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Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group for 2018

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 S.A., the LOTOS Group comprises 18 other companies operating under the LOTOS brand, three of which are based outside Poland, in Lithuania, Norway and the UK.

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

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

Grupa LOTOS S.A. 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 2018
Operations

In 2018, the LOTOS Group reported the expected decline in hydrocarbon production. With total output at 7.5mboe, including 43% of crude oil and 57% of gas. 74.2% of the total volume was produced in Norway, 21.9% in Poland and 3.9% in Lithuania.

The Gdańsk refinery processed nearly 10.8 million tonnes of crude in 2018, a new all-time record. 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 2018, the number of service stations increased to 495.

Key operating and financial metrics

<table>
<thead>
<tr>
<th>Crude oil and gas production ('000 boe/day)²</th>
<th>Crude oil throughput (m tonnes/year)</th>
<th>Domestic fuel sales ³ (m tonnes/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.9</td>
<td>10.2</td>
<td>5.5</td>
</tr>
<tr>
<td>26.7</td>
<td>10.4</td>
<td>6.1</td>
</tr>
<tr>
<td>22.9</td>
<td>9.6</td>
<td>7.2</td>
</tr>
<tr>
<td>20.4</td>
<td>10.8</td>
<td>7.5</td>
</tr>
<tr>
<td>2015</td>
<td>2016</td>
<td>2017</td>
</tr>
</tbody>
</table>

Expected decline in output until now production projects come on stream
Crude oil throughput rising on full capacity utilisation⁴
Improved profitability in the Downstream segment on larger volumes of domestic fuel sales

In 2018, Grupa LOTOS S.A. and its subsidiaries delivered record LIFO-based EBITDA by optimally using their assets and maximising the benefits from the market environment. Consolidated revenue was PLN 30.122m. Adjusted LIFO-based EBITDA⁴ came in at PLN 3.1bn. In 2018, the Group earned consolidated net profit of PLN 1.6bn.

---
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 Maintenance shutdown at the end of Q1 and beginning of Q2 2017
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.
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 main reportable segments:

- the upstream segment – comprising activities related to the acquisition of crude oil and natural gas reserves, and crude oil and natural gas production, as well as the related auxiliary, transport, and service activities,
- 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 role of Grupa LOTOS S.A. as the parent of the LOTOS Group is to integrate the key management and support functions. To perform its role, Grupa LOTOS S.A. has implemented a segmental management model.

A business segment is a discrete area of business operations managed at the Group level by a designated member of the Management Board of Grupa LOTOS S.A. as the entity with control or supervisory powers over the performance of operating functions. The criteria defining a segment include the specialisation/distinctness of functions or processes performed, the ability to determine segment expenses or revenues and expenses, as well as segment autonomy understood as a clear-cut scope of discretion and responsibility that may be assigned to the person managing the segment.

The adopted segmental management model contributes to the achievement of business objectives, improved management efficiency, and cost and revenue synergies across the LOTOS Group. Segmental management covers the pursuit of a uniform strategy, planning and controlling, integrated operations management, and implementation of uniform corporate standards.

As at December 31st 2018, the LOTOS Group’s operations were organised into five equal business segments, with specific Group companies allocated to them:

- management segment – falling within the remit of President of the Management Board (head of the management segment), with LOTOS Ochrona allocated to it,
- corporate segment – falling within the remit of Vice President of the Management Board, Corporate Affairs (head of the corporate segment),
- downstream segment – falling within the remit of Vice President of the Management Board, Chief Refining and Marketing Officer (head of the downstream segment), to which the following companies were allocated:

---

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.
LOTOS Paliwa, LOTOS Oil, LOTOS Kolej, LOTOS Terminale and its subsidiary, LOTOS Infrastruktura and its subsidiary, LOTOS Serwis, LOTOS Straż, and LOTOS-Air BP Polska,
- investment and innovation segment – falling within the remit of President of the Management Board, Chief Investment and Innovation Officer (head of the investment and innovation segment), to which the following companies were allocated: LOTOS Asfalt, LOTOS Lab and its subsidiary, LOTOS Petrobaltic and its Group companies, LOTOS Upstream and its Group companies,
- finance segment – falling within the remit of Vice President of the Management Board, Chief Financial Officer (head of the finance segment).

