsel to the Republic of Poland (PGRP). Head of the Legal Department of the Polish Ministry of Finance between 2016 and 2017. Since January 2017, Mariusz Golecki has worked as Head of the International and European Law Department at PGRP. In 2016–2017, he served as Deputy Chairman of the Polish delegation in Working Group V of the United Nation Commission on International Trade Law (UNCITRAL). Since October 2016, he has been Chairman of the Tax Evasion Prevention Board at the Ministry of Finance and Development.

Adam Lewandowski **Member since June 14th 2017**

Member of the Grupa LOTOS S.A. Supervisory Board of the 9th term from December 22nd 2016. On June 14th 2017, he was appointed by the Annual General Meeting of Grupa LOTOS S.A. to the Supervisory Board of the tenth joint term of office.

According to his own representation, he meets the independence criteria.

He graduated from the University of Warsaw with a master's degree in law. He is a legal counsel, member of the Regional Chamber of Legal Counsels in Warsaw.

Adam Lewandowski has gained professional experience working in the banking and financial sector (e.g. PeKaO S.A., BOŚ S.A., Bank Polskiej Spółdzielczości S.A., and Krajowy Depozyt Papierów Wartościowych S.A. – the central securities depository). In 2006−2009, he was Executive Director of the Division of the President of the Management Board, Company Office Director responsible for supporting PGNiG S.A.'s corporate bodies, and HR Office Director. In 2013–2015, he headed the HR Department at PGNiG S.A., and since 2016 – has served as Head of the Enterprise Management Division at PGNiG Termika S.A.

According to the representations made by all new members of the Supervisory Board of Grupa LOTOS S.A., they are not entered in the Register of Insolvent Debtors maintained under the Act on the National Court Register, they are not involved in any activity competing with Grupa LOTOS S.A.'s business, neither are they partners in any partnerships, or members of corporate bodies of any corporations, or members of governing bodies of any other legal entities competing with Grupa LOTOS S.A.

Delegation of specific duties to individual Supervisory Board members

The Supervisory Board may delegate its members to individually perform certain tasks or functions.

On April 20th 2017, the Supervisory Board delegated two of its members, Mariusz Golecki and Adam Lewandowski (separately), to individually perform supervisory functions with respect to:

- reviewing the process of preparation and implementation of construction, upgrade and maintenance contracts (Resolution No. 191/IX/2017), and
- reviewing the process of preparation and execution of the Hydrogen Recovery Unit (HRU) project (Resolution No. 192/IX/2017).

9.2.3. Management Board of Grupa LOTOS S.A. and powers of individual members

The Management Board of Grupa LOTOS S.A. operates pursuant to the following documents available on the Company's website in the Corporate Governance section: → the Company's Articles of Association, and the Rules of Procedure for the Management Board.

The Management Board represents Grupa LOTOS S.A. before third parties and manages all its corporate affairs. Individual members of the Management Board perform duties in line with the division of powers and responsibilities resulting from their operational functions within the Company. Each member of the Management Board is also authorised to represent the Company in all judicial and non-judicial business relating to the Company's operations, excluding matters reserved for the General Meeting or Supervisory Board under the Commercial Companies Code or the Company's Articles of Association, as well as matters falling outside the scope of ordinary management of the business where they require the Management Board's prior resolution and matters within the powers of another member of the Management Board.

In 2017, the composition of the Grupa LOTOS Management Board was as follows:
From January 1st to January 12th 2017, the Management Board was composed of:

Marcin Jastrzębski − Vice President, Chief Operating Officer, acting President of the Board

Mateusz Aleksander Bonca − Vice President, Chief Strategy and Development Officer

Mariusz Machajewski – Vice President, Chief Financial Officer.

On January 12th 2017, following a recruitment and selection procedure initiated on December 20th 2016, the Supervisory Board appointed Mr Marcin Jastrzębski as President of the Management Board and Mr Jarosław Kawula as Vice President, Chief Refining Officer for the remaining time of the 9th joint term of office of the Grupa LOTOS Management Board. Following his appointment, Mr Marcin Jastrzębski resigned from his position as Vice President of the Management Board, Chief Operating Officer.

The Supervisory Board resolved that the Management Board of the 9th joint term of office would consist of four persons and set a new division of powers and responsibilities among the Management Board members.

By virtue of Resolution No. 16/X/2017 passed on September 5th 2017, the Supervisory Board decided to remove Mariusz Machajewski from the position of Vice President of the Management Board, Chief Financial Officer.

As a result of the above resolution, the Supervisory Board also passed Resolution on 4th December that the Management Board of Grupa LOTOS S.A. of the 9th term would have three members.

Thus, since September 5th 2017, the composition of the Grupa LOTOS Management Board has been as follows:

Marcin Jastrzębski

President of the Management Board — Jan 12 2017

Mateusz Aleksander Bonca

Chief Strategy and Development Officer — Jun 1 2016 – Feb 28 2018

Chief Financial Officer — since March 1st 2018

Jarosław Kawula

Chief Refining Officer — Jan 12 2017 – Feb 28 2018

Chief Refining and Marketing Officer — since March 1st 2018

For more information on the professional experience of the Management Board members and their careers to date, see the Company's → website.

The following matters require resolutions by the Management Board:

1) adoption or amendment of the Rules of Procedure for the Management Board,
2) adoption or amendment of the Organisational Rules for the Company, including the Company's organisational structure,
3) adoption of any rules or regulations required by law,
4) granting of powers of proxy (requires unanimous vote by all Management Board members),
5) adoption of the Company's annual budget,
6) adoption of the LOTOS Group strategy,
7) approval of the Company's financial statements for the previous financial year, prepared in accordance with International Financial Reporting Standards, and the Directors' Report on the Company's operations (not later than within three months of the reporting date),
8) approval of the consolidated financial statements for the previous financial year, prepared in accordance with International Financial Reporting Standards, and the Directors' Report on the Group's operations (not later than within three months of the reporting date),
9) convening of annual and extraordinary General Meetings on the Management Board's own initiative or at the request of a shareholder or shareholders representing at least one-twentieth of the share capital, as well as in other cases provided for in the Commercial Companies Code, and within prescribed deadlines,
10) setting the agenda of a General Meeting,
11) any equity investments or projects involving capital expenditure by the Company, including incurring any related liabilities and divestments, if such investments, projects or divestments entail expenses, charges or disposals in excess of PLN 500,000 (tax exclusive),
12) exercise of the Company's voting rights at General Meetings of its subsidiaries with regard to:
    a) share capital increase or reduction,
    b) business combinations or transformations,
    c) sale or lease of a company's business and/or its encumbrance with usufruct rights,
13) formation of companies under commercial law and of foreign companies,
14) acquisition and disposal of shares and interests in companies,
15) acquisition and disposal of shares, except where shares are acquired or disposed of in public trading in securities, unless such acquisition or disposal results in gaining or losing the status of the parent,
16) acquisition or disposal of property, perpetual usufruct rights or an interest in property,
17) establishing and joining partnerships, organisations or ventures which involve unlimited liability enforceable against the Company's assets,
18) any matters which require a resolution to be passed by the Supervisory Board or the General Meeting,

19) matters falling outside the scope of day-to-day management of the business,

20) matters which have been objected to by at least one of the members of the Management Board,

21) any matters to be decided by way of a Management Board resolution at the request of the President of the Management Board.

Ordinary matters of the Company where no resolution is required to be passed by the Management Board are conducted by the President acting individually, and by Management Board members in line with the division of powers and responsibilities.

The President of the Management Board may delegate a matter to a Management Board member or may decide to handle the matter personally, contrary to the division of powers and responsibilities defined in the Organisational Rules of Grupa LOTOS S.A.

Moreover, as part of the division of responsibilities, the President of the Management Board manages the operations of the Board and conducts and supervises the following corporate matters:

- convening and presiding over meetings of the Management Board,
- maintaining the Management Board's documentation, files and meeting minutes,
- performing obligations under commercial law and matters relating to the register of entrepreneurs,
- ensuring that necessary services are rendered to the Company's governing bodies and that minutes of proceedings are prepared,
- representing the Management Board before the Company's other governing bodies, subject to the provisions of the Commercial Companies Code and the Company's Articles of Association.

The President of the Management Board is also authorised to act individually in matters related to labour law, pursuant to Art. 3^1 of the Labour Code.

Rules of procedure for the Management Board, including procedures for convening meetings, passing and archiving resolutions, as well as the powers and duties of individual Board members, are set forth in → Rules of Procedure for the Management Board of Grupa LOTOS S.A.

In 2017, the Grupa LOTOS Management Board held 40 meetings and passed 276 resolutions, including 28 resolutions passed in accordance with the procedure set out in Section 21.7 of the Rules of Procedure for the Management Board.

Rules governing appointment and removal of management staff

Pursuant to the provisions of the Articles of Association of Grupa LOTOS S.A., the Management Board may consist of three to seven members. The Management Board is appointed by the Supervisory Board, which also determines the number of Management Board members. Members of the Management Board are appointed by the Supervisory Board following a recruitment and selection procedure carried out pursuant to the Regulation of the Polish Council of Ministers of March 18th 2003 on qualification procedures for members of management boards of certain commercial-law companies (Dz. U. No. 55, item 476), taking into consideration 'The Best Practices to be Followed in the Selection of Candidates to Governing Bodies of Companies of Key Importance to the State Treasury', defined by the Minister of State Treasury.

Members of the Management Board should also meet the requirements laid down in the Act on State Property Management of December 16th 2016 (Dz.U. of 2016, No. 2259).

Management Board members are appointed for a joint term of three years. The President, Vice Presidents and other members of the Management Board, as well as the entire Management Board, may at any time be removed from office or suspended from duties for a good reason by the Supervisory Board. Each member's mandate expires no later than on the date of the General Meeting which approves the financial statements for the previous full financial year. Supervisory Board resolutions to appoint or remove any or all members of the Management Board require that at least two thirds of Supervisory Board members are present and participate in the vote. A Management Board member's mandate shall also expire upon their resignation from office.

The current, 9th joint term of office commenced on June 29th 2015 and will expire in 2018.

