Grupa LOTOS
Management's Discussion and Analysis of the consolidated financial results for the fourth quarter of 2018

This is the translated version of a document originally issued in Polish

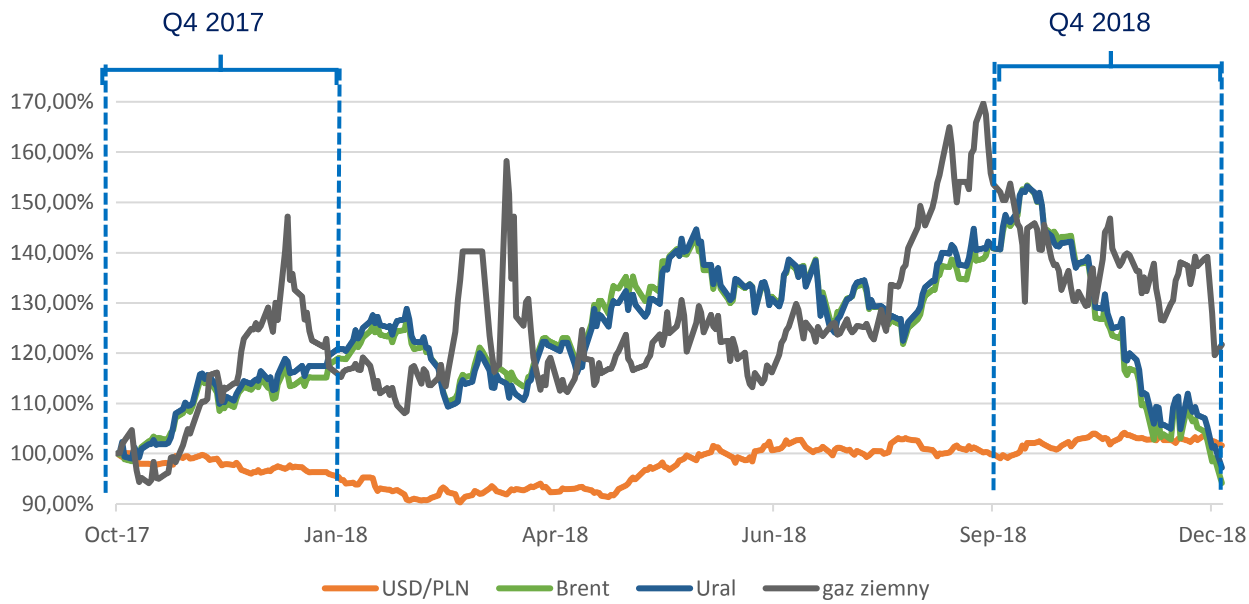
ISIN	Stock Exchange	Thomson Reuters	Bloomberg
PLLOTOS00025	**LTS**	**LTSP.WA**	**LTS PW**

An excel file with the operating and financial data for Q4 2018 and the previous reporting periods is published in the Investor Relations section of our website at → inwestor.lotos.pl/en/ as → databook

Market environment

- **Crude oil and natural gas prices went up (+11.1% or USD +6.82/bbl[1] and +21.2% or USD +8.16/boe year on year, respectively)[2]**
- **Significant year-on-year increases in crack spreads for diesel oil (+38.9% or USD +5.81/bbl), light fuel oil (+37.7% or USD +4.87/bbl), and aviation fuel (+35.6% or USD +5.07/bbl)**
- **Year-on-year improvement in negative crack spread for heavy fuel oil (+45.1% or USD +3.45/bbl)**
- **Strong year-on-year decline in crack spread for gasoline (-52.9% or USD -5.72/bbl)**
- **-9.9% year-on-year narrowing of quarterly average Brent/Urals spread, from USD 0.91/bbl to USD 0.82/bbl**
- **Model refining margin grew year on year, from USD 7.07/bbl to USD 8.47/bbl (up +19.8%), and relative to Q3 2018 (up +13.4%)**
- **Appreciation of USD against PLN on average quarterly basis: by +4.7% (PLN 0.17) year on year and +1.9% (PLN 0.07) quarter on quarter.**

Dynamics of Brent and Urals[3] prices (USD/bbl), natural gas price (USD/boe) and USD/PLN exchange rate



Source: In-house analysis based on Thomson Reuters and National Bank of Poland data.

[1]Bbl – barrel of crude oil.
[2]Boe – barrel of oil equivalent.
[3] Urals prices calculated as the sum of Brent prices and Brent/Urals spread.

Brent crude prices, Brent/Urals spread, gas prices and Grupa LOTOS' model refining margin

USD/bbl	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
DATED Brent FOB prices[4]	**68.22**	75.08	61.40	**-9.1%**	**11.1%**
Brent/Urals spread	**0.82**	1.32	0.91	**-37.9%**	**-9.9%**
UK NBP natural gas prices [5]	**46.58**	46.67	38.42	**-0.2%**	**21.2%**
Model refining margin [6]	**8.47**	7.47	7.07	**13.4%**	**19.8%**

Source: In-house analysis and Thomson Reuters.

Crack spreads[7]

USD/bbl	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Motor gasoline	**5.09**	14.25	10.81	**-64.3%**	**-52.9%**
Naphtha	**-5.03**	-0.45	1.93	**-**	**-**
Diesel oil (10 ppm)	**20.73**	16.37	14.92	**26.6%**	**38.9%**
Light fuel oil	**17.79**	15.24	12.92	**16.7%**	**37.7%**
Aviation fuel	**19.33**	16.10	14.26	**20.1%**	**35.6%**
Heavy fuel oil	**-4.20**	-6.96	-7.65	**39.7%**	**45.1%**

Source: Thomson Reuters.

Exchange rates

USD/PLN	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
PLN/USD exchange rate at end of period	**3.76**	3.68	3.48	**2.2%**	**8.0%**
Average PLN/USD exchange rate	**3.77**	3.70	3.60	**1.9%**	**4.7%**

Source: In-house analysis based on National Bank of Poland data.

Presented below are key factors contributing to the LOTOS Group's performance in Q4 2018.

- **Feedstock and products**

[4]To ensure comparability, the UK NBP natural gas prices were converted from USD/MWh to USD/boe using the conversion factor of 1.6282 MWh/boe.

[5]In line with the methodology applied by the Company, the model margin was computed based on Thomson Reuters data, which reflect long-term trends in prices used by the Company in its trading activities. In a shorter term, the prices used to compute the model margin may differ from the actual trading prices. Since the presented margin model does not account for differences in selling prices on various geographical markets, the model margin amount is an estimate rather than the actual refining margin generated by Grupa LOTOS S.A.'s refinery.

[6] Product crack spread is calculated as the difference between the price per barrel of a given product (price per tonne computed using the appropriate density factor) and the price of Urals crude (the Brent crude price adjusted for the Brent/Urals spread).

- **Downstream segment**
  Ca. 19.8% year-on-year growth in model refining margin, with the refinery's capacity utilisation at the maximum rate, translated into the Downstream segment's Q4 2018 adjusted LIFO-based EBITDA of approximately PLN 609.1m (11.3% year on year).

- **Upstream segment**
  Growing oil prices (up 11.1% year on year) and UK National Balancing Point natural gas prices (up 21.2%) supported the Upstream segment's performance and alleviated the effect of a year-on-year decline in hydrocarbon sales volumes (down 9.3%), resulting in the segment's adjusted EBITDA of PLN 260.5m (up +20.0% year on year).

- **Exchange rates**

  - An increase in the average USD/PLN exchange rate in the quarter (up +4.7% year on year) had a positive impact on crack spreads and thus on the LOTOS Group's operating performance.

Upstream segment

- **Hydrocarbon production rate at 20,500 boe/d [8] (up 16.4% quarter on quarter and down 0.9% year on year)**
- **Recognition of additional 2P reserves (+4.06 mboe) of the Sleipner area reflecting higher-than-projected well productivity in the Sleipner West field**
- **Upstream segment's adjusted EBITDA at PLN 260.5m, up 20.0% year on year**
- **Upstream segment's adjusted EBIT at PLN 205.0m, up 44.6% year on year.**

Crude oil and natural gas reserves, production and sales

Crude oil and natural gas reserves as at (mboe)[9]	Dec 31 2018	Sep 30 2018	Dec 31 2017
Norway	**37.3**[10]	35.2	39.3
Poland	**49.6**	50.0	45.2
Lithuania	**2.9**[11]	3.4	3.6
Total	**89.8**	**88.6**	**88.1**

Production (boe/d)	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Norway	**15,258**	12,179	14,993	**25.3%**	**1.8%**
Poland	**4,535**	4,698	4,861	**-3.5%**	**-6.7%**
Lithuania	**743**	771	874	**-3.6%**	**-15.0%**
Total	**20,536**	**17,647**	**20,728**	**16.4%**	**-0.9%**

Production (boe)	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Norway	**1,403,747**	1,120,430	1,379,356	**25.3%**	**1.8%**
Poland	**417,262**	432,239	447,212	**-3.5%**	**-6.7%**
Lithuania	**68,324**	70,898	80,408	**-3.6%**	**-15.0%**
Total	**1,889,333**	**1,623,567**	**1,906,976**	**16.4%**	**-0.9%**

