



Grupa LOTOS

Management's Discussion and Analysis to the consolidated financial results for Q4 2016

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





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

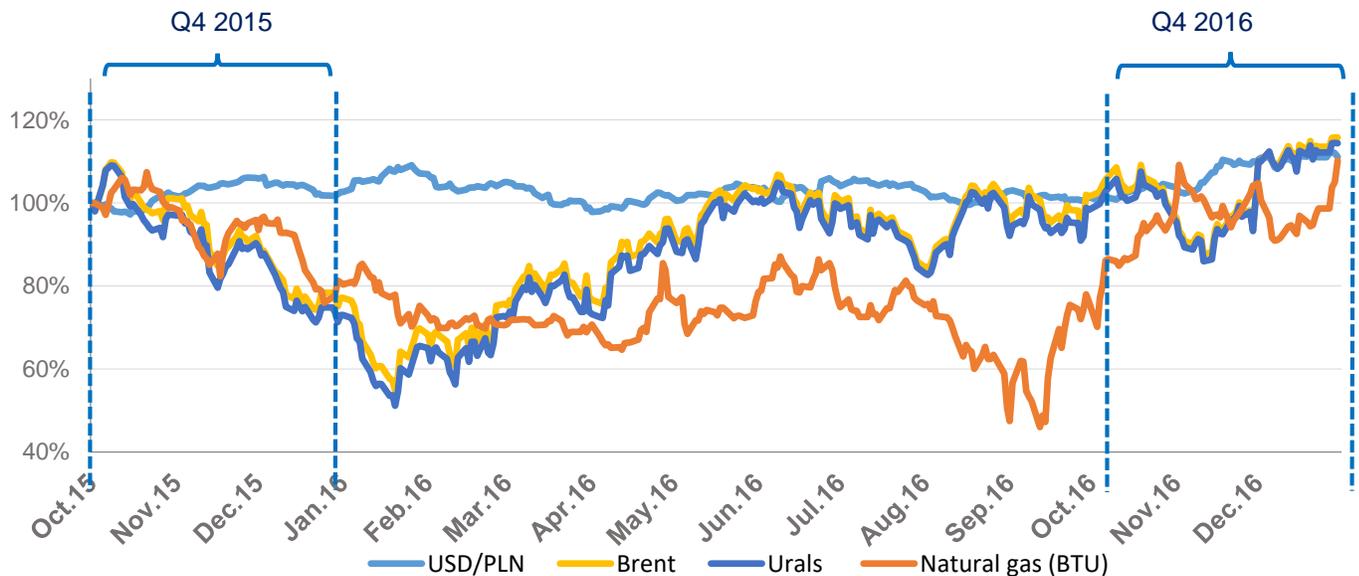
Market environment	3
Upstream segment	6
Downstream segment	12
Consolidated statement of comprehensive income	21
Consolidated statement of financial position	27

An excel file with the operating and financial data for Q4 2016 and the previous reporting periods is published in the Investor Relations section of our website at inwestor.lotos.pl as → [databook](#)

Market environment

- Crude oil and natural gas prices up (12.3% or USD 5.39/bbl¹ and 2.4% or USD 0.73/boe² year on year, respectively).
- Year-on-year rise in the heavy fuel oil crack spread by 56.6%, combined with slight declines in the crack spreads for diesel oil (down 1.7%) and gasoline (down 6.7%), the two key variables used to calculate profitability of LOTOS' 'model barrel'.
- Average Brent/Urals spread in the quarter narrowed by USD 0.5 USD/bbl year on year.
- Uptrend in the average USD/PLN exchange rate for the quarter (up 4.4% year on year) supported the Group's product margins.
- Solid growth of Grupa LOTOS' model refining margin (accounting for the Urals/Brent spread), to USD 8.24/bbl (up 32.7% year on year).
- Downstream margin strongly supported by in-land premium on domestic fuel sales as a result of successful efforts to curb grey market.

Brent/Urals prices (USD/bbl), natural gas price (USD/bbl) and USD/PLN exchange rate



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

¹ Barrels of crude oil

² Barrels of oil equivalent

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

USD/bbl	Q4 2016	Q3 2016	Q4 2015	Q4 16 / Q3 16	Q4 16 /Q4 15
DATED Brent FOB prices ³	49.05	45.71	43.66	7.3%	12.3%
Brent/Urals spread ¹	2.18	2.33	2.68	-6.4%	-18.7%
UK NBP natural gas prices ⁴	31.63	22.66	30.90	39.6%	2.4%
Model refining margin ⁵	8.24	6.01	6.21	37.1%	32.7%

Crack spreads⁶

USD/bbl	Q4 2016	Q3 2016	Q4 2015	Q4 16 /Q3 16	Q4 16 /Q4 15
Gasoline	13.71	13.59	14.69	0.9%	-6.7%
Naphtha	2.42	-0.52	5.53	-565.4%	-56.2%
Diesel oil (10 ppm)	15.05	12.34	15.31	22.0%	-1.7%
Light fuel oil	14.42	11.07	12.98	30.3%	11.1%
Aviation fuel	14.29	11.91	14.18	20.0%	0.8%
Heavy fuel oil	-5.17	-7.29	-11.92	29.1%	56.6%

Source: Thomson Reuters.

³ Source: Thomson Reuters.

⁴ To ensure comparability, the UK NBP natural gas prices have been converted from USD/MWh to USD/boe, using the conversion factor 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 based on which the Company conducts its trading activity. In a shorter term, the prices used to compute the model margin may differ from actual trading prices.

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).

Exchange rates

USD/PLN	Q4 2016	Q3 2016	Q4 2015	Q4 16 /Q3 16	Q4 16 /Q4 15
PLN/USD exchange rate at end of period	4.18	3.86	3.90	8.3%	7.2%
Average PLN/USD exchange rate	4.06	3.89	3.89	4.4%	4.4%

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

Presented below are the key factors which contributed to the LOTOS Group's performance in Q4 2016:

- **Feedstock and products**

- **downstream segment**

Approximately 32.7% year-on-year rise in the model refining margin, with the refinery's capacity utilisation rate having increased quarter on quarter to 102.5%, from 96.5%, helped the downstream segment to generate adjusted LIFO-based EBITDA in Q4 2016 of approximately PLN 635.9m (up 50.7% year on year).