9.2.4. Rules for amending the Articles of Association of Grupa LOTOS S.A.

An amendment to the Articles of Association requires that a relevant resolution be passed by the General Meeting by an absolute majority of votes, save for amendments to Article 10.1 of the Articles of Association, which require that four-fifths of votes be cast in favour of the amending resolution and at least half of the Company's share capital be represented at the General Meeting.

After the General Meeting passes a resolution on amending the Company's Articles of Association, the Management Board of Grupa LOTOS S.A. notifies the registry court of the amendments. The amendments come into force upon their registration by the court.

A consolidated text of the Articles of Association incorporating the amendments is then produced by the Supervisory Board, provided that the Supervisory Board receives relevant authorisation from the General Meeting.

In 2017, an Extraordinary General Meeting of Grupa LOTOS S.A. was convened by the Management Board for March 17th to fulfil the obligation under Art. 4.7.2 of the Act on Rules of Remunerating Persons Who Manage Certain Companies of August 9th 2016. Adoption of rules for the selection and appointment of members of management and supervisory bodies at companies of the LOTOS Group by way of the General Meeting's resolution is expected to ensure openness and transparency of the process.

At the request made by the State Treasury, as a Company shareholder, on February 24th 2017, the Management Board of the Company added the following items to the agenda of the Extraordinary General Meeting: amendments to the Articles of Association, authorisation for the Supervisory Board to prepare a consolidated text of the amended Articles of Association, and amendment of Resolution No. 2 of the Extraordinary General Meeting of December 22nd 2016.

Therefore, on March 17th 2017, the Extraordinary General Meeting passed Resolution No. 3 to amend the Articles of Association and Resolution No. 4 to authorise the Supervisory Board to prepare a consolidated text of the Articles of Association reflecting the amendments introduced by Resolution No. 3. The amendments to the Articles of Association were registered in the National Court Register on April 6th 2017.

9.3. Corporate governance principles applied by Grupa LOTOS S.A. in 2017

Best Practices are principles designed to establish high standards of corporate governance, which thus help bring corporate supervision in line with EU standards. Grupa LOTOS S.A. cares for its investor relations and makes every effort to ensure they are based on partnership and developed in a manner satisfactory to both sides.

The key objectives of corporate governance at the LOTOS Group are as follows:

- Transparency of operations,
- Trust in relations with Stakeholders,
- Building of shareholder value.

Since its stock market debut in June 2005, Grupa LOTOS has complied with most of the recommendations set out in the document 'Best Practices for Public Companies', and since the beginning of 2008 it has followed the 'Code of Best Practice for WSE Listed Companies', as amended by the WSE Supervisory Board's Resolution of October 19th 2011 and Resolution of November 21st 2012. As of January 1st 2016, the Company complies with the revised → Code of Best Practice for WSE Listed Companies 2016.

In line with the new disclosure requirements, the Company reports on instances of incidental or permanent non-compliance with corporate governance rules. Such reports are published through the Electronic Information Base (EBI), similarly to current reports, and released in two languages on the Company's → Investor Relations website.

Obligatory corporate governance principles observed by Grupa LOTOS S.A. in 2017

On January 4th 2016, in the Investor Relations section of its website, Grupa LOTOS S.A. published a → list of Best Practices it applies, with information on three exceptions and grounds for non-compliance:

'The Company publishes:

I.Z.1.16. Information about the planned transmission of a general meeting not later than seven days before the date of the general meeting: **not applied.**

Comment: The Company has never broadcast any of its General Meetings, but may do so in the future.

I.Z.1.20. An audio or video recording of a general meeting: **not applied.**

Comment: The Company has never made audio or video recordings of its General Meeting. In the Company's opinion, the form of documentation of its General Meetings has ensured transparency and protection of shareholder rights. Moreover, the information on resolutions passed by the Company is disclosed in current reports and published on the www.lotos.pl website. The Company does not rule out documenting the proceedings of its General Meeting in the form of audio or video recordings in the future.

IV.Z.2. If justified by the structure of shareholders, companies should ensure publicly available real-time broadcasts of general meetings: **Not applied.**

Comment: The Company believes there is no threat attributable to the Company's not ensuring publicly available real-time broadcasts of its General Meetings given that its Shareholders have the right to attend General Meetings in person or by proxy. Additionally, General Meetings are held at the Company's registered office in Gdańsk, which facilitates attendance by Shareholders or their proxies. The Company complies with the disclosure requirements imposed by legal regulations and promptly, within 24 hours of the close of a General Meeting, issues current reports with information on resolutions passed, ballot results and objections raised, and also publishes such information on its corporate website. Furthermore, the Company publishes questions posed by, and answers given to, Shareholders during General Meetings. This appears sufficient to ensure Shareholders' participation in General Meetings.

Recommendations set out in the Code of Best Practice for WSE Listed Companies applied by the Company in 2017

The LOTOS Group understands that corporate governance is a means to enhancing its credibility as an entity listed on the WSE's regulated market, and thus its competitive position on the market. Therefore, the Group has a significant interest in implementing and complying with best practices. The Group takes steps to provide unambiguous and reliable communication to capital market participants. In 2015 and in prior years, Grupa LOTOS S.A. and its subsidiaries made every effort to ensure that their information policy is effective and supports the objectives of → corporate governance principles, i.e. transparency of the Company's operations as a listed company, trust in stakeholder relations, and consistent work on creating shareholder value.

Disclosure policy, investor communications

(Code of Best Practice for WSE Listed Companies, Chapter I Recommendations)

The LOTOS Group is keen to ensure that its relations with investors and stakeholders are forged and fostered based on equality and dialogue, in a manner satisfactory to both parties. The Group analyses and gradually introduces new communication tools, and continually improves the content and form of its reporting.

Grupa LOTOS S.A.'s → Investor Relations (IR) team makes every effort to present to investors a precise, reliable and transparent picture of the Company's operations and financial condition, taking into account the principles of engagement, availability and equal treatment of all investors.

The Company uses a broad range of IR tools to communicate with investors, including mailing, newsletters, webmaster, conferences for institutional and individual shareholders and brokers, conference calls, one-on-one meetings, open-house days for analysts and investors, and participation in the RESPECT index.

In 2017, the Investor Relations team supported the Management Board in organising meetings with investors and maintaining regular contact with capital market participants.

As part of its relations with individual shareholders, the Company collaborates with the Polish Association of Retail Investors.

In 2017, Grupa LOTOS S.A. attended the 21st Wall Street Conference of retail investors, organised by the Polish Association of Retail Investors in Karpacz, where it presented Part Two of → Grupa LOTOS S.A. Investor's Guide, its original initiative to facilitate analysis and understanding of oil companies' financial accounts. By offering this tool, Grupa LOTOS S.A. seeks to enhance investors' awareness and knowledge of the Company's business and show how it translates into shareholder value.

→ The Grupa LOTOS Investor Relations website is dedicated to market participants and Company stakeholders. This bilingual (Polish-English) service is updated on an ongoing basis to provide foreign investors and analysts with equal access to information. The website contains information and tools organised into four thematic blocks:

1. → LOTOS Group − this section of the LOTOS website presents the Group, its strategy, share capital structure and CSR activities.
2. → Reports and Key Data − this section contains financial and non-financial information (including an easily downloadable excel file databook), as well as the Group's current and periodic reports filed with the Warsaw Stock Exchange
3. → Investors – this section contains information on the methodology of calculating the → model refining margin at Grupa LOTOS S.A. and its monthly updated values; → macroeconomic data including prices of petroleum commodities and products in the global markets; as well as information on the Company's dividend policy and dividend payments, investor tools (calculator, historical LOTOS stock prices). It also contains downloadable files, i.e. periodic reports, strategy and efficiency improvement presentations, and the issue prospectus. This section also lists equity analysts covering the Company and their most recent recommendations for the LOTOS securities traded on the WSE. The corporate events calendar (quarterly reports, dates of General Meetings, open-house days, and other events which, in shareholders' opinion, might impact the price of the Company shares) is published in the '→Investor's Calendar' tab.
4. Corporate Governance – this section contains information on the Company's compliance with the requirements of the Best Practice for WSE Listed Companies. It also provides information on the composition, powers and rules of procedure of the Management Board, Supervisory Board and General Meeting of Grupa LOTOS S.A., and contains the Company's constitutional documents.

Information governance

Grupa LOTOS S.A's Communications Team, assisted by the Investor Relations Team, is responsible for maintaining a consistent and transparent communication policy at the LOTOS Group by cultivating continued relations with the media. The manner of operation and responsibilities of the office are defined in Grupa LOTOS' procedures and are subject to periodic assessment.

Sponsorship policy

In accordance with the adopted sponsorship rules, Grupa LOTOS S.A. and its subsidiaries act as sponsors mainly in Poland, in those administrative districts and provinces where their offices are located and where LOTOS Group companies conduct their business, which includes service stations and local business alliances. Sponsorship may be also carried out abroad, in locations where the LOTOS Group or its key social and business partners are particularly active.

In 2017, Grupa LOTOS S.A. focused its sponsorship initiatives on sports, culture and social causes. The sport-oriented initiatives included support for projects of nationwide reach, such as sponsoring of Poland's national football team, the Polish Skiing Association and motor sports. Grupa LOTOS S.A. continued to sponsor professional and amateur sports, as well as periodic sports events during which the LOTOS brand is promoted. A range of social and sports initiatives addressed to children and youth were also supported.

As part of cultural sponsorship activities, Grupa LOTOS primarily engaged in the organisation of events demonstrating a significant potential for promoting and building the image of the LOTOS brand. Social importance and artistic value were additional selection criteria for cultural projects. A number of key projects implemented in previous years were continued.

In 2017, Grupa LOTOS S.A.'s sponsorship expenditure on sports, cultural and social projects amounted to approximately PLN 39m. In sports and culture, the key projects included:

- Sports sponsorship
  - Nationwide projects, including sponsorship of Poland's national football team, the Polish Skiing Association and Tour de Pologne (a bicycle race),
  - Projects in the field of motorsports, including support of Kajetan Kajetanowicz in the European Rally Championship,
  - Sponsorship of tennis player Agnieszka Radwańska,
  - Training for children and youth, including under the National Ski Jumping Development Programme and the 'Piłkarska przyszłość z LOTOSEM' (Football Future with LOTOS) initiative.
- Culture sponsorship
  - Freedom Jazz Festival,
  - LOTOS Jazz Festival – *Bielska Zadymka Jazzowa*,
  - *Dwa Teatry* (Two Theatres) festival organised by the Polish Radio Theatre and Polish Television Theatre,
  - Siesta Festival,
  - Atelier Theatre, Theatre Summer 2017.