[7] daily production = production in a period / number of calendar days.
[8] 82P – proved and probable reserves (SPE-PRMS classification).
[9] Q4 2018 saw an increase in 2P reserves (+4.06 mboe) of the Sleipner area reflecting higher-than-projected well productivity in the Sleipner West field. At the same time, the Heimdal area's 2P reserves went down (-0.50 mboe) after decommissioning of the Heimdal hub had been rescheduled to an earlier date (decommissioning to start in 2021).
[10] Q4 2018 saw a decline in 2P reserves in Lithuania (-0.40m bbl) due to their re-evaluation by an independent reserves auditor.
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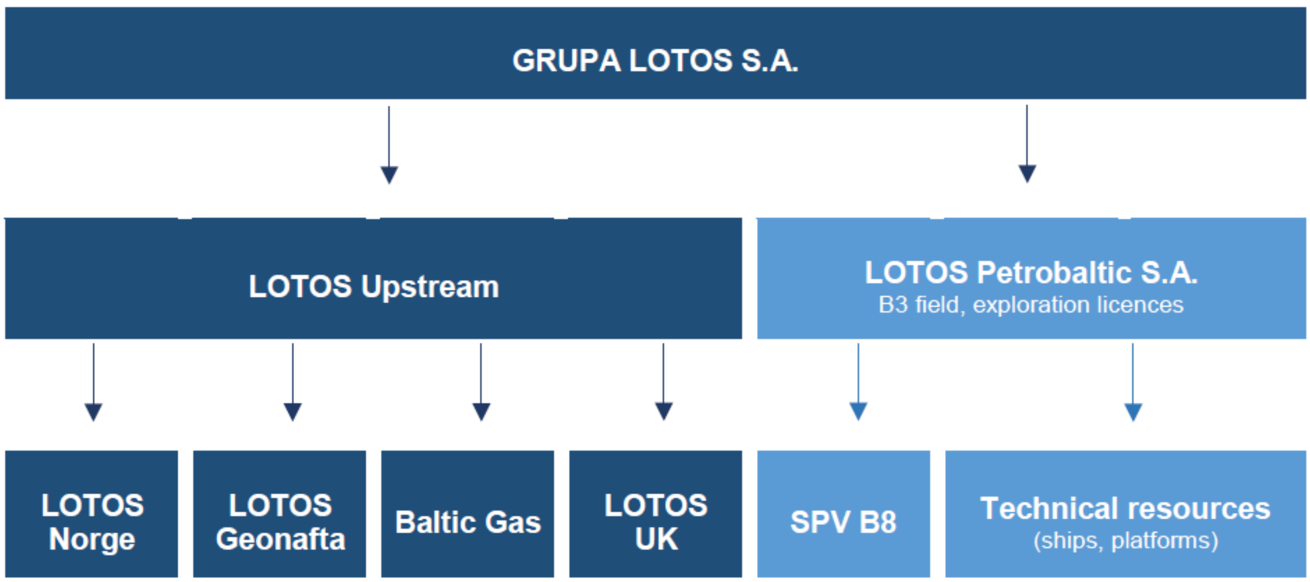
Oil and gas sales (boe)	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Norway	**1,324,107**	1,116,210	1,389,936	**18.6%**	**-4.7%**
Poland	**414,209**	478,874	545,928	**-13.5%**	**-24.1%**
Lithuania	**101,926**	101,942	92,276	**0.0%**	**10.5%**
Total	**1,840,242**	**1,697,026**	**2,028,140**	**8.4%**	**-9.3%**

Upstream segment's organisation

The LOTOS Group's Upstream segment is organised as follows:

The Upstream segment's business structure as at December 31st 2018

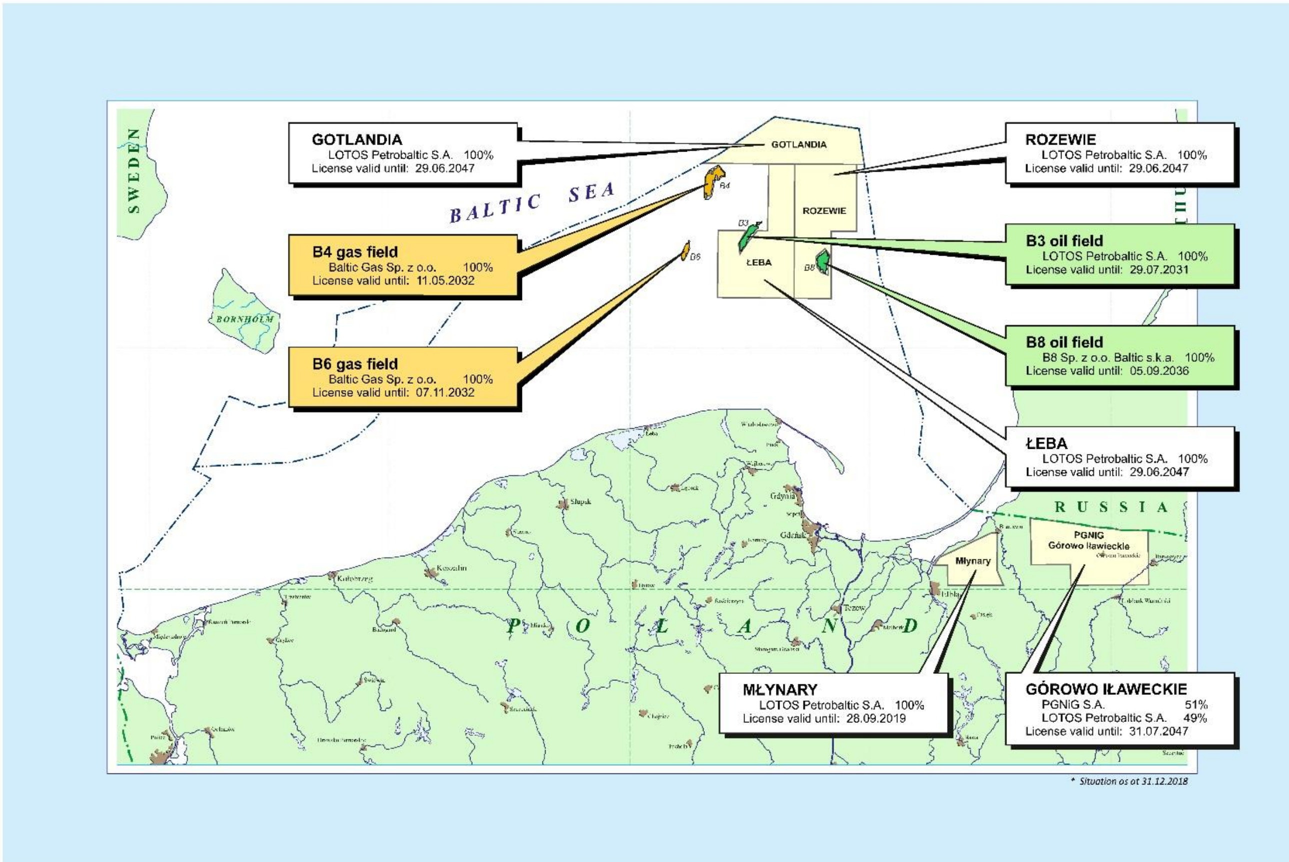


LOTOS Upstream (LUPS), a holding company, carries out the segment's development plans with the support of the following subsidiaries: LOTOS E&P Norge AS (operations on the Norwegian Continental Shelf), AB LOTOS Geonafta and its subsidiaries (onshore operations in Lithuania), Baltic Gas Sp. z o.o., Baltic GAS i wspólnicy sp. z o.o. sp.k. (B4/B6 gas field development project), andLOTOS Upstream UK Ltd (vehicle for potential business expansion in the UK). LUPS's key roles include business development, economic analyses of new and ongoing projects, potential acquisitions/divestments, asset portfolio management, corporate supervision, management of the B4/B6 project, technical supervision and controlling, provision of guarantees and sureties. LUPS is also a platform for arrangement of external financing.

LOTOS Petrobaltic and its subsidiaries focus on the upstream operations and services in the Baltic Sea, including production from the B3 field, development of the B8 field to start full-scale production, and execution of exploration projects in the Baltic Sea and onshore licence areas in Poland. Concurrently, the segment's current business structure supports development of engineering, execution and design capabilities for the offshore sector at LOTOS Petrobaltic, which may ultimately be used in providing services outside Grupa LOTOS S.A.

Exploration and production activities in Poland

Licences held by the LOTOS Group companies in Poland as at December 31st 2018



Source: In-house analysis.

In Q4 2018, LOTOS Petrobaltic S.A. continued to produce crude oil from the B3 field in the Baltic Sea.

B8 Project

The B8 project consists in the development of a crude oil field in the Baltic Sea. The project is being implemented by an SPV – B8 Sp. z o.o. Baltic S.K.A. ("SPV B8"), which is now engaged in initial oil production operations on the B8 field and is continuing the field development work, including conversion of the *Petrobaltic* oil platform into an offshore production hub.