- **upstream segment**

The positive effect of an increase in the output from the recently acquired Sleipner assets and initial production from the B8 field was supported by a rebound in oil prices (up 12.3% yoy) and the UK National Balancing Point natural gas prices (up 2.4%), lifting adjusted EBITDA of the upstream segment to PLN 220.9m (by 207.7% year on year).

- **Exchange rates**

- Slight increase in the average USD/PLN exchange rate for the quarter (up 4.4%) partly offset the negative impact of lower crack spreads on the downstream segment's performance.
- Higher USD/PLN exchange rate at the end of the quarter (up 8.3% quarter on quarter) translated into foreign exchange losses on revaluation of debt.

Upstream segment

- Increase in hydrocarbon reserves following inclusion of the Utgard field in the 2P category and revision of the estimates for commercial reserves.
- Approval of the PDO for the Utgard field in the Norwegian Continental Shelf.
- Five exploration licences secured in the APA round in Norway.
- Production volume in Q4 2016 at approximately 26.92 thousand boe/d⁷, up 108.5% year on year.
- Upstream segment's adjusted EBITDA at PLN 220.9m, up 207.7% year on year.

Crude oil and natural gas reserves, production and sales

Crude oil and natural gas reserves as at (mboe) ⁸	Dec 31 2016	Sep 30 2016	Dec 31 2015
Norway	27.59 ⁹	13.98	19.12
Poland	38.57	39.05	40.58
Lithuania	6.54	6.64	7.14
Total	72.70	59.67	66.84

Production (boe/d)	Q4 2016	Q3 2016	Q4 2015	Q4 16 / Q3 16	Q4 16 / Q4 15
Norway	20,665	15,992	6,006	29.2%	244.1%
Poland	5,202	5,449	5,702	-4.5%	-8.8%
Lithuania	1,053	1,074	1,204	-2.0%	-12.5%
Total	26,919	22,515	12,911	19.6%	108.5%

⁷ Daily production = production in a period/number of calendar days – change in methodology relative to the previous periodic report

⁸ 2P – proved and probable reserves (SPE-PRMS classification).

⁹ 2P reserves in Norway increased year on year due to:

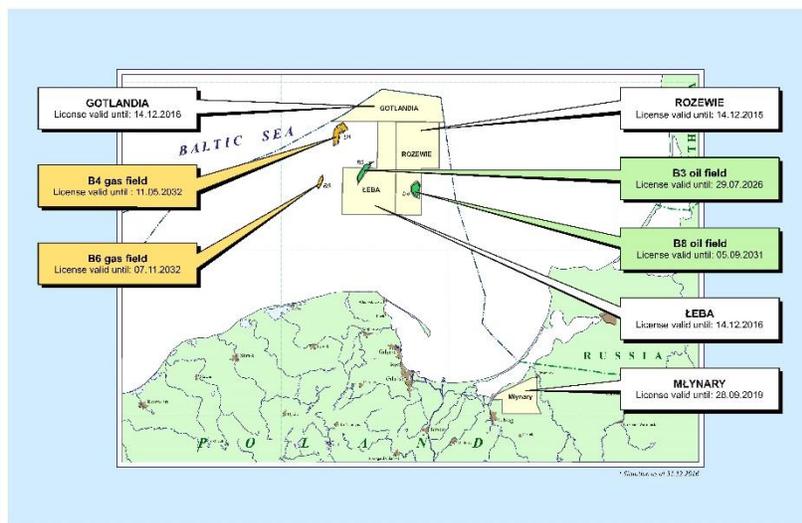
- reclassification of the Utgard field (8.1 million as at December 31st 2016) from the 2C (contingent resources) to 2P (proved and probable reserves) category after the POD for the field was approved by the Norwegian Ministry of Petroleum and Energy, and
- revision of the estimates of commercial reserves in producing assets in Norway, mainly in connection with plans to drill additional production wells in the Sleipner fields

Production (boe)	Q4 2016	Q3 2016	Q4 2015	Q4 16 / Q3 16	Q4 16 / Q4 15
Norway	1,901,180	1,471,264	552,526	29.2%	244.1%
Poland	478,556	501,285	524,567	-4.5%	-8.8%
Lithuania	96,848	98,844	110,682	-2.0%	-12.5%
Total	2,476,585	2,071,393	1,187,775	19.6%	108.5%

Oil and gas sales (boe)	Q4 2016	Q3 2016	Q4 2015	Q4 16 / Q3 16	Q4 16 / Q4 15
Norway	1,961,650	1,084,243	446,902	80.9%	338.9%
Poland	399,657	442,849	563,044	-9.8%	-29.0%
Lithuania	91,013	92,255	90,887	-1.3%	0.1%
Total	2,452,320	1,619,347	1,100,833	51.4%	122.8%

LOTOS Petrobaltic S.A. (LPB)

Baltic Sea licences held by the LOTOS Petrobaltic Group as at December 31st 2016



Source: In-house analysis.

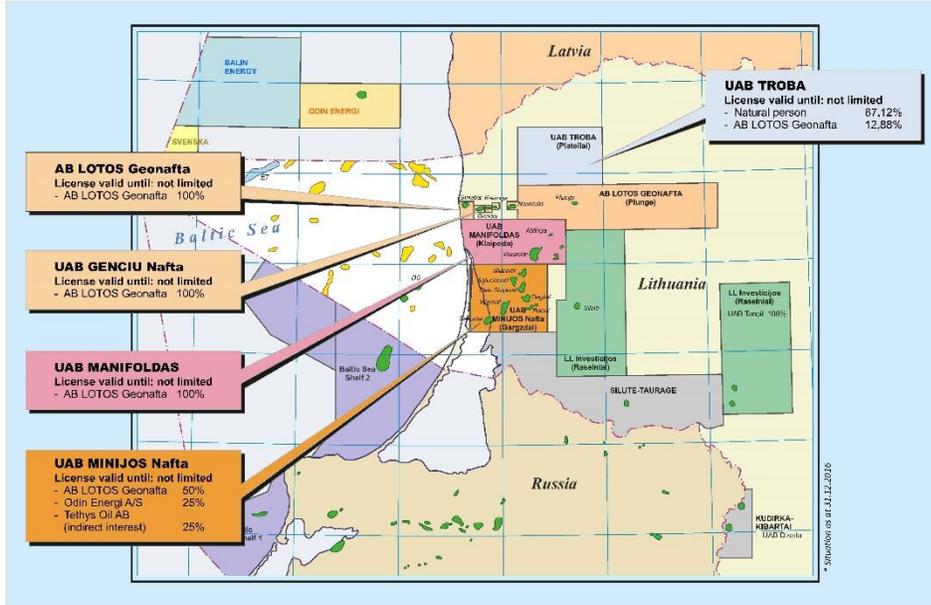
In Q4 2016, LOTOS Petrobaltic continued to produce crude oil from the B3 field in the Baltic Sea.