In 2017, the CSR activities focused on three key areas:

- Environmental protection and ecology, with special focus on conservation of the environment and natural values of the Baltic Sea, and nature protection of areas directly adjacent to the plants operated by the LOTOS Group,
- Road traffic safety,
- Redressing social inequalities and supporting educational projects, in particular those addressed to children and youth.

As part of environmental protection programmes, a range of initiatives were undertaken to raise environmental awareness and promote pro-environmental behaviour. These included the 'Protect the Wildlife of the Sobieszewo Island' programme, 'Headed for the Baltic' programme, and educational communication on the 'Headed for the Baltic' website.

The Company continued its 'LOTOS Safety Belt Champions' initiative aimed at improving road traffic safety. The project is designed to promote the awareness of car passenger safety rules, correct fastening of seat belts, and proper ways of transporting children to reduce the number of passenger injuries in road accidents.

In 2017, the 'Talent with LOTOS' programme and the E(x)plory Festival were continued; the projects are designed to support development of science and education of talented pupils. Also social initiatives and activities focused on Company's immediate environment were continued to build a positive image and good relations with local communities.

Management Board, Supervisory Board

(Code of Best Practice for WSE Listed Companies, Chapter II Recommendations, item 5)

Grupa LOTOS S.A.'s operations are managed by the Management Board, whose members act in the Company's interest and are responsible for its activity. The Company is supervised by an effective and competent Supervisory Board, which issues opinions on the Company's strategy, verifies the work of the Management Board in pursuit of the objectives laid down in the LOTOS Group Strategy 2017–2022.

To the Company's knowledge, members of the Management Board and the Supervisory Board adhere to the recommendations set out in the Code of Best Practice in relation to their engagement in performance of duties and acting in the interest of the Company.

Internal control systems

(Code of Best Practice for WSE Listed Companies, Chapter III Recommendations)

In line with the Minister of Finance's Regulation on current and periodic information to be published by issuers of securities, dated February 19th 2009, the Management Board of Grupa LOTOS S.A. is responsible for the internal audit function and its effective application in the financial reporting process.

Financial statements are prepared, approved and released to the public in line with an internal procedure, whereunder oversight of the financial reporting process lies within the remit of the Head of the Finance and Accounting Centre's Office. Responsibility for preparing the consolidated and separate financial statements lies with the Financial Reporting Office of Grupa LOTOS S.A.

The consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRSs), based on the financial statements of Grupa LOTOS S.A. and the entities controlled by Grupa LOTOS S.A.

Grupa LOTOS S.A., LOTOS Petrobaltic S.A., LOTOS Asfalt Sp. z o.o., LOTOS Oil Sp. z o.o., LOTOS Paliwa Sp. z o.o., LOTOS Kolej Sp. z o.o., LOTOS Serwis Sp. z o.o., Norway-based LOTOS Exploration and Production Norge AS, Lithuania-based AB LOTOS Geonafta and its subsidiaries, APHRODITE Offshore Services N.V., MILIANA Shipholding Company Ltd. and its subsidiaries, with the exception of Technical Ship Management Sp. z o.o. as well as B8 Sp. z o.o. and B8 Spółka z ograniczoną odpowiedzialnością BALTIC S.K.A. maintain their accounts in accordance with the accounting policies prescribed by IFRSs. The other Group companies maintain their accounting books in accordance with the accounting standards defined in the Polish Accounting Act of September 29th 1994 and the accounting policies and standards applicable at their foreign locations. Consolidated financial statements include adjustments which are absent from the accounting books of the Group's entities applying accounting standards other than IFRSs, and which have been introduced to ensure consistency of the entities' financial information with the IFRSs.

In order to ensure accounting uniformity, the accounting policies effective at the Company were implemented across the LOTOS Group companies for application in preparing their consolidation packages.

General Meeting, shareholder relations

(Code of Best Practice for WSE Listed Companies, Chapter IV Recommendations)

Grupa LOTOS S.A. seeks to ensure equal relations with and fair treatment of its shareholders with regard to transactions and agreements made by the Company with the shareholders and their related entities.

The Company ensures that women and men have equal access to management and supervisory functions, and therefore has no policy that would favour or discriminate against either of the sexes.

(Code of Best Practice for WSE Listed Companies, Chapter I Recommendations, item 9)

Number of women and men on the Supervisory Board

	Women	Men
Jan 1 2012–Jan 27 2012	1	5
Jan 27 2012–Feb 29 2012	1	4
Feb 29 2012–Dec 31 2012	2	4
Jan 1 2013–Dec 31 2013	2	4
Jan 1 2014 – Jun 30 2014	2	4
Jun 30 2014–Dec 31 2014	3	3
Jan 1 2015 – Jun 30 2015	3	3
Jun 30 2015 – Dec 23 2015	3	3
Dec 23 2015 – Dec 31 2015	3	4
Dec 31 2015 – Jan 26 2016	3	4
Jan 26 2016 – Jan 27 2016	3	3
Jan 27 2016 – Apr 12 2016	3	3

Apr 12 2016 – May 13 2016	3	4
May 13 2016 – May 25 2016	3	2
May 25 2016 – May 28 2016	4	2
Jun 28 2016 – Dec 22 2016	5	2
Dec 22 2016 – Dec 31 2016	3	4
Jan 1 2017 – Dec 31 2017	3	4
since Jan 1 2018	3	4

Number of women and men on the Management Board and in other management positions at Grupa LOTOS S.A. (December 31st 2017)

	Women	Men
Management Board*	0	0
Senior management	6	24
Lower management	67	171
Total	**73**	**195**

** Management Board members are not Company employees*

Conflict of interest, related-party transactions

(Code of Best Practice for WSE Listed Companies, Chapter V Recommendations)

The Company has in place transparent procedures for preventing conflicts of interest and related-party transactions where a conflict of interest may occur.

On January 1st 2013, the → LOTOS Group Code of Ethics was introduced, superseding the existing documents which had governed the conduct of the Group's employees and managers since mid-2000s. The document is intended to govern behaviour within the organisation, as well as external relations with capital market participants, customers and trading partners, local communities and competitors. It is the key element of a larger project to implement a comprehensive Ethical Conduct Programme.

A crucial element of the standards applicable at the Group is the → Misconduct Prevention Policy, which was adopted in 2012.The two documents were adopted in line with the objectives of the LOTOS Group Corporate Social Responsibility Strategy for 2012-2015.The LOTOS Group's stakeholders may report any suspected or actual breaches of the Code of Ethics to the persons responsible for their prevention using dedicated channels of communication with the LOTOS Group's Ethics Officer.

Remuneration policy for key managers

(Code of Best Practice for WSE Listed Companies, Chapter VI Remuneration)

Remuneration of the Management Board and Supervisory Board members is subject to limitations and conditions prescribed under the Act on Rules of Remunerating Persons Who Manage Certain Companies (Dz.U. of 2016, item 1202).

The Extraordinary General Meeting of December 22nd 2016, determined – within the scope of its powers – a remuneration policy for the members of the Supervisory Board (Resolution No. 3). Pursuant to the resolution, Supervisory Board members are entitled to receive remuneration equal to the average monthly salary in the non-financial corporate sector (net of bonuses paid from profit) in the fourth quarter of the preceding year, as announced by the President of the Central Statistics Office, multiplied by:

a) 1.7 – for the Chairman of the Supervisory Board,
b) 1.5 – for other members of the Supervisory Board.

The rules of remunerating members of the Management Board were defined by the Supervisory Board on March 8th 2017 in Resolution No. 168/IX/2017, whereby members of the Management Board are entitled to receive total remuneration comprising:

a) a lump sum base pay for a calendar month (the fixed remuneration) in the amount of:
   - PLN 61,652.92 – for the President of the Management Board
   - PLN 57,249.14 – for other members of the Management Board.
b) additional remuneration for a financial year (the variable remuneration) the amount of which depends on the level of delivery against management objectives.

The average monthly fixed and variable remuneration of a Management Board member may not exceed PLN 100,000.00 per financial year.

Directors' Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2017

Non-financial information and diversity policy

10. Non-financial information and diversity policy – separate and consolidated disclosures

10.1. Business model of Grupa LOTOS S.A. and the LOTOS Group

As in the previous strategic cycle, i.e. in 2011–2015 and 2016, in 2017 the LOTOS Group's principal business was focused on:

- Oil and gas exploration and production,
- Crude oil refining, and
- Marketing of and trading in petroleum products.

The Company sought to improve its marketing efficiency by optimising the refining and logistics processes. The goal of its strategy was to extend the value chain and increase product margins.

The LOTOS Group's Value Creation Model is founded on thorough realistic analyses of, and long-term forecasts for, the global oil market, and therefore should ensure the Group's sustainable growth in 2017−2022.

10.2. CSR policy – impact on the value chain

10.2.1. Overview and performance indicators of the CSR policy pursued by the Company and the Group

In all areas of its business the LOTOS Group strives to operate in a sustainable manner, with due regard to all legal requirements and in accordance with the principles of corporate social responsibility.

The Company believes that business should be conducted according to ethical standards, in harmony with the natural environment and social needs. This is why the Group has adopted a system of values, which it sees as a long-term pledge towards all its stakeholders.

The four primary **values** underlying the LOTOS Group's corporate social responsibility are:

transparency – stands for the duty to comply with the most exacting environmental standards, commitment to ethical and fair competition, and counteracting the abuse of human rights;

openness − the LOTOS Group's attitude to changes, the world's needs and people's expectations;

innovation – measures taken by the LOTOS Group with a view to achieving business benefits, gaining competitive advantage, ensuring sustainable development or addressing important social or environmental issues.

responsibility – the right attitude towards mankind and its future, the environment, the home country and its international security.