At the end of December 2018, the project's technological tasks were at an advanced stage, but it turned out that the field infrastructure required modification due to design errors and changes in the concept of platform conversion and field development. Currently it is planned that the platform will be at the sea and offshore start-ups will be performed in Q4 2019 at the earliest, with full-scale production from the B8 field expected to commence in Q2 2021.

Key parameters of the B8 project (LOTOS interest):

- LOTOS interest: 100%
- 2P reserves: as at December 31st 2018: 35.9 mboe (crude oil: 91%, natural gas: 9%)
- full-scale production in: Q2 2021

- expected average production rate — 5,000 boe/d (for 5-year period from the full-scale production launch).

B4/B6 Project

The B4/B6 project consists in the development of natural gas deposits in the Baltic Sea, in partnership with CalEnergy Resources Poland Sp. z o.o. The project is being run by an SPV – Baltic Gas LLP, and LOTOS holds a 51% interest in the project. The recoverable reserves of the B4/B6 fields are estimated at 4.8 bcm (100% interest).

Currently, the project is pending a final investment decision (FID), which is expected to be taken after the risks associated with connecting the project to the onshore gas transmission network have been mitigated, i.e. a 30km long pipeline between Władysławowo and Kosakowo has been designed and constructed. In Q4 2018, the third stage of the preparatory phase was continued, including the design of an onshore pipeline, administrative, environmental and land property-related proceedings, as well as finance raising, and preliminary work (along the critical path) of the construction stage.

According to the current project schedule, the final investment decision is to be made in the second half of 2019.

Key parameters of the B4/B6 project (LOTOS interest):

- LOTOS interest — 51%
- 2C resources — as at December 31st 2018: 17.9 mboe (natural gas: 74%, liquids: 26%)
- First Gas — 2022
- expected average production rate — 4,300 boe/d (for 5-year period from the production launch).

Exploration projects

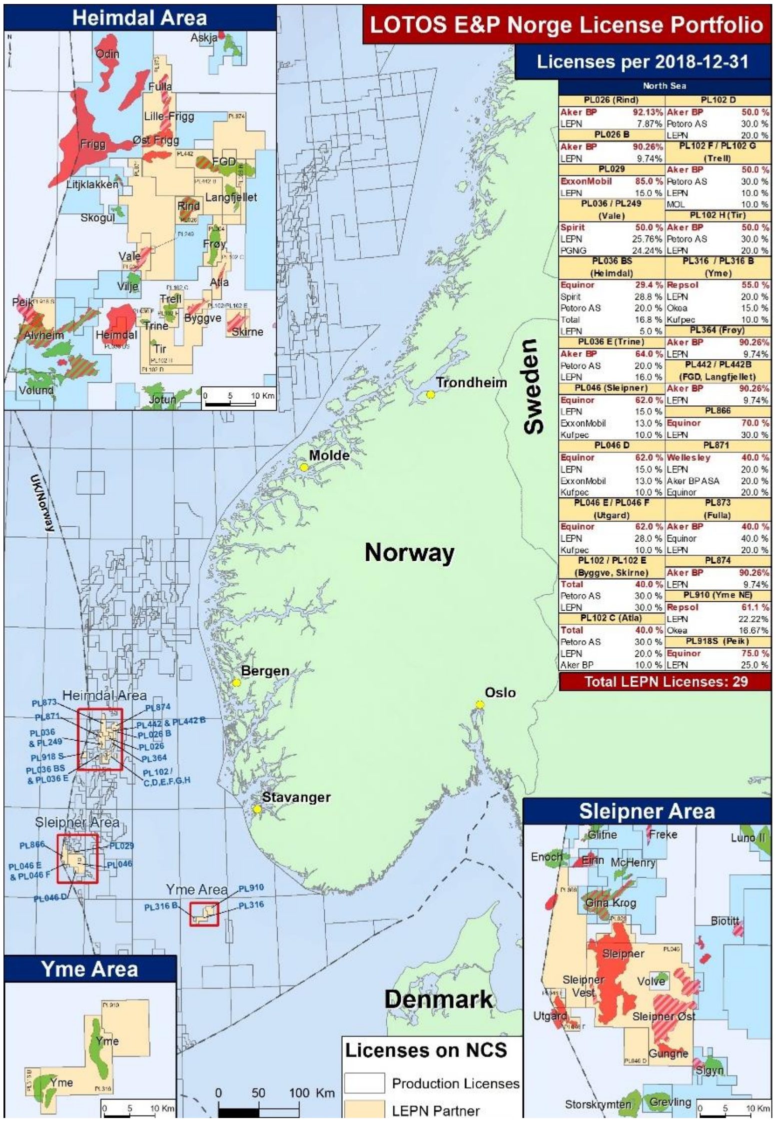
As part of exploration activities in:

- the Gotland, Łeba and Rozewie offshore licences (LPB interest: 100%): in the performance of licence commitments, reprocessing of old 2-D/3-D seismic data was completed, and feasibility studies for geophysical surveys were launched
- the Młynary onshore licence (LPB interest: 100%): acquisition, processing and interpretation of 2-D seismic data were completed
- the Górowo Iławeckie onshore licence (PGNiG operatorship interest: 51%, LPB interest: 49%): acquisition and processing of 3-D seismic data were completed, and data interpretation was commenced.

In Q4 2018, LOTOS Petrobaltic's partnership with PGNiG in the Kamień Pomorski onshore licence area came to an end (PGNiG was the licence operator with a 51% interest, while LPB held a 49% interest). On December 21st 2018, the Ministry of Environment issued a decision to grant the 100% interest in the Kamień Pomorski licence to PGNiG.

Exploration and production activities in Norway

Licences held by LOTOS Exploration & Production Norge AS as at December 31st 2018



Source: In-house analysis.

In Q4 2018, LOTOS Norge, operating in a consortium, produced natural gas and condensate from the Atla, Vale, Skirne, and Heimdal fields (Heimdal assets) and from the Sleipner Ost, Sleipner Vest, Loke and Gungne fields (Sleipner assets). The average output of the Norwegian assets in Q4 2018 was 15,300 boe/d, up 25.3% q/q and up 1.8% y/y.

LOTOS reports robust production rates in Norway, particularly in the Sleipner area, exceeding the targets assumed during the acquisition of the fields: current production from the Sleipner fields is close to 13,000 boe/d, compared with the 9,500 boe/d forecast for 2016–2018, announced at the time of the Sleipner transaction in December 2015.

Q4 2018 saw another increase in 2P reserves (+4.06 mboe) of the Sleipner area reflecting higher-than-projected production well output in the Sleipner West field. Also in Q4 2018, the Heimdal area's 2P reserves went down (-0.50 mboe) after decommissioning of the Heimdal hub had been rescheduled to an earlier date (decommissioning to start in 2021).

In Q4 2018, the following work was also carried on: work on the Utgard and Yme field development projects, preparations for the development of the Trell and Trine discoveries, and of other deposits located in the Greater Heimdal area (the NOAKA project).

Utgard project

The Utgard project, which consists in the development of agas and condensate field in Norway, is nearing completion.

The field's operator is Equinor (formerly Statoil), and the development is being carried out under a fast-track model, leveraging synergies with the existing infrastructure of the Sleipner hub. Following completion, in Q3 2018, of upgrade tasks on the Sleipner platform necessary to adapt it to the processing and separation of gas and condensate from the Utgard field, in Q4 2018 two production wells were drilled in the field (the drilling was completed in early December 2018). At the same time, work on upgrading the Sleipner T platform was continued, and material progress was recorded in the preparatory work on the subsea section of production systems and pipelines. The project has been implemented in line with its budget and schedule, and the operator has indicated that the First Oil date may fall towards the end of 2019. According to LOTOS' base assumptions, the First Oil date is still projected in Q1 2020.

Key parameters of the Utgard project (LOTOS interest):

- LOTOS interest 17.36%
- 2P reserves as at December 31st 2018: 8.1 mboe (condensate: 54%, natural gas: 46%)
- First Oil Q1 2020
- expected average production rate 4,100 boe/d (for 5-year period from the production launch).

Yme project

The project, currently under way, aims to develop the Yme oil field. The field operator is Repsol, and the development activities are being carried out in accordance with the approved new development plan, using a leased platform – Maersk Inspirer. In Q4 2018, the necessary upgrade work on the platform was continued to adapt it for future use as the Yme field production hub. During the coming winter, a wellhead will be installed on the caisson. The next stage, to take place in Q2 2019, will involve the installation of caisson reinforcement. The Rowan Stavanger vessel was engaged to perform the work. Progress made on the project indicates that the field is likely to be developed on schedule and that production may be launched in mid-2020.

Key parameters of the Yme project (LOTOS interest):

- LOTOS interest 20%
- 2P reserves 12.9 mboe as at December 31st 2018 (100% of crude oil)
- First Oil Q2 2020
- expected average production rate 5,000 boe/d (for 5-year period from the production launch).