The special purpose vehicle B8 Sp. z o.o. Baltic S.K.A. ("SPV B8") ran initial production operations under the B8 oil field development project and continued work on converting an oil rig into a production hub to enable the launch of full commercial production from the field. On October 19th 2016, SPV B8, Bank Gospodarstwa Krajowego S.A. ("BGK") and Fundusz Inwestycji Infrastrukturalnych – Dłużny Fundusz Inwestycyjny Zamknięty Aktywów Niepublicznych ("PFR") signed financing agreements for the development of the B8 oil field in the Baltic Sea. Conditions precedent under the agreements were satisfied in February 2017.

LPB, in partnership with CalEnergy Resources Poland Sp. z o.o., continued preparations to develop the B4/B6 gas fields as part of the Baltic Gas Project, which included engineering design work ahead of an investment decision to enter the construction phase.

AB LOTOS Geonafta Group

Licences held by AB LOTOS Geonafta Group as at December 31st 2016



Source: In-house analysis.

In Q4 2016, the AB LOTOS Geonafta Group continued stable production from the Girkaliai, Kretinga, Nausodis, Genciu, Vezaiciai, Liziai and Ablinga onshore oilfields.

Upstream segment's key financial data

PLNm	Q4 2016	Q3 2016	Q4 2015	Q4 16 /Q3 16	Q4 16 /Q4 15
Revenue	366.8	245.4	162.3	49.5%	126.0%
EBIT	49.3	-12.7	-118.9	-	-
Depreciation and amortisation	181.6	116.5	54.4	55.9%	233.8%
EBITDA	230.9	103.8	-64.5	122.4%	-
Adjusted EBIT ¹⁰	39.3	0.9	17.4	4,266.7%	125.9%
Adjusted EBITDA ¹⁰	220.9	117.4	71.8	88.2%	207.7%

The 126.0% growth in revenue of the upstream segment in Q4 2016 vs Q4 2015 was driven by a 122.8% increase in sales volumes, a 4.4% rise in the average USD/PLN exchange rate for the quarter, and a 12.3% increase in the average price of Brent Dated crude. Sales volumes rose mainly on acquisition of interests in the Sleipner licences in Norway in late 2015 and launch of production from the B8 field in the Baltic Sea.

Revenue rose 49.5% on the previous quarter as sales volumes increased 51.4% (with the largest increase reported by LOTOS Norge), chiefly reflecting a low base in Q3 2016 caused by maintenance shutdowns on the Sleipner fields and production stoppages on the Heimdal fields.

The increase in depreciation and amortisation was led by charges recognised for the recently acquired Sleipner assets on the Norwegian Continental Shelf. Depreciation/amortisation grew significantly quarter on quarter following adjustments to the method of classifying the Sleipner assets by LOTOS Norge.

The upstream segment's Q4 2016 adjusted EBITDA was 88.2% higher than in Q3 2016 and 207.7% higher than the adjusted EBITDA posted for Q4 2015, mainly reflecting higher sales volumes, a stronger US dollar, and rising oil prices.

¹⁰ Net of non-recurring items:

- Q4 2016: net effect of impairment losses on assets, losses on discontinued projects and revision of provisioning estimates totalling approximately PLN +10m;
- Q3 2016: net effect of impairment losses on assets and recognised provisions totalling approximately PLN -14m;
- Q4 2015: impairment losses on assets held for sale and other assets, losses on discontinued projects and revision of provisioning estimates totalling approximately PLN -136m

Downstream segment

- The EFRA Project was 54.1% complete.
- Capacity utilisation of the Grupa LOTOS refinery at 102.5% (up 6pp year on year).
- Sustained improvement in the LOTOS Group's financial performance, reflecting the government's efforts to curb the grey market for fuels in Poland.
- In downstream, adjusted LIFO-based EBITDA of PLN 635.9m (up 51% year on year) was supported by rising demand for fuels on the home market.

Crude slate

thousand tonnes	Q4 2016	Q3 2016	Q4 2015	Q4 16 /Q3 16	Q4 16 /Q4 15
Crude oil processed by the Gdańsk refinery	2,714.2	2,715.9	2,555.3	-0.1%	6.2%
including:					
Urals crude	1,922.4	1,954.2	1,861.0	-1.6%	3.3%
Rozewie crude	58.3	64.6	48.6	-9.8%	20.0%
Lithuanian crude	9.3	10.7	14.2	-13.1%	-34.5%
Lubiatów crude	75.0	57.0	77.8	31.6%	-3.6%
Other types of crude	649.2	629.4	553.7	3.1%	17.2%

In Q4 2016, the refinery's capacity utilisation rate was 102.5%. The refining operations were stable, with throughput at 2,714.2 thousand tonnes of crude oil.

On June 26th 2015, in cooperation with LOTOS Asphalt, Grupa LOTOS S.A. launched the EFRA (Effective Refining) Programme, the Group's key project which is a continuation of the wider effort to modernise the LOTOS refinery involving a natural expansion of the deep crude oil processing configuration achieved under the 10+ Programme.

Further enhancement of the conversion complexity, supported by synergies offered by the Gdańsk refinery's existing infrastructure, will help increase the refining margin on every processed barrel of oil by around USD 2. The EFRA units will turn out approximately 900 thousand tonnes of high-margin fuels per year. The project is scheduled for completion in the first half of 2018. More on → [the EFRA Programme](#)

Further contracts for electrical and automation work were signed in Q4 2016. Work on engineering design of the key Delayed Coking/ Coking Naphtha Hydrotreating Units (DCU/CNHT), Hydrogen Generation Unit (HGU) and Hydrowax Vacuum Distillation Unit (HVDU) was nearing completion, and the necessary procurement activities were under way. Work continued under contracts for the construction of major units and associated infrastructure, with first pieces of heavy equipment delivered and installed.

As at December 31st 2016, the progress of design, procurement and construction work under the EFRA Programme was 54.1%, compared with the planned 37.2%.