In 2017, as part of its CSR activities, Grupa LOTOS continued the projects and initiatives from previous years. Its efforts focused on three key areas:

- **Environmental protection and ecology** − with special focus on the biodiversity of the Baltic Sea (given the seaboard location of our refinery), as well as other areas of outstanding natural value located in the Company's immediate vicinity,
- **Road traffic safety** − which we influence through the quality of our products as well as comprehensive educational campaigns,
- **Ensuring equal opportunities and supporting the education and development of children and young people** − who are the target group of our CSR sports programmes and various other projects focusing on the support of talented youth.

CSR ratings

In line with its commitment to Openness, the LOTOS Group has independent institutions regularly review, audit, and assess its activities. Their findings result in the Company's high ratings on key CSR indices.

In December 2017, Grupa LOTOS was included for the 11th time in the RESPECT (Responsibility, Ecology, Sustainability, Participation, Environment, Community, Transparency) Index of the most socially responsible companies listed on the Warsaw Stock Exchange. Having satisfied the stringent criteria, LOTOS was admitted into an elite group of 28 companies comprising the new RESPECT Index portfolio. Grupa LOTOS is proud to have been included in this CSR-focused index since its inception. Each of the acronymic values of the RESPECT project is fostered across the Company on a daily basis, which allows it to build trust among investors and mitigate business risks.

In 2017, Grupa LOTOS came fourth in the 11th edition of the Socially Responsible Companies Ranking, A comprehensive list of Poland's largest companies ranked by the quality of their Corporate Social Responsibility management. The evaluation criteria included responsible conduct of business, relations with external and internal stakeholders, responsible relations with local communities and the environment, sustainable development, as well as responsible innovation in the area of work quality, social development and environmental impact.

In 2017, Grupa LOTOS was declared 'A Well-Perceived Company' in the latest edition of awards organised by the Business Centre Club.

The Company was also awarded a Golden CSR Leaf For its regular efforts to conform to the stringent ISO 26000 CSR standard on a daily basis.

For more information on the LOTOS Group's current CSR initiatives, go to → www.odpowiedzialny.lotos.pl.

LOTOS Foundation

In 2015, the Grupa LOTOS Management Board resolved to establish the LOTOS Foundation. Its main task is to manage the organisation's philanthropic policy. The Foundation's mission is the wide-ranging social activity to make a positive contribution to its social and natural environment. In 2017, the LOTOS Foundation supported social projects with a total amount of **PLN 2,473,356**,

which was allocated as follows:

Area	Donation amount (PLN)	Number of entities
Security	120,000	2
Community and charity initiatives	714,750	24
Culture and arts	439,000	18
Science and education	634,700	21
Health protection and promotion	396,986	27
Preservation of heritage and traditions	120,920	7
Sports	47,000	5
Total	**2,473,356**	**104**

10.2.2. CSR due diligence procedures

In each CSR area, the Company works with reputable and proven social partners, in keeping with its core competence and values. For more information, see: www.odpowiedzialny.lotos.pl.

Being a socially responsible company, Grupa LOTOS has a long-standing tradition of supporting and applying CSR and sustainability best practices, principles and guidelines framed by well-established Polish and international NGOs and industry associations, government authorities and intergovernmental organisations, including the ISO 26 000 standard covering the Seven Core Subjects: organisational governance, human rights, labour practices, the environment, fair operating practices, consumer issues, as well as community involvement and development.

In 2017, Grupa LOTOS took measures to address the challenges defined in the Sustainable Development Goals until 2030 announced by the UN in September 2015, the Vision of Sustainable Development for Business in Poland until 2050, and the 10 Principles of the UN Global Compact. The Company declared its commitment to the 10 Principles of the UN Global Compact in 2009, undertaking to:

1. Support and respect the protection of internationally proclaimed human rights;
2. Make sure that it is not complicit in human rights abuses;

3. Uphold the freedom of association;
4. Uphold the elimination of all forms of forced or compulsory labour;
5. Uphold the effective abolition of child labour;
6. Uphold the elimination of discrimination in employment and occupation;
7. Support a precautionary approach to environmental challenges;
8. Undertake initiatives to promote environmental responsibility;
9. Encourage the development and diffusion of environmentally friendly technologies;
10. Work against corruption in all its forms, including extortion and bribery.

In June 2017, Grupa LOTOS officially joined the Partnership for the UN 2030 Sustainable Development Goals at the ‘2030 Agenda for Sustainable Development – Global Goals, National Challenge, Individual Responsibility’ conference, hosted in Warsaw by the Polish Ministry of Development. Thus, the Company became one of a few dozen Polish corporate and institutional signatories of the official declaration of commitment to the UN global goals.

In 2017, Grupa LOTOS also continued to carry out projects in partnership with the Responsible Business Forum (RBF), an NGO which has successfully promoted CSR among Polish businesses for over a decade. Grupa LOTOS has been RBF’s strategic partner since 2008.

CSR reporting

One of Grupa LOTOS' commitments towards its stakeholders, made in the 2008 CSR Strategy, concerned the implementation of a comprehensive system for performance reporting. Guidelines for sustainability reporting, developed by Global Reporting Initiative (GRI), were chosen as the best framework for preparing CSR performance reports. The GRI standards are recognised as the only standards which enable a comprehensive presentation of CSR matters while ensuring comparability and measurability of an organisation's achievements in individual areas of its activity. The Company has used the framework to report on its performance since 2006.

2017 saw the publication of the LOTOS Group’s Integrated Annual Report for 2016. It was prepared in accordance with Global Reporting Initiative's Sustainability Reporting Framework and Guidelines (GRI G4, core level), together with the Oil and Gas Sector Supplement.

As part of the report preparation process in 2017, the Company widely consulted its key internal and external stakeholder groups, while thoroughly researching external sources. This allowed it to select material GRI aspects to be disclosed in the final report.

In accordance with the GRI G4 guidelines, the process consisted of three steps:

- Identification – deciding on and listing key CSR and business-related aspects.
- Prioritisation – consulting internal stakeholders to determine the materiality of the key aspects.

- Validation – a validation workshop was held to approve the final list of priority aspects to be covered in the report.

Entitled 'Stability and sustainable growth', the LOTOS Group's Integrated Annual Report issued in 2017 won the second prize in the 'Corporations' category of the 'Best Annual Report' competition held by the Institute of Accountancy and Taxes. The report is available at → www.raportroczny.lotos.pl.

Ethical Conduct Programme

The → Code of Ethics in place across the LOTOS Group defines the system of ethical values and standards of conduct which LOTOS employees are expected to uphold in the workplace and in relations with key stakeholder groups, including capital market participants, clients, partners, communities, and competitors.

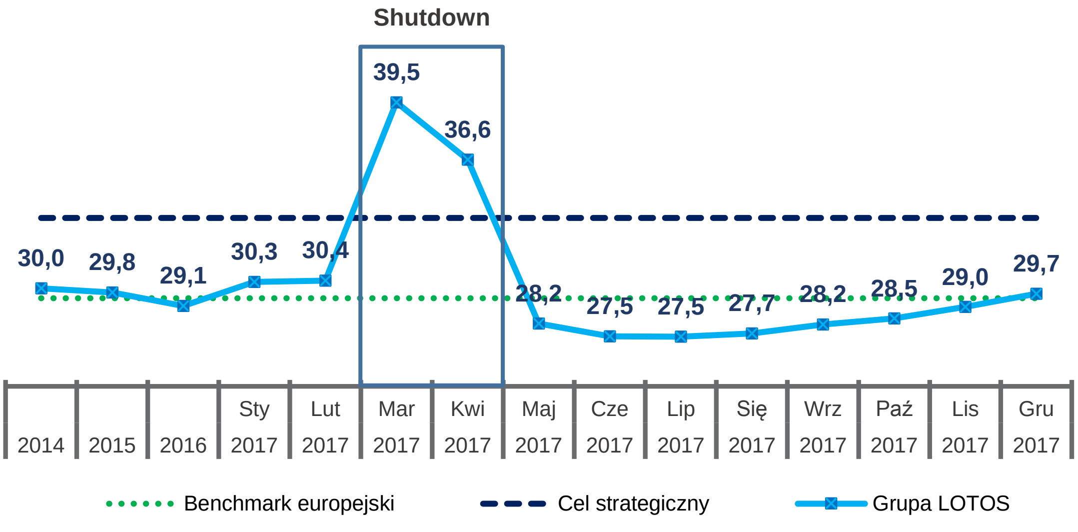
Ethical violations are reported to and handled by the LOTOS Group Ethics Officer. Another crucial element of the Group's standards is the → Misconduct Prevention Policy. The two documents were adopted in line with the objectives of the → LOTOS Group Corporate Social Responsibility Strategy for 2012-2015.

10.3. Environmental policy – impact on the value chain

10.3.1. Overview and performance indicators of the environmental policy pursued by the Company and the Group

As a result of connecting the Grupa LOTOS refinery to a natural gas supply system in 2012 and using the supplied gas as a component of the refinery's fuel gas, the main fuel for its CHP plant, and feedstock in hydrogen production, the Company is able to keep its carbon dioxide emissions, but also carbon dioxide emissions intensity (i.e. emissions in relation to CWT (Complexity Weighted Tonne), a metric reflecting the refinery's total throughput), at constant, low levels. The refinery's processing technologies and production management system are continually improved to reduce its environmental footprint. Thanks to these measures, despite the 2017 maintenance shutdown, the refinery was able to maintain one of the lowest carbon dioxide emissions intensity ratios (expressed in kg CO_2/CWT) among European refineries.

Figure 44. **Total CO_2 emissions intensity of Grupa LOTOS S.A.'s units (kg CO_2/CWT) in 2014-2017**



In 2017, with the shutdown period included, the average emissions intensity ratio was 30.3 kg CO_2/CWT.

We are also proud that, thanks to our commitment to efficient environmental management, in 2017 all the LOTOS Group companies were able to meet the terms of their environmental permits.

10.3.2 Environmental due diligence procedures

Given their nature and scale, the LOTOS Group's operations require a keen sense of responsibility – not only for our employees and local communities, but also for the natural environment. Our daily work is guided by a number of environmental responsibility precepts, which help us make sure that we are doing our utmost to operate responsibly – in good conscience and according to our best knowledge.