Organisational changes at Grupa LOTOS S.A. with an impact on key Group management policies in 2018

In 2018, in response to the challenges posed by the market environment and following changes in the composition of the Grupa LOTOS Management Board, the Company’s organisational structure underwent significant modifications.

By way of Resolution No. 29/IX/2018 of March 1st 2018, the Management Board of Grupa LOTOS S.A. changed the organisational structure, with effect from March 1st 2018, by dissolving the following organisational units: Chief Strategy and Development Officer and Chief Refining Officer and establishing the following organisational units and divisions: Vice President of the Management Board, Chief Financial Officer and Vice President of the Management Board, Chief Refining and Marketing Officer, who, together with the President of the Management Board of Grupa LOTOS S. A., managed all the Company’s activities. As a result, changes were made to other organisational units.

By way of Resolution No. 74/IX/2018 of April 23rd 2018, the Management Board of Grupa LOTOS S.A. amended the Organisational Rules by dissolving the Group Counsel unit, effective as of April 23rd 2018. Based on the dissolved unit, the Head of Corporate Affairs unit was established.

By way of Resolution No. 43/X/2018 of June 30th 2018, the Management Board of Grupa LOTOS S.A. made changes to the organisational structure as a result of which the following business segments operate within the Group as of July 1st 2018:
- management segment – falling within the remit of President of the Management Board (head of the management segment), with LOTOS Ochrona allocated to it,
- downstream segment – falling within the remit of Vice President of the Management Board, Chief Refining and Marketing Officer (head of the downstream segment), to which the following companies were allocated: LOTOS Paliwa, LOTOS Oil, LOTOS Kolej, LOTOS Terminale and its subsidiary, LOTOS Infrastruktura and its subsidiary, LOTOS Serwis, LOTOS Straż, and LOTOS-Air BP Polska,
- investment and innovation segment – falling within the remit of President of the Management Board, Chief Investment and Innovation Officer (head of the investment and innovation segment), to which the following companies were allocated: LOTOS Asfalt, LOTOS Lab and its subsidiary, LOTOS Petrobaltic and its Group companies, LOTOS Upstream and its Group companies,
- finance segment – falling within the remit of Vice President of the Management Board, Chief Financial Officer (head of the finance segment).

By way of Resolution No. 122/X/2018 of September 25th 2018, the Management Board of Grupa LOTOS S.A. amended the Organisational Rules, including by establishing the Vice President for Corporate Affairs division. As a result, as of September 25th 2018 the LOTOS Group operated the following business segments:
- management segment – falling within the remit of President of the Management Board (head of the management segment), with LOTOS Ochrona allocated to it,
- corporate segment – falling within the remit of Vice President of the Management Board, Corporate Affairs (head of the corporate segment),
- downstream segment – falling within the remit of Vice President of the Management Board, Chief Refining and Marketing Officer (head of the downstream segment), to which the following companies were allocated: LOTOS Paliwa, LOTOS Oil, LOTOS Kolej, LOTOS Terminale and its subsidiary, LOTOS Infrastruktura and its subsidiary, LOTOS Serwis, LOTOS Straż, and LOTOS-Air BP Polska,
- investment and innovation segment – falling within the remit of President of the Management Board, Chief Investment and Innovation Officer (head of the investment and innovation segment), to which the following companies were allocated: LOTOS Asfalt, LOTOS Lab and its subsidiary, LOTOS Petrobaltic and its Group companies, LOTOS Upstream and its Group companies,
- finance segment – falling within the remit of Vice President of the Management Board, Chief Financial Officer (head of the finance segment).

By way of Resolution No. 142/X/2018 of October 10th 2018, the Management Board of Grupa LOTOS S.A. amended the Organisational Rules by changing the reporting line of the Investor Relations Office. The Office, previously reporting
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

to the Head of Corporate Affairs, became subordinate to Vice President of the Management Board, Chief Financial Officer.