NOAKA project

The NOAKA project involves the development of discoveries made north of Heimdal, including Frigg Gamma Delta, Langfjellet, Rind, Fulla and Froy, in which LOTOS holds an average interest of 10% and AkerBP is the operator. The project may also cover the Krafla and Askja discoveries, in which LOTOS does not currently hold any interests, whose operator is Equinor. At present, an optimal development concept for the project, which may become an important new hub in Norway, is being selected. For LOTOS, the project represents an attractive opportunity to increase production in the long term, in cooperation with experienced partners: AkerBP and Equinor.

Potential hydrocarbon reserves of the NOAKA area are estimated at 30 mboe for the LOTOS interest. Production from the fields may commence in 2023.

Estimated parameters of the NOAKA* project (LOTOS interest):

- LOTOS interest — approximately 10%
- potential hydrocarbon reserves — approximately 30 mboe
- First Oil potential — 2023
- average potential production rate — approximately 9,000 boe/d (for 5-year period from production launch).

** The presented parameters are estimates and may be reviewed / revised while an optimal field development concept is being prepared. The final project parameters will be announced after the final investment decision (FID) is approved.*

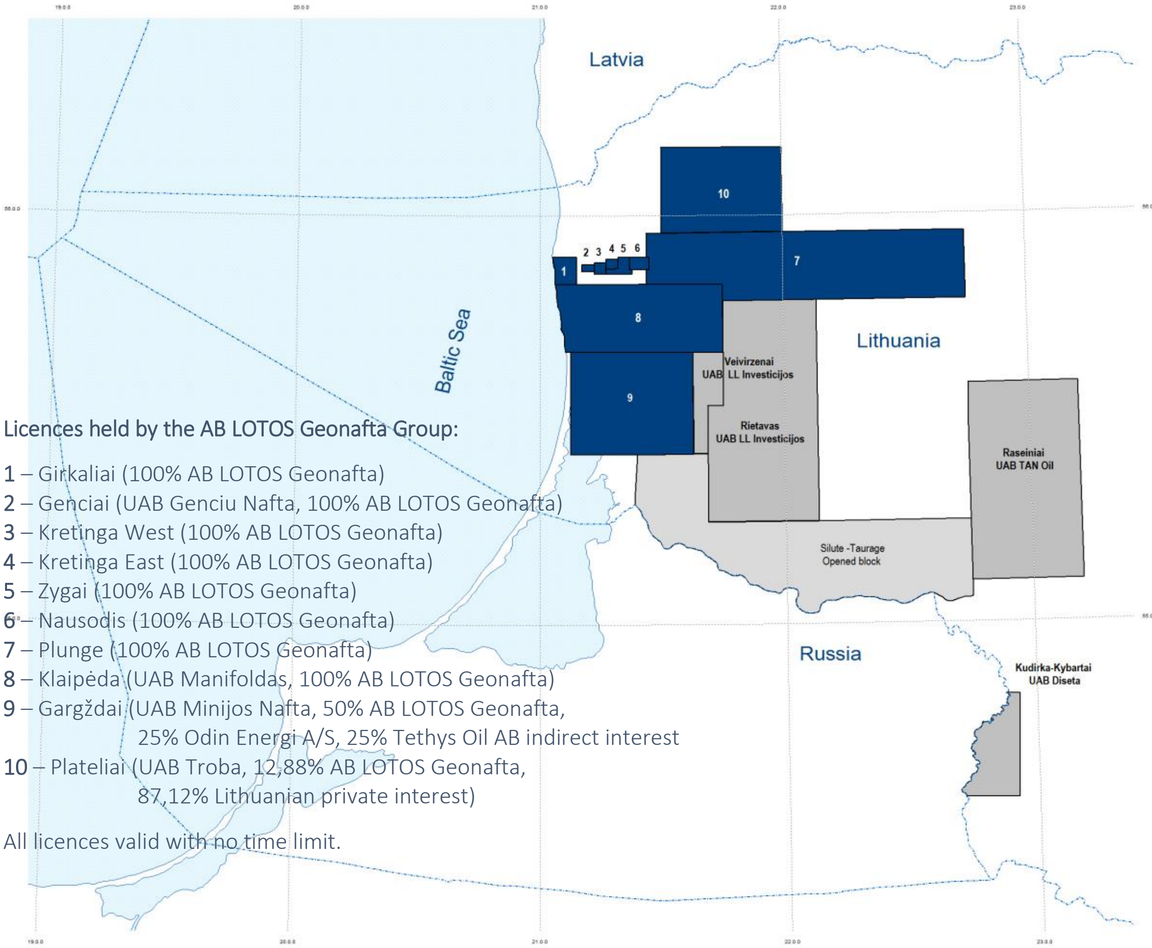
Trell/Trine project

The project involves development of the Trell and Trine discoveries, within the Heimdal licence area (in which LOTOS Norge holds interests of 10% and 16%, respectively). The discoveries have not yet been included in any development plans, but following the change of operator (currently AkerBP) they may be developed.

At present, a development concept for the Trell/Trine project is being selected, with the base option to connect the reserves to the nearby Floating Production Storage and Offloading infrastructure of the Alvheim area. Potential hydrocarbon reserves of the Trell/Trine fields are approximately 5.5 mboe for the LOTOS interest. According to the operator, the fields may be developed under a fast-track model, with production likely to commence in 2021.

Exploration and production operations in Lithuania

Licences held by the AB LOTOS Geonafta Group
as at December 31st 2018



Source: In-house analysis.

In Q4 2018, companies of Lithuania's AB LOTOS Geonafta Group focused on optimising production from the existing onshore oilfields: Girkaliai, Kretinga, Nausodis and Genciu, Vezaiciai, Liziai, Abling.

In Q4 2018, 2P reserves in Lithuania decreased (-0.40m bbl) following their re-evaluation by an independent reserves auditor (Miller & Lentz).

Upstream − key financial data

PLNm	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Revenue	**423.7**	374.5	389.8	**13.1%**	**8.7%**
EBIT	**577.8**	146.0	102.3	**295.8%**	**464.8%**
Depreciation and amortisation	**55.5**	50.6	75.3	**9.7%**	**-26.3%**
EBITDA	**633.3**	196.6	177.6	**222.1%**	**256.6%**
Adjusted EBIT[12]	**205.0**	164.0	141.8	**25.0%**	**44.6%**
Adjusted EBITDA	**260.5**	214.6	217.1	**21.4%**	**20.0%**

The year-on-year growth in revenue of the Upstream segment by 8.7% in Q4 2018 was driven primarily by higher prices of natural gas (up 21.2%) and Dated Brent crude (up 11.1%) as well as the higher average USD/PLN exchange rate for the quarter (up 4.7%), with a 9.3% decline in sales volumes.

The increase in revenue quarter on quarter (up 13.1%) was mainly attributable to an 8.4% rise in sales volumes and the higher average USD/PLN exchange rate for the quarter (up 1.9%), with crude oil and natural gas prices down.

The segment's lower depreciation and amortisation (year on year) was an effect of lower production and an increase in hydrocarbon reserves.

The year-on-year rise in the Upstream segment's adjusted EBITDA in Q4 2018 resulted mainly from higher prices of crude oil and natural gas combined with the appreciation of the US dollar against the złoty.

The quarter-on-quarter increase in the segment's adjusted EBITDA was caused by higher production and sales of hydrocarbons at LOTOS Norge, following maintenance shutdown in the Sleipner area and production stoppage on the Heimdal platform in Q3 2018.

[11] EBIT adjusted for non-recurring items: in Q4 2018 reversal of impairment loss on expenditure on YME, receipt of insurance proceeds in respect of the defective platform, revaluation of reserves of the Heimdal and Sleipner fields and Lithuanian assets; in Q3 2018 remeasurement of estimated provisions for contingent payments related to the agreement to acquire the Sleipner assets; in Q4 2017 net effect of impairment losses on assets, losses on discontinued projects and revision of provisioning estimates.

Downstream segment

- **Maximum capacity utilisation of the Grupa LOTOS S.A. refinery**
- **Increase in the Downstream segment's adjusted LIFO-based EBITDA to PLN 609.1m in Q4 2018 (up 11.39% year on year), mainly on higher refining margin.**

Crude slate

thousand tonnes	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Crude oil processed by the Gdańsk refinery including:	**2,775.1**	**2,790.4**	**2,700.1**	**-0.5%**	**2.8%**
Urals crude	**2,297.7**	2,245.8	2,080.5	**2.3%**	**10.4%**
Rozewie crude	**67.2**	38.8	50.4	**73.2%**	**33.3%**
Lithuanian crude	**14.0**	12.4	7.1	**12.9%**	**97.2%**
Lubiatów crude	**84.5**	77.4	69.6	**9.2%**	**21.4%**
Other	**311.7**	416.0	492.5	**-25.1%**	**-36.7%**

In Q4 2018, the refinery's capacity utilisation rate was 104.8%. The refining operations were stable, with throughput at 2,775.1 thousand tonnes of crude oil.

EFRA (Effective Refining), Grupa LOTOS' key investment project, is a continuation of a wider effort to upgrade the LOTOS refinery and supplements the deep crude oil processing configuration achieved under the 10+ Programme.