The first of these principles is to minimise environmental footprint. For us, this means not only managing the environmental issues so as to ensure compliance with legal requirements, but also going beyond the law, in the positive sense. A good example of this approach was the project to connect the refinery to a natural gas supply system, which in our opinion has proved its worth and still has some untapped potential. From the business point of view, gas is a cheaper source of energy and feedstock for hydrogen production, while in terms environmental benefits, it is the cleanest of all fossil fuels. The neighbouring communities were also able to take advantage of the gas grid extension. Other projects which have considerably improved the well-being of local communities and the environment included reduction of the odour nuisance of our wastewater treatment plant in Gdańsk and development of a treated wastewater and steam condensate recirculation unit and a flare gas recovery unit, none of which was required by any statutory laws or regulations.

The second principle is to consider the aspects of our environmental footprint when making decisions and take responsibility for the impact of our decisions on the environment. In keeping with this principle, when planning the 2017 maintenance shutdown we assessed all known and foreseeable environmental impacts of the planned work at each stage of the project, i.e. when taking process lines off stream, their shutdown, and bringing them back on stream. In order to eliminate the identified risks, adequate measures were taken, including washing of roads or setting up special tents to contain dust.

In addition to our own environmental protection efforts, we attach great importance to our suppliers' environmental policies. When selecting potential contractors, we check whether they have relevant environmental permits, if required. Next, if a company is awarded a contract with the LOTOS Group, it is required to sign a clause whereby it undertakes to perform the contract in compliance with applicable environmental laws and regulations. During the contract performance, we audit the contractor to check whether it actually fulfils all applicable legal requirements related to various aspects of environmental protection, primarily with respect to waste management, payment of environmental fees and charges, and storage of hazardous substances.

The third environmental responsibility precept calls for adhering to the principle of sustainable development when conducting our business, with due regard to the needs of all stakeholders, including the environment. We are committed to ensuring that environmental protection is one of the key values behind all our business decisions, plans, and activities. This means that we operate our process units in full compliance with the most stringent environmental requirements and that we plan business growth through innovative technological projects and solutions meeting the definition of the best available techniques, i.e. ensuring environmental protection and sustainable use of natural resources. We are committed to designing and operating our production processes with a primary focus on preventing pollution and other nuisance at source. In accordance with the principles of sustainable development and corporate social responsibility, we also strive to manufacture high quality products which leave the least possible environmental footprint. Last but not least, we attach great weight to raising our staff's environmental awareness through internal communication highlighting individual, corporate, regional and global aspects of environmental protection.

10.4. Human resources management and diversity policy – impact on the value chain

10.4.1. Overview and performance indicators of the human resources management policy pursued by the Company and the Group and related due diligence procedures

The strategic objective of our HR policy is to recruit and retain such workforce as to ensure delivery of the LOTOS Group's business objectives. We believe that highly qualified, motivated and dedicated staff is the Company's core asset, driving its performance and giving it a true competitive edge.

The HR policy in place at the LOTOS Group is based on procedures governing various aspects of employee recruitment and management processes:

- Staff recruitment: 'Workforce Planning and Employment Practices at the LOTOS Group', and also 'Employee Recruitment and Selection Standards at the LOTOS Group − Guidelines for Managers Requesting Staff Recruitment'.
- Onboarding of newly recruited staff: 'Induction Programme for New Hires at the LOTOS Group'.Onboarding of newly recruited staff: 'Induction Programme for New Hires at the LOTOS Group'.
- Staff development and training: 'Employee Training and Development' and 'Periodic Employee Evaluation System (PEES)'.

Our standards of conduct at work and in business relations are described in the LOTOS Group's Code of Ethics. In our relations with employees and other stakeholders, we are also guided by the 10 Principles of the United Nations Global Compact, which cover the areas of human rights, labour, environment, and anti-corruption.

Our priority is to build a sense of trust between the management and other employees, and to treat everyone fairly regardless of their position, length of service, trade union membership, physical appearance, age, gender, sexual orientation, religion, nationality, or political views.

Additional tools which foster good relations between the employees and management include the Collective Bargaining Agreement and internal procedures which standardise HR management.

Under the Collective Bargaining Agreement, we provide all our employees – regardless of the form of employment and length of service – with the same package of social benefits (which is also guaranteed by the Rules of Participation in the Company Social Benefits Fund).

How do we create an organisational culture fostering productivity?

- We take initiatives aimed at building a positive corporate culture, which include cooperation with the Ethics Officer within the framework of the Ethical Conduct Programme.
- We promote ethical values in line with the Code of Ethics, and conduct awareness raising activities targeted at employees and management, such as e-learning courses on how to avoid conflicts of interest in the workplace.
- We use annual employee evaluation for open communication between managers and employees, and for joint setting and assessing the delivery of professional and development objectives.
- We build an employee engagement culture by conducting surveys of employee satisfaction and implementing improvements. They provide an insight into our employees' attitudes and help us monitor their satisfaction, engagement, and opinions. We try to use the findings to create a friendly environment at the organisation and achieve business objectives.
- We maintain good relations and we cooperate with trade unions and works councils.

Periodic Employee Evaluation System

At the LOTOS Group, we attach great importance **to key competencies**, that is the skills, attitudes, knowledge, and experience necessary for the successful performance of tasks. In our case, such competencies include the ability to cooperate, commitment, and openness to change. We believe that all our employees should possess them, regardless of their role or position.

What do key competencies mean to us?

Ability to cooperate:

- Relationship building, e.g. through respect for others, kindness, support, and positive attitude towards cooperation,
- Teamwork,
- Good manners.

Commitment:

- Initiative,
- Focusing on goals and tasks,
- Improving the way the organisation operates, e.g. through reporting difficulties and searching for solutions, suggesting improvements, improving one's own productivity and the productivity of one's business area,

- Identifying with the organisation, e.g. acting in line with its values and promoting its image,
- Complying with the rules, procedures, and standards.

Openness to change:

- Accepting and showing positive attitude towards change,
- Interest in new solutions,
- Adapting to change,
- Signalling the need for change within one's business area and actively participating in change implementation.

The key competencies of LOTOS Group employees are assessed during periodic employee evaluations. Management staff are additionally evaluated for their managerial skills in such areas as teamwork management, leadership, team potential building, strategic thinking, and decision making. Non-management staff are evaluated for their functional competencies required in a given position, e.g. work discipline, resilience to stress, negotiation skills, and project work.

Other advantages of PEES:

Meetings between managers and employees are an opportunity to receive feedback on employees' competencies and achievement of professional and development objectives. The collected information helps the managers better plan future steps (such as division of tasks or definition of employee development paths), while motivating staff to pursue their professional goals.

Training and development policy

The LOTOS Group provides adequate conditions for effective development and practical application of the knowledge and skills required of all employees throughout their employment. The objectives and tasks defined in the Group's short- and long-term development plans are reflected in the development plans formulated every year during the periodic employee evaluation. All employees, irrespective of their age and time left to retirement, are offered opportunities to take part in training designed to help them acquire or enhance their knowledge and professional qualifications, and develop general skill sets.

In line with its adopted CSR Strategy, Grupa LOTOS undertakes initiatives to encourage active engagement of staff aged over 50, seeks to promote a knowledge sharing culture drawing on the expertise of employees aged over 50 and involving them in the professional advancement of other staff.

Our senior employees are given an opportunity to act as mentors of newly hired staff as part of the

'**Good Start for Beginners' onboarding programme**.

WSPARCIE NA STARCIE
Program adaptacyjny LOTOS

It introduces new employees to the LOTOS values and organisational culture, and – with the active support of an experienced colleague – makes it easier for them to find their bearings in the new professional environment and fit into the team, while reducing stress associated with starting a new job.

Among solutions applied at the Group are those based on coaching and mentoring, the latter chiefly in the refining area, where skill learning is the longest process, requiring many years of experience. Coaches and mentors are experienced operational trainers who directly share their knowledge with younger colleagues working as process operators.

The establishment of an **operational training team** within the Chief Refining Officer's division made it possible to transfer valuable knowledge in that area. Our senior employees were internally transferred to the team based chiefly on their long-standing experience in working at the refinery's units and the resulting extensive technical and technological knowledge uniquely specific to the fuel sector. The majority of the team are employees aged over 50, who are involved in such activities as:

- **Conducting on-the-job training** (individual coaching and evaluation sessions), including training with the use of simulators; such training (about 600 sessions a year) is dedicated to process operators and its purpose is to transfer the knowledge and develop the skills required to operate the refinery's units
- **Conducting selected modules of basic training** for newly hired staff in the refining area, focusing on technical and technological knowledge essential for employees working as process operators (12 training days within one edition followed by an exam), **holding exams for particular job positions** (about 200–300 a year) to test the knowledge required to operate a given unit or related to a specific refinery area
- **Organising work placements** in the Chief Refining Officer's division for university and secondary school students who want to learn about the nature of work at refining units and confront theory with practice
- **Participating in overhauls of the refinery's units**
- **Reviewing, designing and updating procedures and manuals**
- **Participating in emergency committees**

- **Developing training materials** with a view to retaining refining area-related expertise within the organisation.

The LOTOS Group is focused on creating the best conditions for professional development of its employees, which involves learning and updating knowledge necessary to effectively perform current and future tasks.

Objectives of the LOTOS Group's training policy:

- To increase the Group value through continuous drive towards excellence and leveraging the potential of our employees;
- To secure resources necessary to deliver key tasks defined in our strategy;
- To focus on the current and future requirements for individual positions;
- To seek organisational excellence through productivity improvements and knowledge sharing;
- To identify and analyse training needs, plan new training and assess its effectiveness;
- To improve the tools used in the training management process.

The LOTOS Group's training policy is based around the following concepts:

- **Availability** – training opportunities are offered to all employee groups;
- **Cohesion** – the training system is consistent with the Group's mission and strategy;
- **Responsibility** – all participants are responsible for training results and development;
- **Continuity** – training course planning takes into account the results of periodic employee evaluations (PEES), career paths, succession plans, and development programmes for particular employee groups;
- **Flexibility** – training courses are planned and organised to respond to the evolving external conditions and changes in required/desired employee qualifications.

To find out what kind of training our employees expect, we conduct an annual survey as part of the Periodic Employee Evaluation System (PEES). The optimum development plan for an employee is formulated based on a catalogue of development activities, i.e. a set of suggested options on the PEES form.