Refining products ¹¹

	Q4 2016	Q3 2016	Q4 2015	Q4 16 /Q3 16	Q4 16 /Q4 15
Total output (thousand tonnes)	2,901.2	2,867.7	2,707.5	1.2%	7.2%
Gasolines	410.2	385.0	402.7	6.5%	1.9%
Naphtha	161.4	117.7	139.4	37.1%	15.8%
Diesel oils	1,187.5	1,255.9	1,119.6	-5.4%	6.1%
Light fuel oils	91.2	41.8	83.5	118.2%	9.2%
Jet fuel	131.9	200.1	122.5	-34.1%	7.7%
Heavy products ¹²	581.8	535.6	522.5	8.6%	11.3%
Other ¹³	337.2	331.6	317.3	1.7%	6.3%

¹¹ 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 streams of biocomponents, enhancing additives and middle distillates purchased from third-party suppliers.

¹² Heavy fuel oil and bitumen components.

¹³ Other products include fuel and technical gases, sulphur, base oils, xylene fraction, LPG, bunker fuel, extracts, raffinates, and slack wax.

Breakdown of sales in the downstream segment

	Q4 2016	Q3 2016	Q4 2015	Q4 16 /Q3 16	Q4 16 /Q4 15
thousand tonnes	2,954.2	3,009.5	2,915.9	-1.8%	1.3%
Gasolines	435.7	391.3	399.9	11.3%	9.0%
Naphtha	161.5	117.6	139.4	37.3%	15.9%
Diesel oils	1,269.7	1,340.1	1,201.3	-5.3%	5.7%
Light fuel oils	91.2	47.5	77.9	92.0%	17.1%
Jet fuel	145.2	199.0	118.4	-27.0%	22.6%
Heavy products ¹⁴	609.3	527.5	530.8	15.5%	14.8%
Crude oil for resale	24.8	170.0	243.0	-85.4%	-89.8%
Other petroleum products ¹⁵	216.8	216.5	205.2	0.1%	5.7%

Polish oil products market and LOTOS Group's sales in 2016 – Q4 2016 data (October–December)

In Q4 2016, consumption of liquid fuels (i.e. diesel oil, gasolines and light fuel oil) in Poland grew by 18.1% year on year, driven by an increase in diesel oil consumption (up 22.7%), gasoline consumption (up 6.0%), and light fuel oil consumption (up 10.0%).

¹⁴ Heavy fuel oil and bitumen components.

¹⁵ Other products include gas liquids, base oils, lubricants, sulfur, xylene fraction, slack wax, reformat, bunker fuels, plasticizer.

Motor gasoline

Consumption of gasolines was up 11% in January–December 2016, with the increase in the fourth quarter alone amounting to 6%. In Q4 2016, the average global crack spread for gasoline fell by USD 1.05/bbl year on year. The Group also reported a 9% year-on-year rise in gasoline sales. Grupa LOTOS S.A.'s sales of gasoline in Poland improved by 12.3%, driven by the growing demand from the wholesale market and sustainable expansion of the LOTOS retail network.

Motor gasoline – average monthly crack margin, USD/bbl (October 2015–December 2016)



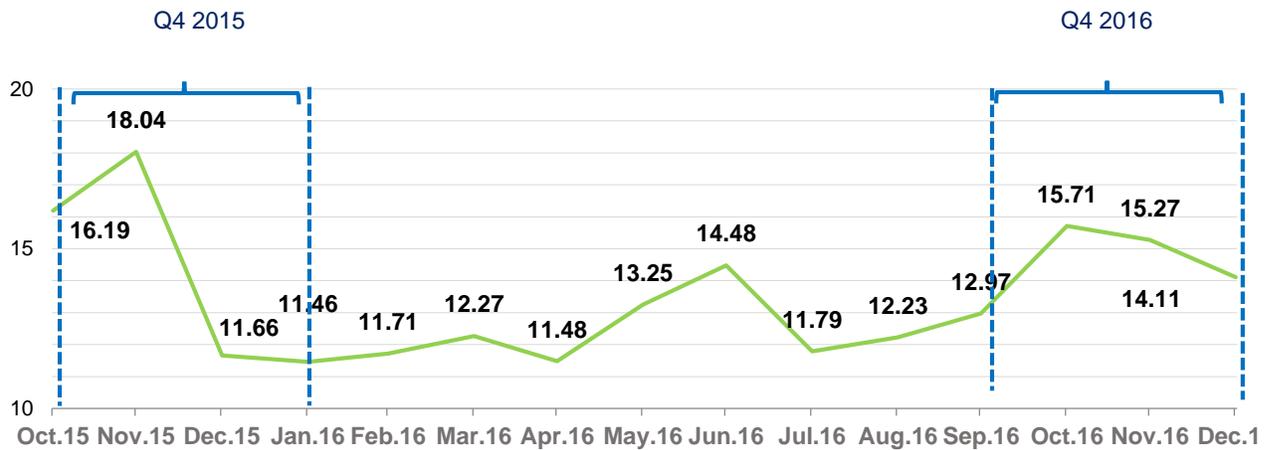
Source: In-house analysis based on Thomson Reuters data.

Diesel oil

The period January to December 2016, including the fourth quarter, saw continued growth of demand for diesel oil. In the four quarters of the year, diesel oil consumption rose by 15.5%, and in the fourth quarter alone by 22.7%. In Q4 2016, the key driver of growth in diesel oil consumption in Poland was the Fuels Package, whose enactment significantly curtailed illegal diesel imports to Poland and boosted demand from legal sources.

In Q4 2016, the average global crack spread for diesel oil stayed largely flat year on year. The LOTOS Group's Q4 2016 and full-year sales on the home market grew 16% and 6%, respectively. In 2016, the Group sold 1.2% of diesel oil less than the year before due to lower exports.