In Q4 2018, construction, assembly and start-up activities were continued on individual units, including installations, auxiliaries and general infrastructure. Commissioning of the Hydrogen Generation Unit (HGU), one of the EFRA Project's three key units, was completed and a warranty test run was successfully performed. On the DCU unit, the installation of pipelines was nearing completion and work to install an electric heating system and pipeline insulation was continued. Pipeline pressure tests were completed. Pre-commissioning work was continued (tests and trials of the units following completion of their construction and assembly and pending the RFSU status).

The following facilities were declared ready for testing and trials:

- SRU I unit (the 'old' Claus facility 0810; the unit was adapted to operate using oxygen-enriched air),
- caustic soda lye mixing facility along with a pipeline system,
- emergency steam pipeline and trestle of the CHP plant,
- new inter-unit connections.

The following facilities were placed in service:

- four storage tanks, upgraded for the HVD unit,
- upgraded fuel gas network (3700) and part of inter-unit pipelines,
- upgraded 0520-C2 tower of the HDS unit (0520).

As at December 31st 2018, the progress of design, procurement and construction/assembly work under the EFRA Project was 98.1%.

As the risk of failure to meet the Ready for Start Up date for the coking unit actually materialised (see Current Report No. 21/2018 of July 13th 2018), on December 4th 2018 negotiations with KT - Kinetics Technology S.p. A. (general contractor for the DCU/CNHT unit) were concluded and an amendment to the contract was signed setting a new RFSU date for the DCU at May 31st 2019 (see Current Report No. 32/2018 of December 4th 2018).

Refining products [13]

thousand tonnes	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
	3,005.5	**3,106.1**	**2,911.6**	**-3.2%**	**3.2%**
Gasolines	**401.8**	412.1	409.3	**-2.5%**	**-1.8%**
Naphtha	**133.8**	119.5	126.8	**12.0%**	**5.5%**
Diesel oils	**1,374.3**	1,488.3	1,317.8	**-7.7%**	**4.3%**
Light fuel oils	**84.5**	42.2	83.6	**100.2%**	**1.1%**
Jet fuel	**150.6**	150.3	136.8	**0.2%**	**10.1%**
Heavy products[14]	**528.5**	547.1	514.9	**-3.4%**	**2.6%**
Other[15]	**332.0**	346.6	322.4	**-4.2%**	**3.0%**

[12]The difference between the volume of crude oil processed and output of products stems from the fact that, apart from crude oil, the processing units and finished product blenders receive biocomponent streams, enhancing additives and middle distillates purchased from third-party suppliers.
[13]Heavy fuel oil and bitumen components
[14]Other products include fuel and industrial gases, sulfur, base oils, xylene fraction, LPG, bunker fuel, extracts, refinates, and slack wax.

Sales structure in the Downstream segment

thousand tonnes	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
	2,933.6	**3,026.7**	**3,126.6**	**-3.1%**	**-6.2%**
Gasolines	**404.9**	430.8	408.6	**-6.0%**	**-0.9%**
Naphtha	**133.8**	119.5	126.8	**12.0%**	**5.5%**
Diesel oils	**1,401.5**	1,514.2	1,357.6	**-7.4%**	**3.2%**
Light fuel oils	**80.9**	42.9	83.7	**88.6%**	**-3.3%**
Jet fuel	**140.9**	144.8	143.0	**-2.7%**	**-1.5%**
Heavy products[16]	**555.8**	544.5	542.3	**2.1%**	**2.5%**
Crude oil (commodity/material)	**0.0**	0.0	259.1	**-**	**-100.0%**
Other[17]	**215.8**	230.0	205.5	**-6.2%**	**5.0%**

Petroleum products market in Poland and LOTOS Group's sales in 2018 − Q4 2018 data

In 2018, consumption of liquid fuels[18] (diesel oil, gasolines and light fuel oil) in Poland grew 2.5% year on year, driven by an increase in diesel oil consumption (up 2.2%) and gasoline consumption (up 5.3%), offset by a decline in light fuel oil consumption (down 9.6%).

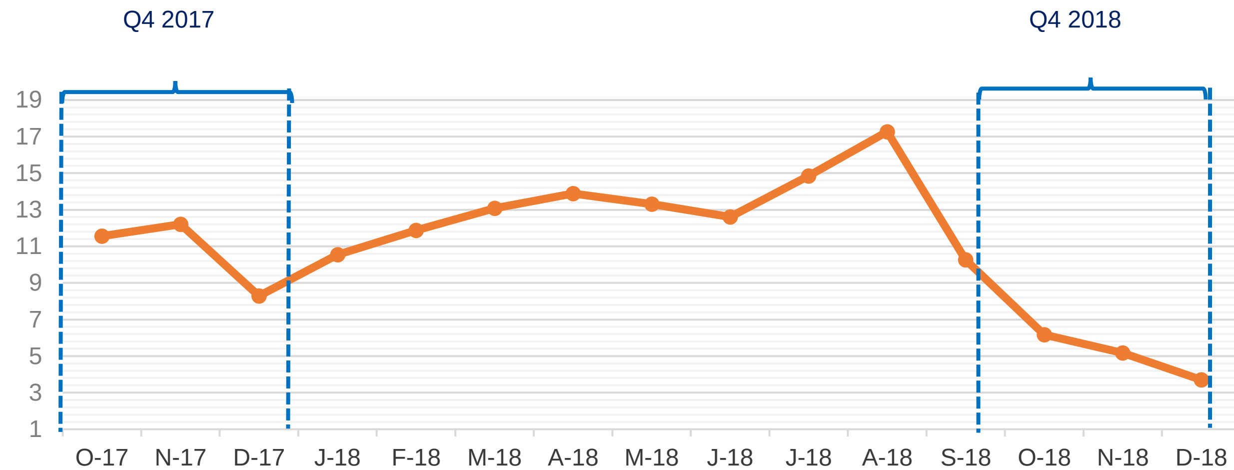
Motor gasoline

In 2018, gasoline consumption rose by 5.3% year on year. The LOTOS Group's total sales of gasoline fell 0.9% year on year in Q4 2018, mainly on production optimisation measures undertaken to maximise the refining margin.

In Q4 2018, the average global crack spread for gasoline fell by USD 5.72/bbl year on year.

[15]Heavy fuel oil and bitumen components.
[16]Other products include fuel and industrial gases, sulfur, base oils, xylene fraction, LPG, bunker fuel, extracts, refinates, and slack wax.
[17] Fuel and diesel oil consumption growth data sourced from POPiHN.

Motor gasoline – average monthly crack spread, USD/bbl (October 2017–December 2018)



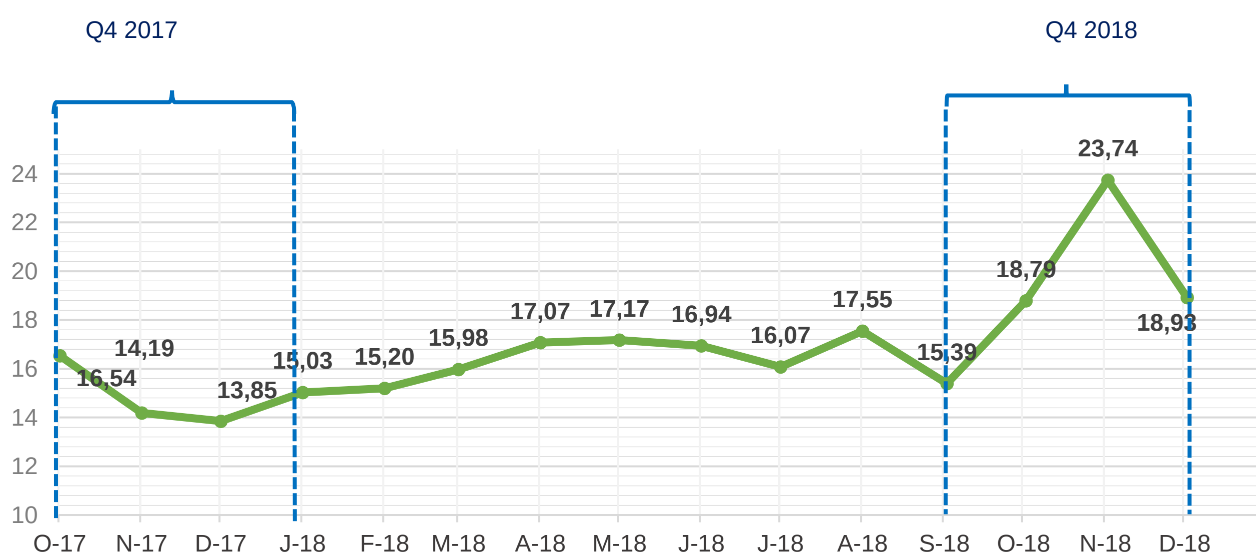
Source: In-house analysis based on Thomson Reuters data.

Diesel oil

Demand for diesel oil continued to rise in 2018, but the growth stopped in Q4. In 2018, diesel oil consumption grew 2.2% year on year. Aware of the growing demand for diesel oil in Poland, the LOTOS Group increased its domestic sales of the product by 3.3%.

In Q4 2018, the average global crack spread for diesel oil went up by USD 5.81/bbl year on year.