By way of Resolution No. 188/X/2018, the Management Board of Grupa LOTOS S.A. of December 3rd 2018, the Management Board of Grupa LOTOS S.A. amended the Organisational Rules by more specifically defining the scope of responsibilities of the organisational units within the divisions of Vice President of the Management Board, Chief Financial Officer, and Vice President of the Management Board, Chief Investment and Innovation Officer.

<table>
<thead>
<tr>
<th>President of the Management Board</th>
<th>Vice President of the Management Board, Chief Investment and Innovation Officer</th>
<th>Vice President of the Management Board, Chief Refining and Marketing Officer</th>
<th>Vice President of the Management Board, Chief Financial Officer</th>
<th>Vice President of the Management Board, Corporate Affairs</th>
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<tr>
<td>Strategy and Development</td>
<td>Efficiency</td>
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<td>Finance</td>
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<td>Critical Infrastructure and Defence</td>
<td>EFRA Project</td>
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<td>Investor Relations</td>
<td>Corporate Supervision</td>
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<td>Refining Efficiency</td>
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<td>Trade in Refinery Products</td>
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<td>Audit/Control</td>
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Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

Organisational structure of GRUPA LOTOS S.A.
as at December 31st 2018
Directors’ Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2018

Strategy of the LOTOS Group
2. Strategy of the LOTOS Group


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:

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

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

In February 2018, the Ministry of Energy and PKN ORLEN signed a letter of intent for the acquisition of Grupa LOTOS S.A. A due diligence process has been carried out by PKN Orlen since April 2018 to investigate the financial, tax, commercial and legal position of Grupa LOTOS. In November 2018, PKN Orlen filed a draft application for concentration approval with the European Commission (EC) in connection with the planned acquisition of Grupa LOTOS. Formal proceedings of the European Commission will commence after a final application is filed. PKN Orlen has announced it expects to obtain the Commission’s decision by mid-2019. The framework transaction structure provides for the acquisition of up to 32.9% of shares from the State Treasury as the first stage of the process. The next stage of the process will be a tender offer for shares representing up to 66% of total voting rights in Grupa LOTOS.

2.2. Macroeconomic environment versus strategic assumptions

The macroeconomic environment in 2018 was more challenging for the refining business than was assumed in the 2016 projections. The average annual oil and gas prices were 25% and 31% above forecast. At the same time, crack spreads on key refinery products in 2018 showed adverse deviations from the assumed levels. The deviation was roughly 10% for diesel oil and over 20% for gasoline. The average USD/PLN exchange rate for the year was 3.61 versus the assumed 3.70.

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7 Based on Current Report No. 26/2018 published by PKN ORLEN on February 27th 2018, concerning the letter of intent for the acquisition of Grupa LOTOS S.A. by PKN ORLEN S.A.
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

<table>
<thead>
<tr>
<th>Brent DTS (USD/bbl) – projekcja strategiczna z 2016 roku</th>
<th>Brent DTS (USD/bbl) – 2016 strategic projection</th>
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<tr>
<td>Brent DTD (USD/bbl)</td>
<td>Brent DTD (USD/bbl)</td>
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<td>Gaz ziemny NBP (USD/boe) – projekcja strategiczna z 2016 roku</td>
<td>NBP natural gas (USD/boe) – 2016 strategic projection</td>
</tr>
<tr>
<td>Gaz ziemny NBP (USD/boe)</td>
<td>Natural gas (NBP) (USD/boe)</td>
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<tr>
<td>Ropa Naftowa</td>
<td>Crude oil</td>
</tr>
<tr>
<td>Gaz ziemny</td>
<td>Natural gas</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Cracki produktowe – olej napędowy</th>
<th>Crack spreads – diesel oil</th>
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<tr>
<td>Olej napędowy – projekcja strategiczna z 2016 roku</td>
<td>Diesel oil – 2016 strategic projection</td>
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<td>Olej napędowy</td>
<td>Diesel oil</td>
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<td>Cracki produktowe – benzyna</td>
<td>Crack spreads – gasoline</td>
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<td>Benzyna – projekcja strategiczna z 2016 roku</td>
<td>Gasoline – 2016 strategic projection</td>
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<td>benzyna</td>
<td>gasoline</td>
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</table>
Poland