When choosing training subject areas, we also take into account the findings of employee satisfaction and engagement surveys, employee development plans for particular units, and the organisation's development needs.

To respond to the challenges arising from changes within and outside our organisation, back in 2004 we launched the LOTOS Academy, our proprietary training and development programme.

LOTOS Academy initiates and runs talent development programmes targeted at various employee groups, including:

- Leader of the Future Programme;
- Master Programme;
- Managers Academy;
- Management Skills Development Programme for Technical Personnel;
- LOTOS Group Succession Programme.

Initiatives undertaken as part of LOTOS Academy help develop a culture of knowledge sharing. We have created the 'Good Start for Beginners' onboarding programme, a certification process for refining-related training, and 'On the Road to Perfection' training scheme. At the LOTOS Group, we promote e-learning to raise our staff's qualifications, responding to the expectations of the growing proportion of employees aged 25–35, who prefer to use modern IT tools.

Number of training days per employee at the LOTOS Group in 2017: 2.5

at Grupa LOTOS S.A.: 2.8

Recruitment:

We conduct recruitment taking into account the high qualifications and skills of Grupa LOTOS existing employees and the need to provide them with career development opportunities. Job applications submitted by the LOTOS Group's existing employees are given priority to enable effective transfer of knowledge between its subsidiaries. Additionally, by announcing job openings in newspapers and on the Internet, spreading information in the media, participating in job fairs, etc., we recruit candidates from outside the Group to add new qualifications necessary for the organisation tackle the challenges facing it. Our recruitment and selection processes are transparent and objective, based on high ethical standards. As a member of the Coalition for Friendly Recruitment, Grupa LOTOS S.A. follows the Code of Best Practice in recruiting staff. Thanks to these efforts, it continues to hold the Friendly Recruitment Zone certificate, which is highly valued by job seekers and can be used in image-building activities. We have implemented ‘Standards of the Recruitment and Selection Process at the LOTOS Group’, which include guidelines for recruitment specialists and for managers requesting staff recruitment.

In order to retain the most valuable talent and reduce recruitment costs, we systematically review the reasons for employee departures to monitor and prevent employee attrition.

Grupa LOTOS is as a Strategic Member of the Polish Human Resources Management Association, thereby gaining access to the latest HR knowledge, best practices, and proven business efficiency improvement tools. In 2017, we were subject to another certification audit by the Polish Human Resources Management Association. Based on the audit results, the Association decided to extend the validity of the **‘Top-Quality HR Certificate’** held by Grupa LOTOS, which is granted to companies adhering to the highest standards in human capital management.

10.5. Respect for human rights – impact on the value chain

10.5.1. Description and performance indicators of the human rights policy in place at the Company and the Group

In the business environment in which the LOTOS Group operates, human rights issues are governed by a legal framework. The Group only trades with entities that operate lawfully and are required to comply with law, including regulations on human rights.

Mindful of our external impacts and strong reliance on contractors and suppliers, we want to work with partners who attach priority to the universally accepted system of values. This approach aims to ensure that our contractors down the supply chain treat their own employees with respect and dignity.

The LOTOS Group seeks to ensure that all requests for proposals in a contractor selection process, and all contracts awarded to existing or new suppliers, contain CSR clauses pertaining to: OHS, rules and standards of conduct, ethics, absence of conflicts of interest, anti-corruption, environmental protection, respect for human rights, and social impacts. All LOTOS Group companies must include these clauses in their contracts with trade partners.

LOTOS upholds a philosophy of integrated supply chain management, whereby it seeks to maximise the integrated economic effects of its operations while doing its best to meet the expectations of all stakeholders.

The LOTOS Group develops its strategy of corporate social responsibility in the supply chain based on the Corporate Human Rights Benchmark methodology. The purpose of the project is to draw the attention of global business to the issue of human rights abuse by corporations, their contractors and suppliers. It also aims to create a ranking of global publicly traded companies and to recognise those that excel at human rights performance. The Corporate Human Rights Benchmark methodology builds on internationally recognised standards, including the standards of business conduct in the area of human rights developed by the **United Nations**. In addition, it takes into account the **Sustainable Development Goals** in the 17 areas identified as key to the world’s future through wide-ranging public consultations.

The LOTOS Group's CSR policy addresses the challenges defined in the Sustainable Development Goals until 2030, published by the UN in September 2015.

In 2009, Grupa LOTOS joined the United Nations Global Compact, an international initiative launched in 2000 by the UN Secretary-General. In its business, the Company adheres to and complies with the 10 Principles of the UN Global Compact, spanning the areas of respecting human rights, environmental protection and anti-corruption.

Standards of conduct at work and in business relations to be followed by LOTOS employees are described in the LOTOS Group’s Code of Ethics, which also contains human rights-related provisions. The priority is to build a sense of trust between the management and other employees, and to treat everyone fairly regardless of their position, length of service, trade union membership, physical appearance, age, gender, sexual orientation, religion, nationality, or political views.

10.5.1. Human rights due diligence procedures

Every year, the LOTOS Group companies set goals and tasks aimed at improving workplace safety, implementing uniform standards and sharing knowledge and experience by occupational health and safety specialists. The overriding objective for LOTOS is to raise awareness and further the commitment to improving safety among management staff and employees across the organisation, as well as subcontractors. Workplace safety is closely related to the corporate responsibility to respect human rights.

10.6. Anti-corruption policy – impact on the value chain

10.6.1. Description and performance indicators of the anti-corruption policy in place at the Company and the Group

Key components of the misconduct (corruption) prevention system at the LOTOS Group

APPLICABLE REGULATIONS

- Misconduct prevention policy
- Material misconduct (corruption) risk management card
- Organisational rules
- Work rules
- Code of Ethics
- Remits
- CSR clauses (including anti-corruption clauses)

RESPONSIBILITY

- Management Board members
- Management
- Employees
- Internal Audit Office
- Legal department

REPORTING CHANNELS

- Line manager/Director of the Internal Audit Office
- Report form (WWW or Intranet)
- Dedicated email address
- Dedicated phone number with voicemail

EDUCATION

- Training
- Themed meetings
- Raising management and employee awareness

COMMUNICATION

- External
- Annual report
- Reporting system

OPERATIONAL ACTIVITIES

- Risk identification and assessment
- Control system
- Prevention and detection
- Investigation processes

In 2017, the Group continued to raise the standards in the existing misconduct and corruption prevention mechanisms and solutions that form part of a larger system designed to constantly increase resilience to misconduct by:

- Minimising the risk of misconduct
- Mitigating the harmful impacts of misconduct
- Mobilising the resources to faster restore the organisation to the pre-incident state.

Misconduct (corruption) prevention policy performance indicators:

- Misconduct risk assessment – once every three years based on a questionnaire survey.
- Prevention and detection measures assessment – once every three years based on a questionnaire survey.

Last carried out in 2017 in electronic form, the surveys demonstrated that:

- Awareness of misconduct-related threats increased relative to the previous survey
- Misconduct prevention and detection measures were perceived as more effective relative to the previous survey.

10.6.2. Anti-corruption due diligence procedures

Actions in this area were implemented through:

1. The **Misconduct Risk Management Programme**, achieved through:
   - Educating on risk identification (preventive measures)
   - Communicating liability for corrupt behaviour and corruption offences
   - Investigating reports of suspected misconduct (corruption)
   - Ongoing monitoring of systems, processes and controls within the organisation to identify weak points and threats

- Making systems more resilient by implementing risk mitigation mechanisms.

2. The **LOTOS Group Misconduct Prevention Policy**, which
   - Articulates the Management Board's **ZERO TOLERANCE FOR MISCONDUCT APPROACH**
   - Defines the process for dealing with suspected misconduct reports
   - Specifies the suspected misconduct reporting channels: telephone, email, internet and intranet report forms, and traditional mail.
3. Definition of **enterprise risk** related to material misconduct, including all forms of corrupt behaviour, and establishing a Risk Management Card, which:
   - Specifies the method of risk management and monitoring
   - Sets out a risk mitigation plan and an action plan in case the risk materialises.
4. The **Code of Ethics** as a set of ethical standards to be followed within the organisation, defining the approach to the risk of corruption and to relationships with external stakeholders
5. The **Ethics Officer**, responsible for promoting the values and principles set out in the Code of Ethics.
6. The **CSR (corporate social responsibility) clauses** to be incorporated in RFPs and contracts (including the anti-corruption clause).

Other actions taken in 2017 under the misconduct prevention policy:

Organisational changes and actions **implemented in 2017** to meet the needs of the organisation:

- Setting up a **Misconduct Risk Management Team** within the Internal Audit Office
- Expanding the operations of **the Trade Partner Assessment Department** established within the structures of Grupa LOTOS S.A. in the fourth quarter of 2016
- Requiring all **subsidiaries of Grupa LOTOS S.A. to carry out trade partner assessment** in line with the updated procedure, which aims to reduce the risk of misconduct (corruption) in the Group's relations with trade partners
- Conducting training in misconduct prevention at subsidiaries under the Misconduct Risk Management Programme
- Providing new hires with information on the Misconduct Prevention Policy and employee responsibility during onboarding training sessions.

10.7. Description and outcomes of managing material risks related to the Company's/Group's operations, stakeholder and trade partner relations in the five areas described above

As a responsible corporate citizen guided by the principles of sustainable development, the LOTOS Group conducts its business while maintaining commitment to personnel and social matters, human rights, the natural environment and anti-corruption. As part of its enterprise risk management framework, the Group identifies and mitigates risks falling into the categories specified above.

All material risks are discussed in detail in the table below. They contain references to specific areas of non-financial impacts: P (for Personnel), S (for Social), NE (for Natural Environment), AC (for Anti-Corruption), and HR (for Human Rights).

In order to ensure due diligence in mitigating material risks, Grupa LOTOS S.A., as a publicly traded company, operates a compliance system (further referred to as the Compliance System), which covers all organisational units of Grupa LOTOS S.A. and its subsidiaries. The system is principally designed to prevent and mitigate legal risks, while ensuring compliance with legal requirements, corporate regulations, as well as ethical standards and adopted standards of conduct.