Diesel oil – average monthly crack spread, USD/bbl (October 2017–December 2018)

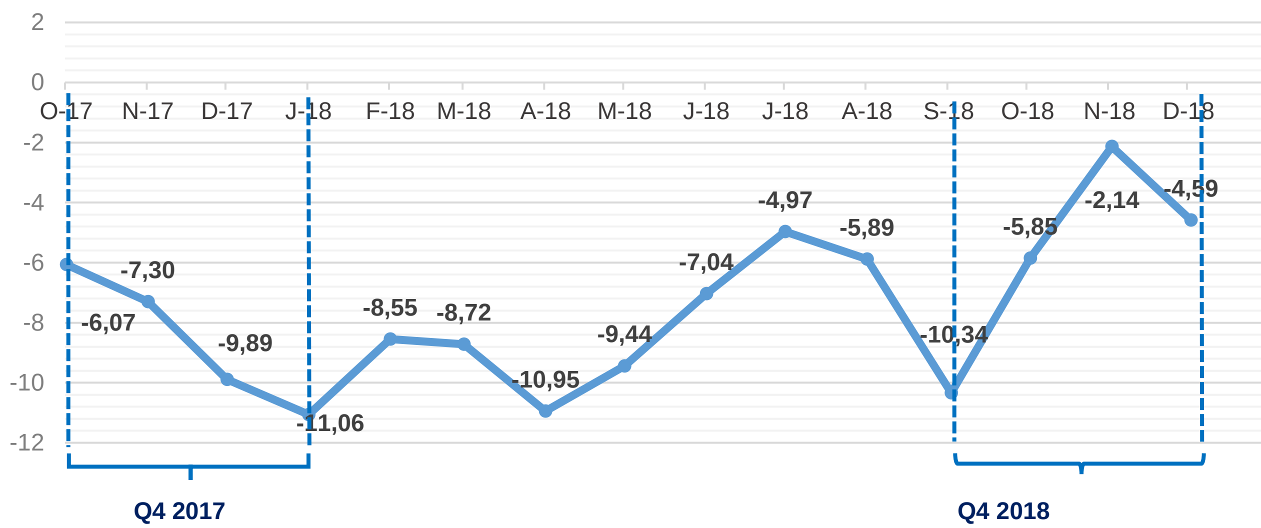


Source: In-house analysis based on Thomson Reuters data.

Heavy fuel oil

Sales of heavy fuel oil by the LOTOS Group in Q4 2018 fell 9% relative to Q4 2017. The decline was an effect of optimised output of heavy distillates and higher bitumen sales. In Q4 2018, the average negative crack spread for heavy fuel oil on global markets was USD -4.20/bbl, having improved by USD 3.45/bbl year on year.

Heavy fuel oil – average monthly crack spread, USD/bbl (October 2017–December 2018)

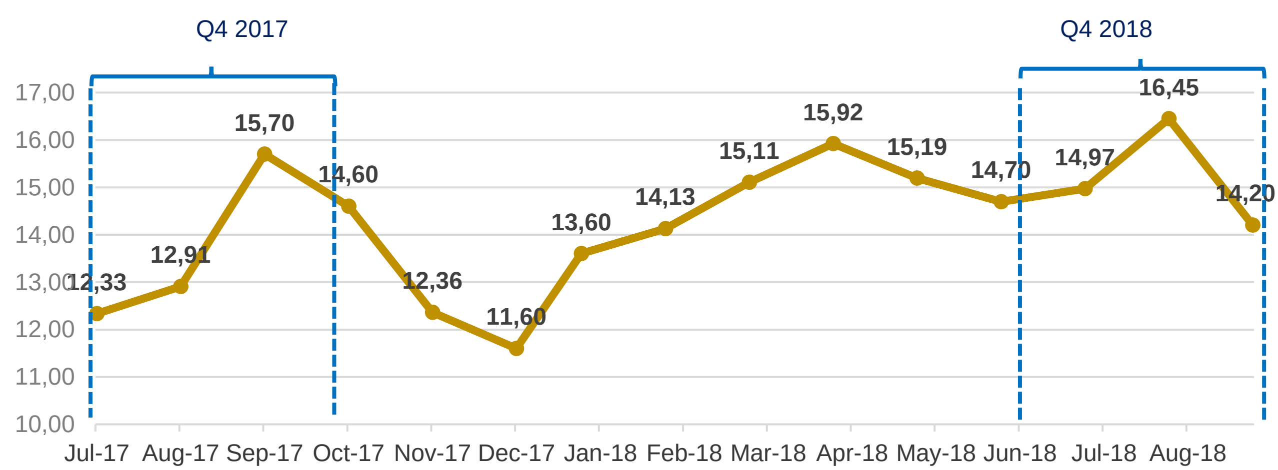


Source: In-house analysis based on Thomson Reuters data.

Light fuel oil

After twelve months of 2018, consumption of light fuel oil was down 9.6%. In Q4 2018, the LOTOS Group reduced its domestic sales of light fuel oil by 3.3% year on year. In the same quarter, the average global crack spread for light fuel oil rose by USD 4.87/bbl year on year.

Light fuel oil – average monthly crack spread, USD/bbl (October 2017–December 2018)



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

Downstream − key financial data

PLNm	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Revenue	**7,639.2**	8,136.6	6,791.7	**-6.1%**	**12.5%**
EBIT	**184.1**	735.1	630.9	**-75.0%**	**-70.8%**
Depreciation and amortisation	**125.3**	124.1	129.9	**1.0%**	**-3.5%**
EBITDA	**309.4**	859.2	760.8	**-64.0%**	**-59.3%**
LIFO-based EBIT	**350.9**	561.2	433.4	**-37.5%**	**-19.0%**
LIFO-based EBITDA	**476.2**	685.3	563.3	**-30.5%**	**-15.5%**
Adjusted LIFO-based EBITDA [19]	**609.1**	687.7	547.2	**-11.4%**	**11.3%**

The Downstream segment's revenue was up 12.5% year on year as a result of higher average net selling prices, offset by a 6.2% decrease in sales volumes. In Q4 2018, the segment's average net selling price was PLN 2,604 per tonne, having increased 19.9% year on year, chiefly on higher prices of petroleum products on global markets and the higher average USD/PLN exchange rate in the quarter.

A 6.1% quarter-on-quarter revenue decline in the Downstream segment reported in Q4 2018 was led both by a decreased sales volume (down 3.1%) and lower net selling price (down 3.1%), an effect of falling prices of petroleum products.

In Q4 2018, adjusted LIFO-based EBITDA of the Downstream segment came in at PLN 609.1m, down 11.4% quarter on quarter and up 11.3% year on year.

The adjusted LIFO-based EBITDA growth was driven mainly by:

- higher model refining margin,
- increase in the average USD/PLN exchange rate for the quarter, with an effect on the refining and sales margins.

The quarter-on-quarter decrease in adjusted LIFO-based EBITDA was primarily attributable to lower sales volumes of petroleum products.

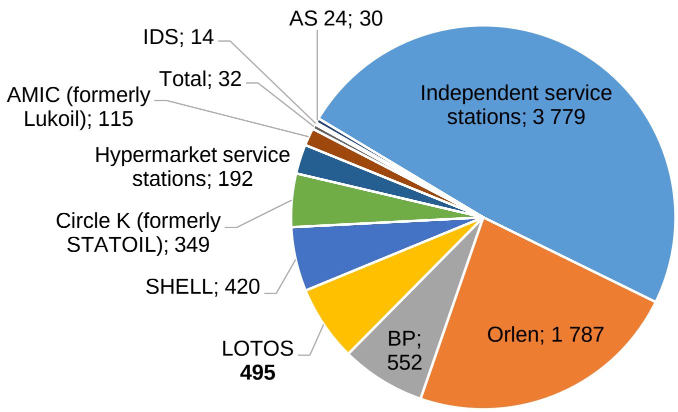
Number of service stations in the LOTOS network as at December 31st 2018

	Dec 31 2018	Sep 30 2018	Dec 31 2017	Q3 2018/Q2 2018	Q3 2018 /Q3 2017
	495	489	493	**6**	**2**
CODO	**306**	306	305	**0**	**1**
including: LOTOS OPTIMA	**121**	121	121	**0**	**0**
DOFO	**189**	183	188	**6**	**1**
including: LOTOS OPTIMA	**76**	78	83	**-2**	**-7**

As at the end of 2018, the LOTOS Group operated a network of 495 service stations.

[18]EBITDA including the LIFO effect of inventory measurement and excluding theoretical write-downs on LIFO-measured inventories, adjusted for exchange differences on operating activities; in Q4 2018 additionally for impairment loss on service stations, provisions for deficit in CO_2 emission allowances and tax risk; and in Q4 2017 for cost of the Spring 2017 maintenance shutdown and impairment loss on service stations.

Polish retail market as at December 31st 2018



Source: Polish Organisation of Oil Industry and Trade (POPiHN).