Diesel oil – average monthly crack margin, USD/bbl (October 2015–December 2016)

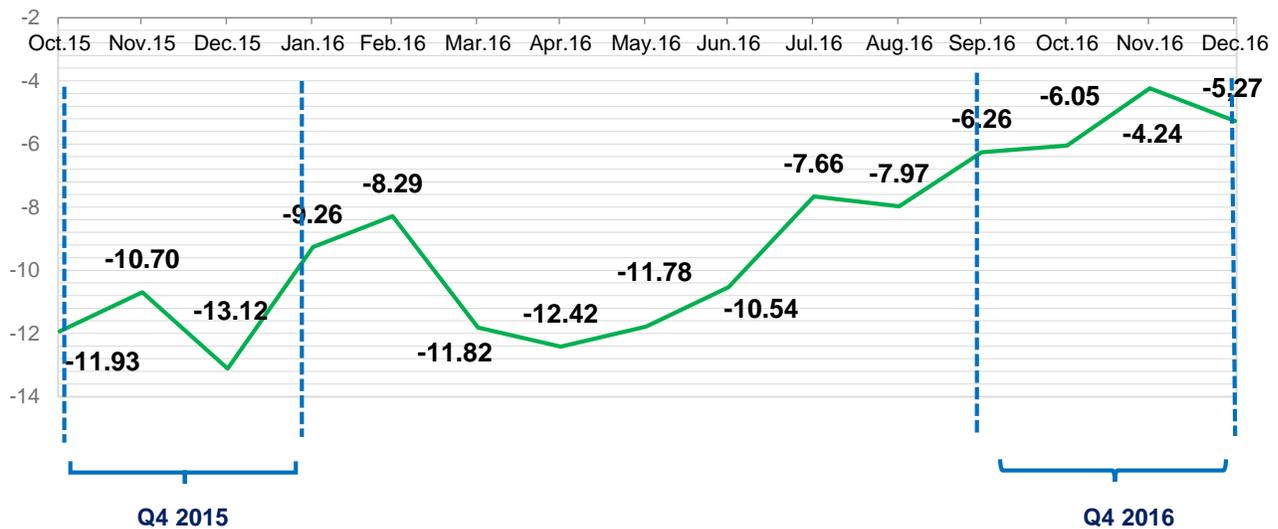


Source: In-house analysis based on Thomson Reuters data.

Heavy fuel oil

In Q4 2016, the average negative heavy fuel oil crack spread on global markets improved by USD 6.73/bbl year on year. Sales of heavy fuel oil increased 35% in the analysed period and 3% for the full year thanks to strong margins and implemented optimisation measures.

Heavy fuel oil – average monthly crack margin, USD/bbl (October 2015–December 2016)



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

Light fuel oil

Consumption of light fuel oil was up 1% in January–December 2016, with the increase in the fourth quarter alone amounting to 10%. The LOTOS Group recorded a 17% year-on-year rise in domestic sales of light fuel oil in the fourth quarter.

Downstream segment's key financial data

PLNm	Q4 2016	Q3 2016	Q4 2015	Q4 16 / Q3 16	Q4 16 / Q4 15
Revenue	6,108.3	5,521.6	5,180.7	10.6%	17.9%
EBIT	682.9	445.5	-193.7	53.3%	-
Depreciation and amortisation	126.5	121.9	120.3	3.8%	5.2%
EBITDA	809.4	567.4	-73.4	42.7%	-
LIFO-based EBIT	597.0	428.3	-187.5	39.4%	-
LIFO-based EBITDA	723.5	550.2	-67.2	31.5%	-
Adjusted LIFO EBITDA ¹⁶	635.9	525.0	421.9	21.1%	50.7%

The downstream segment's revenue was up 17.9% year on year as a result of an increase in the average net selling price and a 1.3% rise in sales volumes. In Q4 2016, the segment's average net selling price was PLN 2,068 per tonne, having increased 16.4% year on year, chiefly on higher prices of petroleum products on global markets and a higher average USD/PLN exchange rate in the quarter.

The 10.6% quarter-on-quarter revenue growth in the downstream segment reported in Q4 2016 was mainly led by a higher average net selling price in the segment (up 12.7%), and was partly offset by a 1.8% drop in sales volumes.

In Q4 2016, adjusted LIFO-based EBITDA of the downstream segment came in at PLN 635.9m, up 21.1% on Q3 2016 and up 50.7% on Q4 2015.

¹⁶ EBITDA including the LIFO effect of inventory measurement and excluding theoretical write-downs on LIFO-measured inventories, net of inventory write-downs, exchange differences on operating activities and, for Q4 2016 and Q4 2015, impairment losses on service stations.

Polish oil products market and LOTOS Group's sales in January to December 2016

Official domestic fuel consumption figures rose for the second consecutive year in 2016, after three years of declines caused by the then-expanding grey market.

Domestic fuel consumption increased 14% in 2016, including diesel by 15.5%, gasolines by 11%, and light fuel oil by 1%.

2016 was different from previous years due to the enactment of the First Fuels Package on August 1st, which helped to significantly curb the grey market. Accordingly, the market analysis below is split into two periods: January to July (prior to enactment of the new law) and August to December (after its enactment).

From January to July 2016, fuel consumption grew 8%, including diesel oil up 8% and gasolines up 11%, with a 1% drop in light fuel oil consumption. The overall growth was partly a result of legislative changes targeting the grey market made in 2015 (such as a PLN 10m security deposit required to obtain a cross-border fuel trading licence), which however were not as effective as the Fuels Package signed into law as of August 1st 2016.

In August to December 2016, official consumption grew 20.1%, beating even the most optimistic of analyst forecasts. The fastest growth, of 25.3%, was recorded for diesel oil. The sharp rise in consumption from August 2016 onwards led to a 132% increase in diesel oil imports.

Source: Based on data published by the Polish Organisation of Oil Industry and Trade (POPiHN).

Fuel consumption in Poland (mcm)	January–July ¹⁷	August–December	12 months
2015	11,765.789	9,005.670	20,771.459
2016	12,737.181	10,868.735	23,605.916
Change (m ³)	971.392	1,863.065	2,834.457
Change (%)	8%	21%	14%

¹⁷ Prior to the enactment of regulations targeting grey market for fuels in Poland.

Diesel oil consumption in Poland (mcm) 2016/2015	January–July	August–December	12 months
2015	8,389.851	6,410.032	14,799.883
2016	9,057.075	8,033.740	17,090.815
Change (m ³)	667.224	1,623.708	2,290.932
Change (%)	8%	25%	15%

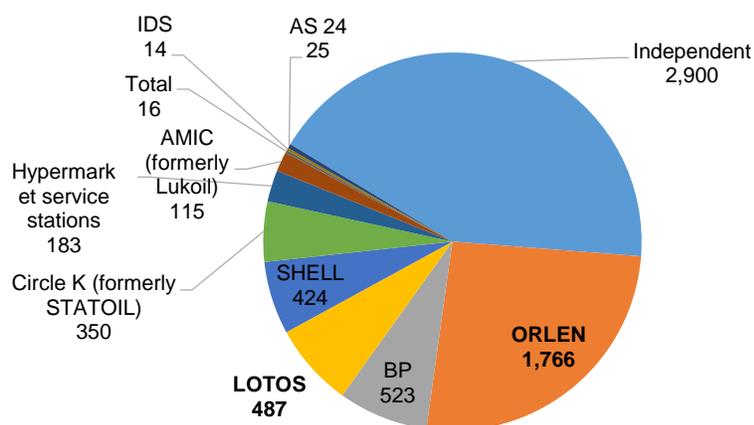
Source: POPiHN.