In 2017, the focus of the newly established Compliance Department's efforts was on developing the system by implementing uniform rules across the Group. As part of the compliance function, corporate mechanisms and organisational solutions were gradually put in place to minimise the risk and consequences of legal breaches. Key activities included ongoing legal monitoring and implementation of newly enacted regulations, keeping track of new legislative proposals and coordinating the process of reporting the Company's position regarding such proposals. In addition, in the organisational units and subsidiaries of Grupa LOTOS S.A. an assessment of compliance with legal requirements was carried out. An electronic platform was deployed for sharing compliance-related information and documents. Training and education was also provided to Company employees covering significant changes in the applicable regulatory framework.

The Company has an irregularity detection system, which ensures confidentiality and anonymity to whistleblowers.

Overview of key non-financial risks to the LOTOS Group

Minor risk ●○○ Moderate risk ●●○ Major risk ●●●

Stable risk → Risk increasing ↗ Risk decreasing ↘

NON-FINANCIAL CATEGORIES: P personnel; AC anti-corruption; HR human rights; S; NE natural environment

	CATEGORY	BRIEF DESCRIPTION OF RISK	RISK MITIGATION/ RESPONSE MEASURES	POTENTIAL ADVERSE IMPACT OF RISK	RISK LEVEL	TREND
	OPERATIONAL RISKS					
1.	**Production risk** P NE	Risk of drilling or production failure, resulting in reduced availability of affected infrastructure	Implementing a range of measures to mitigate such risks as blowout, well failure, oil spill, fire, and collision at sea and to monitor their effective oversight, including: • monitoring of process parameters • equipment performance tests • use of appropriate safety measures • compliance with applicable safety and operating procedures	• Reduced production, disrupted operations • Harm to people and damage to the environment • Damage to reputation • Revenue erosion and site restoration costs, with a negative impact on financial performance	●●○	→
2.		Geological reservoir risk and downhole equipment-related risk	• Reservoir analysis (updating integrated static and dynamic models) and assessing well and pump performance on an ongoing basis • Taking measures to achieve projected production volumes • Compliance with review schedules • Having equipment routinely inspected by certifying institutions (Polish Register of Shipping, Mining Authority, Technical Inspection Office).	• Failure to achieve projected production volumes, • Reduced revenue and profits	●●●	→

			• Following an optimal spare part storage policy and compliance with the adopted machinery and equipment maintenance policy • Improving staff qualifications			

3.	**OHS risk**
	P
	NE
	HR
		Accidents along the entire production cycle and logistics chain (including road and rail accidents during product transport and aircraft accidents during rig crews transport)	• Regular inspections of OHS compliance at the workplace
			• Raising employees' awareness of and commitment to safety culture by taking various initiatives
			• Implementation of the annual Health and Safety Plan for the LOTOS Group
			• For EFRA Project: developing the "EFRA Project Safety Rules" (in the form of a booklet), running a newsletter, the Incentive Programme to award employees who do their work safely; weekly OHS reviews together with the Project management team
			• In the area of air safety:
			  ○ High safety requirements for aircraft fleet – AOC and E12 certificates, IFR approval.
			  ○ Ongoing monitoring of weather conditions and proper logistics of passenger transport by sea, to minimise risks.
			  ○ Reviewing the terms and conditions of contracts with carriers, to ensure appropriate quality and safety of transport.
				• Harm to people and damage to the environment
				• Damage to reputation and costs of recovery from reputational crisis
				• Site restoration and compensation costs
				• Disrupted operations, reduced revenue and profits		

4.	**Procurement risk** S	Buying from an unreliable supplier participating in VAT "carousel fraud"	• Detailed checks of trade partners • Inclusion of relevant clauses in contracts with trade partners • Due diligence	• VAT liabilities • Weaker financial performance		
REPUTATION AND COMPLIANCE RISK						
5.	**Legal risk** AC HR	Misconduct understood as a deliberate act or omission which constitutes violation of the law or a breach of the LOTOS Group's internal regulations, committed to secure an unlawful gain or causing the Company to sustain undue losses (including corrupt practices).	• Misconduct Risk Management Programme, which consists in the coordination of misconduct prevention and detection measures implemented in individual business processes, misconduct prevention education, identification and assessment of misconduct risks, as well as overall evaluation of the organisation's resilience to misconduct. • Ethical Conduct Programme, which is pursued through the Code of Ethics, the Ethics Officer and the Ethics Hotline, as well as training activities.	• Financial losses for the LOTOS Group • Loss of reputation		

6.	S	Violation of data protection laws	• Establishment of internal data protection standards, including as part of the Security Policy, and data protection procedures • Audits, also by external auditors, to verify whether the organisation observes the applicable rules and how it is prepared to comply with the new GDPR requirements • Raising employees' awareness (training, meetings)	• Fines • Loss of reputation	●●○	→
7.	**Environmental risk** NE	Leakage from vessels carrying crude oil / products made by the LOTOS Group	• Working with service providers that observe the performance standards set out in resolutions of the International Maritime Organization (IMO) and comply with the maritime security conventions • Including clauses on technical condition of ships in contracts with trading partners and providers of sea transport services • Working with shipowners that are members of the International Tanker Owners Pollution Federation Ltd. (ITOPF) and hold the required insurance certificates • Membership in the International Oil Pollution Compensation Fund (IOPCF)	• Environmental pollution • Loss of reputation • Financial losses due to loss of cargo • Reduced revenue and profits	●●○	→
8.		Oil spill on rig	• Maintaining offshore equipment in good technical condition to minimise the risk of accidents on rigs • Taking steps to control the risk of formation fluid invasion at the stage of planning and conducting well drilling operations • Holding annual drills in oil spill control • Selecting the right anti-spill equipment	• Environmental pollution • Loss of reputation • Cost of removing damage • Disrupted operations • Reduced revenue and profits	●●○	→
9.		Periodical spikes in emissions from the refining process	• Constantly monitoring the process and emission parameters • Maintaining high technical standards; BAT requirements • Implementation of environmental management plans	• Loss of reputation • Fines	●○○	→
10.	**Personnel risk** P	Employees resisting changes introduced in the LOTOS Group	• In the case of restructuring – open communication with employees, trade unions and works council about the planned changes • Communicating the restructuring plans to media • Opportunities for employees to gain new qualifications/ retrain • Offering support in the event of a change of workplace and relocation; financial assistance • Outplacement and support in finding new job outside the LOTOS Group	• Lower loyalty and motivation, project delays • Loss of reputation • Limited potential to develop competence	●○○	↘

			• Ongoing monitoring of employee sentiment			
11.		Difficulties with recruitment of qualified staff and retention of competent and experienced employees	• Building a knowledge management system to enable effective knowledge sharing/transfer and develop staff competencies necessary to achieve near- and long-term business goals • Management staff development programme • Building an engaging work environment to enhance productivity • Creating space for development and innovation within the organisation • Building a good employer image inside and outside the organisation	• Increased expenditures on employer promotion, recruitment, and programmes preventing employee departures		
12.	**Social risk** S HR	Social protests against the Group's projects	• Maintaining good relations with stakeholders. Holding meetings to inform stakeholders about the Group's projects • Open communication on the Group's current operations and projects • Maintaining good relations with industry, local, nationwide and foreign media • Working with the supervisory bodies and public authorities to prevent crises that may arise in the course of legislative procedures, whether Polish or EU.	• Development project delays • Loss of reputation • Reduced revenue and profits		

INDEPENDENT AUDITOR’S REPORT ON THE AUDIT OF THE ANNUAL CONSOLIDATED FINANCIAL STATEMENTS

To the General Meeting and Supervisory Board of Grupa LOTOS S.A.

The audit report on the annual consolidated financial statements

We have audited the accompanying annual consolidated financial statements for the year ended 31 December 2017 of LOTOS Capital Group (‘the Group‘), for which the holding company is Grupa LOTOS S.A. (‘the Company‘) located in Gdańsk at Elbląska 135, containing the consolidated statement of comprehensive income for the period from 1 January 2017 to 31 December 2017, the consolidated statement of financial position as at 31 December 2017, the consolidated statement of cash flows and the consolidated statement of changes in equity for the period from 1 January 2017 to 31 December 2017 and the notes to the financial statements (‘the accompanying consolidated financial statements’).

Responsibilities of the Company’s Management and members of the Supervisory Board for the consolidated financial statements

The Company’s Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Accounting Standards, International Financial Reporting Standards and related interpretations announced in the form of European Commission decrees and other applicable laws, as well as the Company’s Statute. The Company’s Management is also responsible for such internal control as determined is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In accordance with the Accounting Act of 29 September 1994 (the ‘Accounting Act’), the Company’s Management and the members of the Company’s Supervisory Board are required to ensure that the accompanying consolidated financial statements meet the requirements of the Accounting Act.

Auditor’s responsibility

Our objective was to express an opinion on whether the accompanying consolidated financial statements give a true and fair view[1] of the financial position and results of the operations of the Group in accordance with International Accounting Standards, International Financial Reporting Standards and related interpretations announced in the form of European Commission regulations and adopted accounting policies.
We conducted our audit of the accompanying consolidated financial statements in accordance with:

- Act of 11 May 2017 on Statutory Auditors, Audit Firms and Public Oversight (‘Act on Statutory Auditors’),
- National Auditing Standards in the wording of the International Auditing Standards adopted by the resolution no. 2783/52/2015 of the National Council of Statutory Auditors of 10 February 2015 with subsequent amendments,
- Regulation (EU) No. 537/2014 of the European Parliament and of the Council of 16 April 2014 on specific requirements regarding statutory audit of public-interest entities and repealing Commission Decision 2005/909/EC (“Regulation 537/2014”).

Those regulations require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement.

The purpose of the audit is to obtain reasonable assurance as to whether the consolidated financial statements as a whole were prepared based on properly maintained accounting records and are free from material misstatement due to fraud or error, and to issue an independent auditor's report containing our opinion. Reasonable assurance is a high level of assurance, but it is not guarantee that an audit conducted in accordance with the above mentioned standards will always detect material misstatements. Misstatements may arise as a result of fraud or error and are considered material if it can reasonably be expected that individually or in aggregate, they could influence economic decisions of the users taken on the basis of these consolidated financial statements. The risk of not detecting a material misstatement due to fraud is higher than the risk of not recognizing a material misstatement due to an error, as fraud may involve collusion, falsification, deliberate omissions, misleading or circumventing internal control and may affect every area of law and regulation, not just this directly affecting the consolidated financial statements.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company’s preparation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control.