Retail − key financial data

PLNm	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Sales volume ('000 tonnes)	**318.3**	333.6	299.8	**-4.6%**	**6.2%**
Revenue	**1,769.8**	1,839.0	1,497.6	**-3.8%**	**18.2%**
EBIT	**2.0**	34.9	-16.8	**-94.3%**	**-111.9%**
Depreciation and amortisation	**16.9**	16.8	18.2	**0.6%**	**-7.1%**
EBITDA	**18.9**	51.7	1.4	**-63.4%**	**1250.0%**
Adjusted EBIT	**35.3**	34.9	12.0	**1.1%**	**194.2%**
Adjusted EBITDA	**52.2**	51.7	30.2	**1.0%**	**72.8%**

EBIT posted in Retail for Q4 2018 reached PLN 2.0m. The significant decline in EBIT relative to the previous quarter was attributable to an impairment loss of PLN 33.3m (on service stations) recognised in December 2018. Adjusted EBITDA in Q4 2018, of PLN 52.2m, was comparable to that reported in Q3 2018.

Consolidated statement of comprehensive income

Key financial results of the LOTOS Group

PLNm	Q4 2018	Q3 2018	Q4 2017	Q4 18 /Q3 18	Q4 18 /Q4 17
Revenue	**7,922.0**	8,344.0	7,020.9	**-5.1%**	**12.8%**
EBIT	**768.7**	866.8	722.7	**-11.3%**	**6.4%**
Depreciation and amortisation	**180.8**	174.7	204.9	**3.5%**	**-11.8%**
EBITDA	**949.5**	1,041.5	927.6	**-8.8%**	**2.4%**
LIFO effect[20]	**166.8**	-173.9	-197.5	**-**	**-**
LIFO-based EBIT	**935.5**	692.9	525.2	**35.0%**	**78.1%**
Adjusted LIFO-based EBIT	**695.6**	713.3	544.1	**-2.5%**	**27.8%**
Adjusted LIFO-based EBITDA[21]	**876.4**	888.0	753.5	**-1.3%**	**16.3%**

In line with its inventory measurement policies, the LOTOS Group uses the weighted average method to measure changes in inventories. This method defers the impact of changes in crude oil prices on the prices of finished goods. Thus, an increase in crude oil prices has a positive effect on financial performance, while a decrease adversely affects the performance.

Operating results computed using this inventory measurement method are presented in the EBITDA and EBIT lines of the table. The table also presents estimated inventory decreases measured using the LIFO method, as well as the LIFO effect, LIFO-based EBIT, adjusted LIFO-based EBIT, and adjusted LIFO-based EBITDA.

In Q4 2018, the LOTOS Group posted an operating profit (EBIT) of PLN 768.7m, being the combined result of the Upstream segment's EBIT of PLN 577.8m, the Downstream segment's EBIT of PLN 184.1m and PLN 6.8m in consolidation adjustments (mainly the realised margin on sales of Rozewie and Lithuanian crudes being adjusted for the margin on crude stocks held by the Group). LIFO-based EBITDA (excluding theoretical LIFO-based write-downs), net of non-recurring items and exchange differences on operating activities (adjusted LIFO-based EBITDA) was PLN 876.4m.

In Q4 2018, the LOTOS Group reported net finance costs of PLN -151.5m, mainly comprising a negative net balance of interest on debt, interest income and commissions of PLN -44.9m, foreign exchange losses of PLN -61.8m, and a PLN -25.0m loss on measurement and settlement of hedging transactions.

In Q4 2018, the effect of measurement and settlement of market risk hedging transactions at the LOTOS Group included mainly a PLN -37.3m net loss on settlement and measurement of transactions hedging currency risk, a PLN -29.3m net loss on settlement and measurement of transactions hedging the risk of changes in prices of petroleum products and options, a PLN 48.1m net gain on settlement and measurement of transactions hedging the risk of changes in prices of CO_2 emission allowances, and a PLN -6.5m net loss on settlement and measurement of interest rate swaps hedging interest rate risk.

[19] LIFO effect = LIFO-based EBIT (estimated with the LIFO, or Last In First Out, method) - EBIT

[20]EBITDA including the LIFO effect of inventory measurement and excluding theoretical write-downs on LIFO-measured inventories, adjusted for exchange differences on operating activities; and events specified in the Management Discussion and Analysis next to the segment results.

Transactions hedging the risk related to petroleum product prices as at December 31st 2018

Period	Product/Feedstock	Purchase Heavy fuel oil 3.5 PCT Barges FOB Rotterdam	Sale Heavy fuel oil 3.5 PCT Barges FOB Rotterdam	Purchase Light fuel oil Gasoil .1 Cargoes CIF NWE / ARA	Sale Light fuel oil Gasoil .1 Cargoes CIF NWE / ARA	Purchase Ethanol Ethanol T2 FOB Rdam Barge Eur/cm
Q1 2019	Volume (mt)	1,082			-100	5,100
	Price range (USD/mt)	303-303			521-521	499-499
Q2 2019	Volume (mt)	26,816			-2,478	7,700
	Price range (USD/mt)	287-287			488.25-604	499-499
Q3 2019	Volume (mt)	56,357	-1,895	175	-5,208	6,400
	Price range (USD/mt)	265.5-421.8	300-300	566-566	525.5-717.6	499-499
Q4 2019	Volume (mt)	16,942			-1,565	5,100
	Price range (USD/mt)	265.5-361			527.75-643.25	499-499
Q1 2020	Volume (mt)	1,082			-100	
	Price range (USD/mt)	261.85-261.85			549-549	
Q2 2020	Volume (mt)	27,852			-2,574	
	Price range (USD/mt)	253.3-337.5			549-677	
Q3 2020	Volume (mt)	37,627			-3,477	
	Price range (USD/mt)	234-326.5			548.35-660.75	
Q4 2020	Volume (mt)	16,488			-1,583	
	Price range (USD/mt)	234-287.25			548.35-644	
Q2 2021	Volume (mt)	1,082			-100	
	Price range (USD/mt)	292-292			570.8-570.8	

Transactions hedging foreign exchange risk as at December 31st 2018

Currency pair	Instrument	Volume	Currency	Exchange rate range
EUR/USD exchange rates	Forward	144,000,000	EUR	1.1643-1.2187
EUR/PLN exchange rates	Forward	58,400,000	EUR	4.29-4.3
USD/PLN exchange rates	Forward	-360,114,824	USD	3.6275-3.806

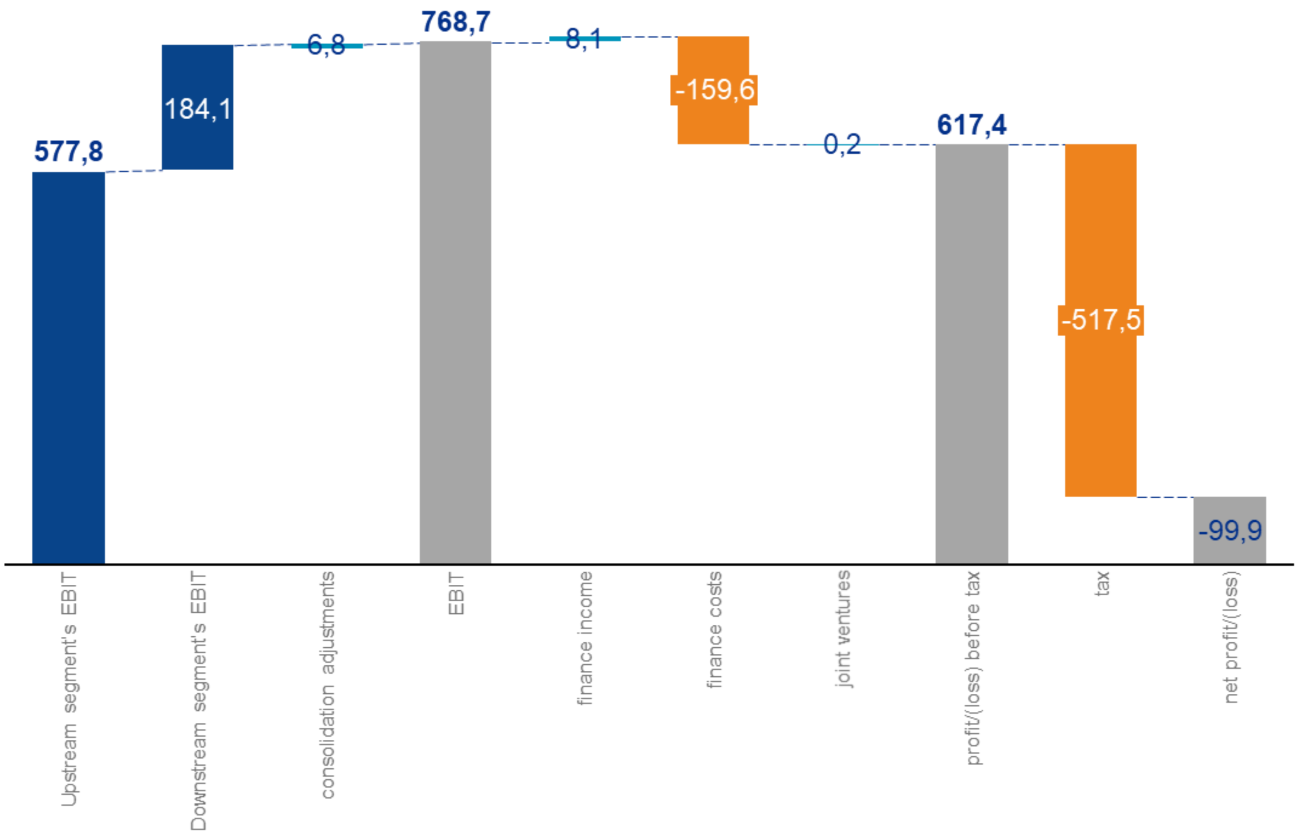
Transactions hedging interest rate risk as at December 31st 2018