LOTOS service station network

Number of service stations in the LOTOS network as at December 31st 2016

	Dec 31 2016	Sep 30 2016	Dec 31 2015	Q4 16 - Q3 16	Q4 16 - Q4 15
	487	480	476	7	11
CODO	300	295	290	5	10
including: LOTOS OPTIMA	121	122	121	-1	0
DOFO	187	185	186	2	1
including: LOTOS OPTIMA	84	76	73	8	11

As at the end of 2016, the LOTOS Group operated a chain of 487 service stations. Compared with the end of 2015, the number of service stations increased, with 11 new locations opened, including 10 CODO stations and one DOFO station, all of which operate under the LOTOS Optima economy brand.

Polish retail market as at December 31st 2016


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

Retail segment's operating highlights

PLNm	Q4 2016	Q3 2016	Q4 2015	Q4 16 /Q3 16	Q4 16 /Q3 16
Sales volume ('000 tonnes)	345.6	365.1	328.8	-5.3%	5.1%
Revenue	1,626.7	1,622.6	1,475.8	0.3%	10.2%
EBIT	11.2	44.8	-8.2	-75.0%	-
Depreciation and amortisation	17.9	17.3	16.6	3.5%	7.8%
EBITDA	29.1	62.1	8.4	-53.1%	246.4%

Starting from 2017, the results of the SDS (System Diesel Service) channel, previously reported as part of the retail business, will now be reported as part of the downstream segment (2016 full-year EBITDA generated by the SDS channel was PLN 17.7m, accounting for 11% of the retail business total EBITDA).

The retail segment posted EBIT of PLN 11.2m for Q4 2016, down quarter on quarter due to impairment losses recognised on service station assets of PLN 13.1m. Other factors included a lower margin on fuel sales (reflecting lower sales volumes and squeezed unit margins), lower sales of non-fuel products and services, and higher operating costs. The lower revenue was due to normal seasonal variations in fuel sales.

Consolidated statement of comprehensive income

Key financial results of the LOTOS Group

PLNm	Q4 2016	Q3 2016	Q4 2015	Q4 16 /Q3 16	Q4 16 /Q3 16
Revenue	6,366.1	5,660.0	5,225.8	12.5%	21.8%
EBIT	734.6	431.7	-319.4	70.2%	-
Depreciation and amortisation	307.7	238.0	174.3	29.3%	76.5%
EBITDA	1,042.3	669.7	-145.1	55.6%	-
LIFO effect ¹⁸	-85.9	-17.2	6.2	-	-
LIFO-based EBIT	648.7	414.5	-313.2	56.5%	-
Adjusted LIFO-based EBIT ¹⁹	551.1	402.9	312.2	36.8%	76.5%
Adjusted LIFO-based EBITDA ¹⁹	858.8	640.9	486.5	34.0%	76.5%

In line with its inventory measurement policies, the LOTOS Group uses the weighted average method to measure change 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 2016, the LOTOS Group posted an operating profit of PLN 734.6m, being the combined result of the downstream segment's operating profit of PLN 682.9m, the upstream segment's operating profit of PLN 49.3m, and PLN 2.4m in consolidation adjustments (mainly the realised margin on sales of the Rozewie and Lithuanian crudes being adjusted for the margin on crude stocks held by the Group). In Q4 2016, LIFO-based EBITDA (excluding theoretical LIFO-based write-downs), net of non-recurring items and exchange differences on operating activities (clean LIFO-based EBITDA) was PLN 858.8m.

¹⁸ LIFO effect = LIFO-based EBIT (estimated with the LIFO, or Last In First Out, method) - EBIT

¹⁹ EBITDA including the LIFO effect of inventory measurement and excluding theoretical write-downs on LIFO-measured inventories (PLN 120.9m and PLN 11.0m in write-down reversals in Q4 2016 and Q3 2016, respectively, and PLN -491.5m write-downs recognised in Q4 2015), net of inventory write-downs, exchange differences on operating activities, the net effect of impairment losses on assets, losses on discontinued projects, and revision of estimates related to provisions in the upstream segment, as well as impairment losses on service stations in the downstream segment.

In Q4 2016, the LOTOS Group reported net finance costs of PLN -235.6m, with the main contributors being foreign exchange losses of PLN -110.8m, a PLN -53.2m loss on measurement and settlement of hedging transactions, and a PLN -68.7m negative balance of interest on debt, interest income and commissions.

In Q4 2016, the effect of measurement and settlement of market risk hedging transactions at the LOTOS Group included primarily a PLN -108.0m net loss on settlement and measurement of transactions hedging the foreign exchange risk and a PLN -1.7m net loss on settlement and measurement of futures hedging the risk of changes in prices of CO₂ emission allowances, partly offset by a PLN 30.4m net gain on settlement and measurement of transactions hedging the risk of changes in prices of petroleum products and options, and a PLN 26.1m net gain on settlement and measurement of interest rate swaps (IRS) hedging the interest rate risk.