[1] Translation of the following expression in Polish is ‘rzetelny i jasny obraz’.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the presentation of the consolidated financial statements.

The scope of the audit does not include assurance on the future profitability of the audited Group nor effectiveness of conducting business matters of the Group now and in the future by the Company's Management Board.

In accordance with International Auditing Standard 320 section 5 the concept of materiality is applied by the auditor both in planning and performing the audit, and in evaluating the effect of identified misstatements on the audit and of uncorrected misstatements, if any, on the consolidated financial statements and in forming the opinion in the auditor's report. Hence all auditor's assertions and statements contained in the auditor's report, including those on other information or regulatory requirements, are made with the contemplation of the qualitative and quantitative materiality levels established in accordance with auditing standards and auditor's professional judgement.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion. The opinion is consistent with the additional report to the audit committee issued on the date of this report.

Independence

While conducting our audit, the key certified auditor and the audit firm remained independent of the entities comprising the Group in accordance with the regulations of Act on Statutory Auditors, Regulation 537/2014 and principles of professional ethics adopted by resolutions of the National Council of Statutory Auditors.

Based on our best knowledge and belief, we declare that we have not provided non-audit services, that are prohibited based on article 136 of the Act on Statutory Auditors and article 5, point 1 of Regulation 537/2014, to the Company.

Appointment of the audit firm

We were appointed to audit the consolidated financial statements based on the Company's Supervisory Board resolution dated 31 July 2015. We have been auditing the consolidated financial statements of the Company consecutively since the beginning of the financial year ended 31 December 2010; this is for 8 years.

Most significant assessed risks

In the course of our audit we have identified the below described most significant assessed risks of material misstatement (key audit matters), including due to fraud and we designed appropriate audit procedures in response to those risks. Where we considered to be relevant in order to understand the nature of the identified risk and audit procedures performed we have also included key observations arising with respect to those risks.

These matters were addressed in the context of our audit of the accompanying consolidated financial statements as a whole, and in forming our opinion thereon. Therefore we do not provide a separate opinion on these matters.

description of the nature of the risk of material misstatement (key audit matters)	*audit procedures in response to the identified risk*
<u>Impairment analysis of property, plant and equipment</u> *Why this issue is the key audit matter* The Group has significant property, plant and equipment in the upstream sector with a value of PLN 2 404,2 million and in the manufacturing and downstream sector with a value of PLN 8 761,5 million. The Group performed an analysis to identify impairment indicators of property, plant and equipment for individual cash generating units. The analysis of the recoverable amounts of those assets relates to the results of impairment tests using the discounted cash flows of individual cash generating units. Tests for the impairment of the recoverable amount of property, plant and equipment are based, to a great extent, on, among others, the following: forecasted prices of gas and oil, Company strategy, planned capital expenditure, forecasted revenues and costs, weighted average cost of capital (WAAC), and the perpetual growth rate (PGR), which depend on the expectations regarding future market and economic conditions. These forecasts incur a significant risk of changes due to variable market conditions. Given the above, we considered the impairment analysis of property, plant and equipment as a key audit matter. Disclosures relating to impairment loss of property, plant and equipment are presented in notes 7.10, 13.2.1 and 13.2.2.	Our audit procedures covered, among others, the following: · assessment of the Management Board's analysis of assets impairment indicators; · analysis of macroeconomic assumptions covering prices of gas and oil, exchange rates, inflation and perpetual growth rate (PGR), after considering publically available market analyses and analyses of our own specialists; · evaluation of the adopted production volumes by comparing to the resource reports prepared by industry experts; · assessment of the independence and competence of the external specialists responsible for the reports that are used by the Group; · evaluation of weighted average cost of capital (WAAC) through the assessment of input data used for WAAC calculation basing on the work of evaluation team specialists; · assessment of planned capital expenditure, future revenues and costs, and of other assumptions by way of investment budget analysis and analysis of historical performance of such budgets; · assessment of the models of discounted cash flows used by the Company for their compliance with appropriate standards of financial reporting;

	· assessment of the models of discounted cash flows for their mathematical accuracy; · assessment of the disclosure in the books of account of the results of property, plant and equipment impairment testing; · evaluation of the analysis of sensitivity of impairment tests disclosed in note 13.2.2; · suitability assessment of impairment test disclosures; · verification of the consistency of assumptions adopted for impairment testing against assumptions adopted for other estimates; · obtaining detailed Management/ managements Representations on the completeness and correctness of submitted data and significant assumptions; · assessment of the adequacy of significant impairment test disclosures.
<u>VAT risk of the requirement to maintain due diligence</u> *Why this issue is the key audit matter* During the year, the Group concluded significant transactions of Intracommunity acquisition of goods and Intra-community supply of goods with many entities, including the transactions of trading in goods and products incurring higher risk of VAT fraud. At the same time, tax inspections were carried out at the Company in the past, where tax authorities calculated significant VAT liabilities, as has been described in note 29.1 of the attached consolidated financial statements. In accordance with VAT law requirements, the Group is obligated to maintain due diligence i.e. to take all steps necessary to file a proper VAT declaration (VAT Act, article 17 section 2a).	Our audit procedures covered, among others, the following: · involvement of the internal indirect tax specialists during the course of the audit; · documenting our understanding of the procedure related to contractors verification as part of due diligence maintenance and performance of the tests of control mechanisms identified during this process; · analytical procedures for significant suppliers and customers, including the historical data; · analysis of court cases and tax inspections carried out by tax authorities at Capital Group companies;

Given the above, we considered the VAT risk related to the necessity to maintain due diligence as a key audit matter.	· obtaining detailed Management/ Managements Representations on the completeness and correctness of submitted data and significant assumptions; · assessment of the adequacy of significant disclosures in this respect.
<u>Estimation of provision for site restoration in the excavation segment</u> *Why this issue is the key audit matter* Given the exploitation of fossil fuel deposit, the Group recognises in the statement of financial position a provision for site restoration in the amount of PLN 1 074.3 million. The obligation to perform site restoration works results from binding legal requirements and from the provisions of the contracts on deposits exploitation in the countries the Group operates in. The calculation of site restoration provision is based on several assumptions, including the scope and unit costs for planned site restoration works, discount rate and other macroeconomic assumptions. Given the above, we considered the estimation of site restoration provision in the upstream sector as a key audit matter. Disclosures relating to site restoration provision in the excavation industry are presented in notes 7.25.1 and 25.1.	Our audit procedures covered, among others, the following: · analysis of the reports of external experts obtained by the Group; · evaluation of competences and independence of the experts preparing reports underlying provisions calculation; · documenting the process of calculation of site restoration provisions at excavation companies; · analysis of the Group accounting policy and its application; · assessment of the adopted main assumptions for calculating site restoration provision for individual deposits, including discount rate and inflation index; · checking of mathematical accuracy of calculations; · assessment of the consistency of adopted assumptions underlying calculation of site restoration provision against the assumptions adopted for impairment testing; · obtaining detailed Management/ Managements Representations on the completeness and correctness of submitted data and significant assumptions; · assessment of the adequacy of significant disclosures in this respect.

Opinion

In our opinion, accompanying consolidated financial statements:

- give a true and fair view of the financial position of the Group as at 31 December 2017 and its financial performance for the year from 1 January 2017 to 31 December 2017 in accordance with International Accounting Standards, International Financial Reporting Standards and related interpretations announced in the form of regulations of the European Commission and other applicable laws and the adopted accounting policies,
- are in respect of the form and content in accordance with legal regulations governing the Company and the Company's Statute.

Report on other legal and regulatory requirements

Opinion on the Directors' Report

Our opinion on the consolidated financial statements does not include the Directors' Report.

The Company's Management is responsible for preparation of the Directors' Report in accordance with the Accounting Act and other applicable laws. In addition, the Company's Management and members of the Company's Supervisory Board are required to ensure that the Directors' Report meets the requirements of the Accounting Act.

Our responsibility in accordance with the Act on Statutory Auditors was to issue an opinion on whether the Director's Report, except for the chapter 'Statement on non-financial information', was prepared in accordance with relevant laws and that it is consistent with the information contained in the accompanying consolidated financial statements.

Our responsibility was also to make a statement, on whether based on our knowledge about the Company and its environment obtained during the audit of the financial statements we have identified in the Director's Report any material misstatements and to indicate the nature of each of material misstatement.

In our opinion the Directors' Report was prepared in accordance with the relevant regulations and reconciles with the information derived from the accompanying financial statements. Moreover, based on our knowledge of the Company and its environment obtained during the audit of the financial statements, we have not identified material misstatements in the Directors' Report.

Opinion on the corporate governance application representation

The Company's Management and members of the Company's Supervisory Board are responsible for preparation of the representation on application of corporate governance in accordance with the applicable laws.

In connection with the conducted audit of the consolidated financial statements, our responsibility in accordance with the Act on Statutory Auditors was to issue an opinion on whether the issuer, obliged to present a representation on application of corporate governance, constituting a separate part of the Director's Report, included in the representation information required by applicable laws and whether the related information is in accordance with applicable regulations and with the information included in the accompanying consolidated financial statements.

In our opinion, in the representation on application of corporate governance, the Company has included information stipulated in paragraph 91, section 5, point 4, letter a, b, g, j, k and l of the Regulation of the Minister of Finance of 19 February 2009 on current and periodic information provided by issuers of securities and conditions of deeming information required by the regulations of a non-member country equal ('Regulation').

Information on preparation of the statement on non-financial information

In accordance with the Act on Statutory Auditors, we inform, that the Company has prepared a statement on non-financial information mentioned in article 49b, section 1 of the Accounting Act as a separate element of the Director's Report.

We have not performed any attestation services in respect to the statement on non-financial information and do not express any assurance in its respect.

Warsaw, 6 March 2018

Key Certified Auditor

Jarosław Dac
certified auditor
No. 10138

on behalf of
Ernst & Young Audyt Polska spółka
z ograniczoną odpowiedzialnością sp. k.
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