Instrument	Start date	End date	Notional amount	Currency	Interest rate range	Reference rate
IRS	from Jan 16 2018	from Jan 15 2019	524,500,014	USD	1.145%-2.89%	3M LIBOR – 6M LIBOR
	to Sep 21 2021	to Dec 21 2021				

Transactions hedging the risk related to prices of carbon dioxide (CO_2) emission allowances as at December 31st 2018

		2019		2020	
		Volume (mt)	Price range (EUR/mt)	Volume (mt)	Price range (EUR/mt)
EUAs	Futures	1,169,000	7.64-23.69	-10,000	7.19

Structure of the LOTOS Group's consolidated results in Q4 2018 (PLNm)



In Q4 2018, the LOTOS Group posted a consolidated net profit of PLN 99.9m.

EBIT, profit before tax and net profit/(loss) of the LOTOS Group

PLNm	Q4 2018	Q3 2018	Q4 2017
EBIT	**768.7**	866.8	722.7
Profit/(loss) before tax	**617.4**	852.0	735.0
Net profit/(loss)	**99.9**	631.6	484.7

Consolidated statement of financial position

Consolidated statement of financial position – assets

PLNm	Dec 31 2018	Dec 31 2017	Change	%
	22,223.9	21,171.2	**1,052.7**	**5.0%**
Non-current assets	**13,078.0**	12,462.1	**615.9**	**4.9%**
Property, plant and equipment of the Downstream segment	**8,742.4**	8,761.5	**-19.1**	**-0.2%**
Intangible assets of the Downstream segment	**151.9**	163.2	**-11.3**	**-6.9%**
Property, plant and equipment of the Upstream segment	**3,044.0**	2,404.2	**639.8**	**26.6%**
Intangible assets of the Upstream segment	**338.0**	304.8	**33.2**	**10.9%**
Equity-accounted joint ventures	**117.2**	106.5	**10.7**	**10.0%**
Deferred tax assets	**149.6**	415.4	**-265.8**	**-64.0%**
Derivative financial instruments	**9.1**	2.7	**6.4**	**237.0%**
Other non-current assets	**525.8**	303.8	**222.0**	**73.1%**
Current assets	**9,145.9**	8,709.1	**436.8**	**5.0%**
Inventories	**4,848.9**	3,559.6	**1,289.3**	**36.2%**
Trade receivables	**1,880.4**	2,677.0	**-796.6**	**-29.8%**
Current tax assets	**2.4**	1.3	**1.1**	**84.6%**
Derivative financial instruments	**15.3**	161.8	**-146.5**	**-90.5%**
Other current assets	**457.6**	388.7	**68.9**	**17.7%**
Cash and cash equivalents	**1,941.3**	1,920.7	**20.6**	**1.1%**

As at December 31st 2018, the LOTOS Group carried total assets of PLN 22,223.9m (up PLN 1,052.7m on December 31st 2017).

Key changes in assets:

- PLN 1,289.3m increase in inventories (mainly of crude oil and petroleum products), attributable mainly to higher volumes of oil as well as finished and semi-finished petroleum products in stock, as well as higher prices as at the end of 2018 vs the end of 2017,
- PLN 639.8m increase in the Upstream segment's property, plant and equipment, attributable mainly to reversed impairment loss on YME expenditure,
- PLN 796.6m decrease in trade receivables, attributable mainly to sale of crude oil in December 2017 under contracts with the Material Reserves Agency,
- PLN 265.8m decrease in deferred tax assets, attributable mainly to reversed impairment loss on YME expenditure and insurance proceeds received in respect of the defective platform on the YME field,

- PLN 290.9m increase in other assets, primarily attributable to funds in the Sleipner decommissioning escrow account,
- PLN 140.1m decrease in positive fair value of financial derivatives.

Consolidated statement of financial position – sources of funding

PLNm	Dec 31 2018	Dec 31 2017	Change	%
	22,223.9	21,171.2	**1,052.7**	**5.0%**
Equity	**12,034.8**	10,712.5	**1,322.3**	**12.3%**
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	**-288.2**	-225.2	**-63.0**	**-28.0%**
Retained earnings	**9,826.1**	8,432.2	**1,393.9**	**16.5%**
Translation reserve	**83.6**	92.2	**-8.6**	**-9.3%**
Non-controlling interests	**0.1**	0.1	**0.0**	**0.0%**
Non-current liabilities	**4,044.3**	4,264.4	**-220.1**	**5.2%**
Borrowings, other debt instruments and finance lease liabilities	**2,345.3**	2,738.3	**-393.0**	**-14.4%**
Derivative financial instruments	**6.9**	6.7	**0.2**	**3.0%**
Deferred tax liabilities	**324.9**	277.7	**47.2**	**17.0%**
Employee benefit obligations	**170.4**	169.3	**1.1**	**0.6%**
Other liabilities and provisions	**1,196.8**	1,072.4	**124.4**	**11.6%**
Current liabilities	**6,144.8**	6,194.3	**-49.5**	**-0.8%**
Borrowings, other debt instruments and finance lease liabilities	**1,538.7**	1,687.6	**-148.9**	**-8.8%**
Derivative financial instruments	**47.4**	72.7	**-25.3**	**-34.8%**
Trade payables	**1,913.7**	2,201.7	**-288.0**	**-13.1%**
Current tax payables	**565.3**	210.0	**355.3**	**169.2%**
Employee benefit obligations	**156.2**	145.3	**10.9**	**7.5%**
Other liabilities and provisions	**1,923.5**	1,877.0	**46.5**	**2.5%**

The **increase in the LOTOS Group's equity** as at the end of 2018 to PLN 12,034.8m (up by PLN 1,322.3m on 2017) was driven primarily by higher retained earnings (up by PLN 1,393.9m), which were reduced by foreign exchange losses on valuation of cash flow hedges charged against capital reserves, adjusted by the tax effect of PLN -63.0m.

The share of equity in total equity and liabilities increased by 3.6pp year on year, to 54.2%.

Key changes in liabilities (down by PLN 269.6m):

- PLN 170.9m increase in other liabilities and provisions (mainly provisions recognised in the Downstream segment and provisions remeasured in the Upstream segment),
- PLN 355.3m increase in current tax payables,
- PLN 288.0m decrease in trade payables,
- PLN 541.9m decrease in borrowings, other debt instruments and finance lease liabilities, reflecting mainly partial repayment of the parent's investment facilities, loans contracted by LOTOS Norge S.A. and AB LOTOS Geonafta, as well as redemption of some of the bonds issued by the Group.

The LOTOS Group's financial debt was PLN 3,884.0m as at December 31st 2018 (down PLN 541.9m on December 31st 2017). The ratio of financial debt adjusted for free cash to equity was 16.1%, down 7.3pp on December 31st 2017. Net debt was PLN 1,942.7m. The ratio of net debt to adjusted LIFO-based EBITDA was 0.6 as at December 31st 2018.

Consolidated statement of cash flows

Consolidated statement of cash flows

PLNm	Q4 2018	Q3 2018	Q4 2017
Cash flows from operating activities	**631.8**	1,299.1	1,013.7
Cash flows from investing activities	**-505.6**	-178.9	-344.2
Cash flows from financing activities	**-310.8**	-400.1	-278.2
Effect of exchange rate fluctuations on cash held	**4.9**	-1.4	-0.2
Change in net cash	**-179.7**	718.7	391.1
Cash at beginning of period	**2,118.0**	1,399.3	1,529.5
Cash at end of period	**1,938.3**	2,118.0	1,920.6

As at December 31st 2018, the LOTOS Group's cash balance (including current account overdrafts) was PLN 1,938.3m. In Q4 2018, net cash flows decreased cash and cash equivalents by PLN 179.7m.

In Q4 2018, net cash flows from operating activities were positive at PLN 631.8m, driven mainly by net profit increased by depreciation and amortisation, income tax and a decrease in trade receivables, and reduced by higher inventories, impairment losses on property, plant and equipment and intangible assets, as well as a decrease in trade payables in Q4 2018.

Negative net cash flows from investing activities (PLN -505.6m) were mainly attributable to purchases of property, plant and equipment and other intangible assets, chiefly for the Upstream segment, and funds in the Sleipner decommissioning escrow account.

Net cash flows from financing activities in Q4 2018 were PLN -310.8m and chiefly included a negative net balance of proceeds from borrowings and repayments of borrowings (principal and interest) of PLN -318.3m.