Transactions hedging the risk related to petroleum product prices as at December 31st 2016

Period	Product Feedstock	Diesel oil	Heavy fuel oil	Light fuel oil
		ULSD 10ppm CIF NWE (Platts)	3.5 PCT Barges FOB Rotterdam	Gasoil .1 Cargoes CIF NWE / Basis ARA
Q1 2017	Volume (mt)		3,140	-191
	Price range (USD/mt)		202.75-488.5	404-428.5
Q2 2017	Volume (mt)	-16,050.00	48,238	-3,864
	Price range (USD/mt)	410-410	183.75-488.5	371.25-626.25
Q3 2017	Volume (mt)		52,451	-4,108
	Price range (USD/mt)		183.75-488.5	371.25-466.25
Q4 2017	Volume (mt)		26,239	-2,298
	Price range (USD/mt)		183.75-380	371.25-440
Q1 2018	Volume (mt)		2 411	-222
	Price range (USD/mt)		217.5-224.75	417-432.5
Q2 2018	Volume (mt)		26,480	-2,447
	Price range (USD/mt)		217.5-260	412-486
Q3 2018	Volume (mt)		25,255	-2,335
	Price range (USD/mt)		217.5-260	412-486
Q4 2018	Volume (mt)		7,958	-736
	Price range (USD/mt)		217.5-260	412-486

Transactions hedging foreign exchange risk as at December 31st 2016

Currency pair	Instrument	Volume	Currency	Exchange rate range
EUR/USD exchange rates	Forward	217,199,998	EUR	1.0475 - 1.1286
EUR/PLN exchange rate	Forward	-23,654,038	EUR	4.3392 - 4.4792
USD/PLN exchange rate	Forward	-374,064,343	USD	3.8023 - 4.2333

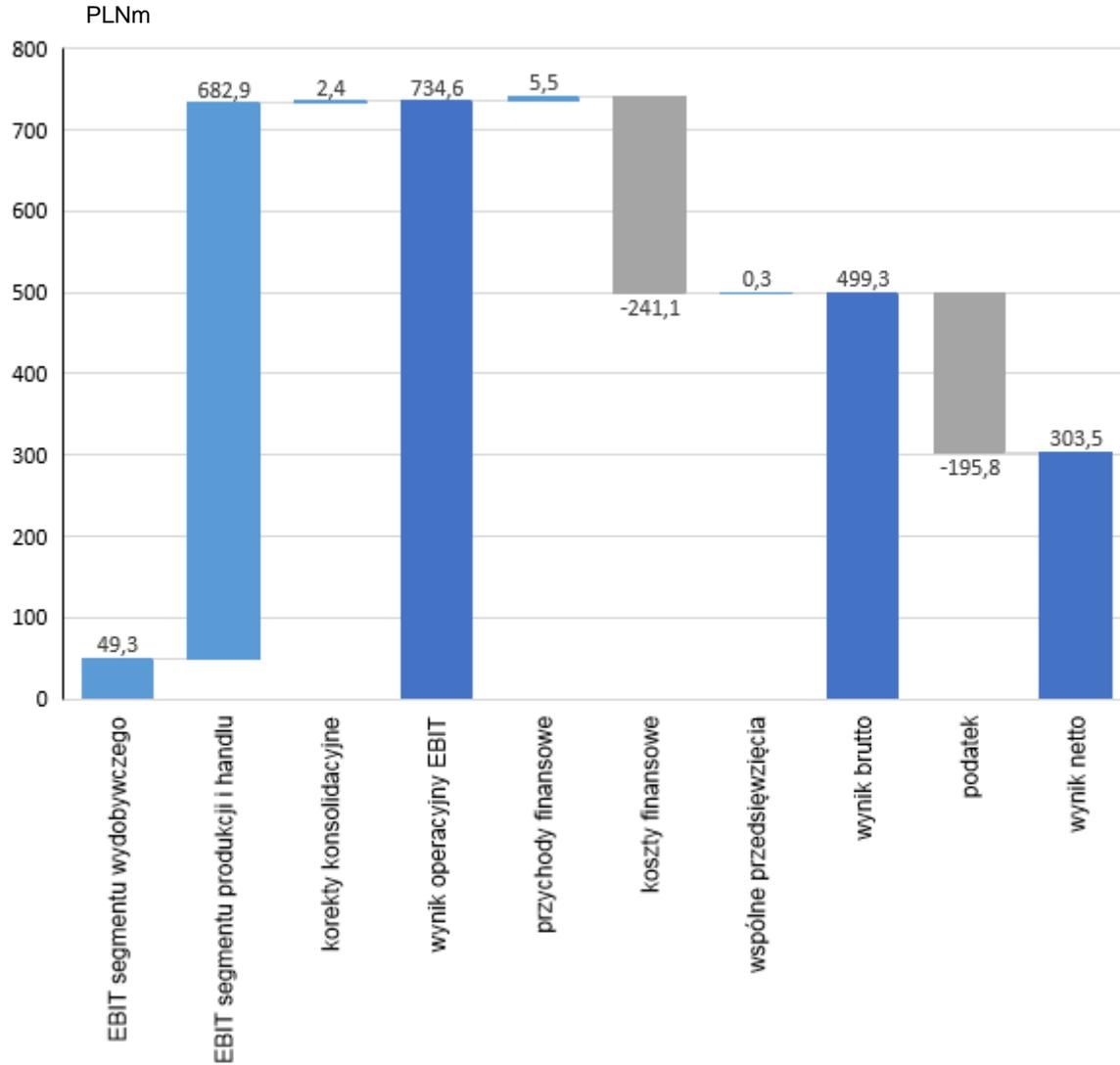
Transactions hedging interest rate risk as at December 31st 2016

Instrument	Start date	End date	Notional amount	Currency	Interest rate range	Reference rate
IRS	from Jul 15 2011	from Dec 21 2016	706,500,019	USD	1.145%- 4.045%	3M LIBOR – 6M LIBOR
	to Sep 21 2021	to Dec 21 2021				

Futures contracts hedging the risk related to prices of carbon dioxide (CO₂) emission allowances as at December 31st 2016

		2017	2018	2019			
		Volume (mt)	Price range (EUR/mt)	Volume (mt)	Price range (EUR/mt)	Volume (mt)	Price range (EUR/mt)
EUAs	Futures	890,000	4.61 – 8.29	829,000	5.54 – 5.67	33,000	8.57-8.6

Breakdown of the LOTOS Group's consolidated results in Q4 2016



In Q4 2016, the LOTOS Group posted consolidated net profit of PLN 303.5m.

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

PLNm	Q4 2016	Q3 2016	Q4 2015
EBIT	734.6	431.7	-319.4
Profit/(loss) before tax	499.3	495.1	-416.5
Net profit/(loss)	303.5	379.9	-391.3

Consolidated statement of financial position

Consolidated statement of financial position – assets

	Dec 31 2016	Dec 31 2015	Change	%
Assets (PLNm)	19,326.3	19,169.3	157.0	0.8%
Non-current assets	12,330.7	12,437.7	-107.0	-0.9%
Property, plant and equipment	10,651.7	10,568.4	83.3	0.8%
Intangible assets	651.9	664.4	-12.5	-1.9%
Equity-accounted joint ventures	98.1	70.7	27.4	38.8%
Deferred tax assets	596.0	924.5	-328.5	-35.5%
Derivative financial instruments	20.9	8.7	12.2	140.2%
Other non-current assets	312.1	201.0	111.1	55.3%
Current assets	6,995.1	6,723.2	271.9	4.0%
Inventories	3,333.6	3,235.8	97.8	3.0%
Trade receivables	2,251.7	1,550.9	700.8	45.2%
Current tax assets	8.0	12.0	-4.0	-33.3%
Derivative financial instruments	80.0	208.5	-128.5	-61.6%
Other current assets	577.2	856.3	-279.1	-32.6%
Cash and cash equivalents	744.6	859.7	-115.1	-13.4%
Assets held for sale	0.5	8.4	-7.9	-94.0%

As at December 31st 2016, total assets of the LOTOS Group stood at PLN 19,326.3m, having increased by PLN 157.0m in 2016.

The most significant changes in assets included:

- PLN 700.8m increase in trade receivables, attributable mainly to higher product prices as at the end of 2016 vs 2015,
- PLN 328.5m decrease in deferred tax assets,
- PLN 168.0m decrease in other assets, mainly due to:
 - use of proceeds from the issue of Grupa LOTOS shares to finance the EFRA Project (PLN -438.3m),
 - cash pledged as security for contractual obligations related to future asset decommissioning (PLN +192.0m),
 - increase in bank deposits (PLN +103.7m),
- PLN 115.1m decrease in cash and cash equivalents,
- PLN 116.3m decrease in positive fair value of financial instruments,
- PLN 97.8m increase in inventories, mainly mandatory stocks, in connection with higher prices of oil and petroleum product inventories held as at the end of 2016 compared with inventories held as at the end of 2015.

Consolidated statement of financial position – sources of funding

	Dec 31 2016	Dec 31 2015	Change	%
Equity and liabilities (PLNm)	19,326.3	19,169.3	157.0	0.8%
Equity	8,610.9	7,712.2	898.7	11.7%
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	-812.8	-700.9	-111.9	16.0%
Retained earnings	6,945.5	5,928.5	1 017.0	17.2%
Translation reserve	64.9	71.3	-6.4	-9.0%
Non-controlling interests	0.1	0.1	0.0	0.0%
Non-current liabilities	5 443.7	6 031.2	-587.5	-9.7%

Borrowings, other debt instruments and finance lease liabilities	3,980.6	4,454.5	-473.9	-10.6%
Derivative financial instruments	36.3	54.3	-18.0	-33.1%
Deferred tax liabilities	57.4	47.6	9.8	20.6%
Employee benefit obligations	168.5	182.2	-13.7	-7.5%
Other liabilities and provisions	1,200.9	1,292.6	-91.7	-7.1%
Current liabilities	5,271.7	5,425.9	-154.2	-2.8%
Borrowings, other debt instruments and finance lease liabilities	1,576.7	2,544.8	-968.1	-38.0%
Derivative financial instruments	172.9	110.8	62.1	56.0%
Trade payables	1,718.2	1,232.5	485.7	39.4%
Current tax payables	49.2	11.8	37.4	316.9%
Employee benefit obligations	135.6	122.2	13.4	11.0%
Other liabilities and provisions	1,619.1	1,403.8	215.3	15.3%

Increase in the LOTOS Group's equity as at the end of 2016 to PLN 8,610.9m (up PLN 898.7m on 2015) was driven primarily by higher retained earnings (up PLN 1,017.0m), offset by foreign exchange losses on valuation of cash flow hedges recognised in capital reserves, adjusted by the tax effect of PLN 111.9m.

The share of equity in total equity and liabilities increased by 4.4pp year on year, to 44.6%.

Key changes in liabilities (PLN -741.7m):

- PLN 1,442.0m decrease in bank and non-bank borrowings, bonds, and finance lease liabilities, mainly due to partial repayment of foreign currency loans and lower utilisation of overdraft facilities, combined with the valuation of foreign currency loans at a higher exchange rate (up 7.2%) as at the end of 2016,
- PLN 485.7m increase in trade payables, primarily as a result of a year-on-year rise in prices of crude oil purchases made in November and December 2016,
- PLN 123.6m increase in other provisions and liabilities, mainly liabilities to the state budget on higher excise tax, fuel charge, and stocks charge.

As at December 31st 2016, the LOTOS Group's financial debt totalled PLN 5,557.3m, down PLN 1,442.0m on December 31st 2015. The ratio of financial debt (adjusted for free cash), including cash earmarked to finance the objectives of the issue of Series D shares, to equity was 55.9% (down 18.0pp on December 31st 2015.)

Consolidated statement of cash flows

Consolidated statement of cash flows

PLNm	Q4 2016	Q3 2016	Q4 2015
Cash flows from operating activities	527.4	1 176.5	402.4
Cash flows from investing activities	-376.3	-190.4	-218.7
Cash flows from financing activities	-672.0	-249.8	-226.1
Effect of exchange rate fluctuations on cash held	12.7	-7.8	4.9
Change in net cash	-508.2	728.5	-37.5
Cash and cash equivalents at beginning of period	1,239.0	510.5	315.6
Cash and cash equivalents at end of period	730.8	1,239.0	278.1

As at December 31st 2016, the LOTOS Group's cash balance (including current account overdrafts) was PLN 730.8m. In Q4 2016, net cash flows reduced cash and cash equivalents by PLN 508.2m.

In Q4 2016, net cash flows from operating activities were positive at PLN 527.4m, driven mainly by net profit before tax, depreciation and amortisation. They also reflect an increase in inventories and a decrease in trade payables, other liabilities and provisions reported in Q4 2016.

Negative net cash flows from investing activities (PLN -376.3m) were mainly attributable to purchases of property, plant and equipment and other intangible assets, chiefly for the downstream segment (the EFRA Project, expansion of the service station network and construction of the Hydrogen Recovery Unit) and the upstream segment. A portion of expenditure on the EFRA Project in Q4 2016 was financed with proceeds from the issue of Grupa LOTOS Series D shares deposited in a separate bank account.

Net cash flows from financing activities in Q4 2016, of PLN -672.0m, chiefly comprised net repayments of borrowings and related outflows on principal and interest payments of PLN -666.5m.