The implementation of the Grupa LOTOS strategy was supported by a strong expansion of the domestic fuel market. In the second half of 2016, the so-called fuel legislative package was introduced as part of the wider effort to counteract a grey market in fuels. The package included amendments to tax legislation aimed at tightening the VAT system in foreign trade in liquid fuels. Between 2015 and 2017, domestic fuel consumption (gasoline, diesel oil and light fuel oil) grew by over 27%, to 21.8m tonnes.

In the first nine months of 2018, domestic consumption of fuels was 16.7m tonnes, up 3% year on year. Demand for gasoline and diesel oil grew by over 5% and by 3%, respectively, and demand for light fuel oil dropped 12%.8

Amid the strong growth in fuel sales, domestic companies are facing the new challenge of organising efficient logistics infrastructure that would include adequate storage capacities (trade and emergency).

2.3. Strategy implementation in 2018 – 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.

- 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,
- LTIF9 <3.

The operational objectives with regard to production and refining were met. The 2P reserves of approximately 90 mboe held as at the end of 2018 reached the target amount. The average annual output in 2017–2018 was 22 kboe/d, in line with expectations. With regard to refining, in LOTOS processed a record-high amount of crude oil – 10.8m tonnes. At year end, the number of LOTOS service stations increased to 495, bringing the segment closer to the target of 550 stations, set for 2022.

In line with the Company’s strategic objectives, the level of customer satisfaction is measured using the NPS methodology implemented in 2017, which shows an upward trend.

As far as occupational safety is concerned, the LTIF rate improved relative to previous years although it exceeds the strategic target.

---

8Based on Polish Organisation of Oil Industry and Trade (POPiHN) data.
9LTIF (Lost Time Injury Frequency Rate).
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

2017–2018 strategic time horizon, key strategy metrics:

<table>
<thead>
<tr>
<th>Bezpieczeństwo</th>
<th>WYDOBYCIE</th>
<th>PRODUKCJA</th>
<th>DETAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mierniki operacyjne</td>
<td>EBITDA LIFO mld PLN średnioroczna w latach 2017 – 18</td>
<td>ok. 2P</td>
<td>ok. 1,5</td>
</tr>
<tr>
<td></td>
<td>CAPEX mld PLN całkowity 2017-2018</td>
<td>ok. 1,8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dług netto/EBITDA</td>
<td>nie więcej niż 1,5x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OPEX oszczędności</td>
<td>200 mln PLN rocznie (run rate) względem bazy kosztowej 2015</td>
<td></td>
</tr>
<tr>
<td>Satysfakcja klienta</td>
<td>Wdrożony NPS (Net Promoter Score), pierwsze pomiary w 2017 roku</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bezpieczeństwo</th>
<th>Operational and financial metrics</th>
<th>Operational metrics</th>
<th>Average annual LIFO-based EBITDA in 2017–2018 (PLNbn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA LIFO mld PLN średnioroczna w latach 2017 – 18</td>
<td>ok. 2P</td>
<td>ok. 2P</td>
<td>ok. 2P</td>
</tr>
<tr>
<td>CAPEX mld PLN całkowity 2017-2018</td>
<td>Total CAPEX in 2017–2018 (PLNbn)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dług netto/EBITDA</td>
<td>Net debt/EBITDA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPEX oszczędności</td>
<td>OPEX savings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satysfakcja klienta</td>
<td>Customer satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zdolność dywidendowa</td>
<td>Dividend paying capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LTIF &lt; 3</td>
<td>LTIF &lt;3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WYDOBYCIE PRODUKCJA DETAL</td>
<td>PRODUCTION REFINING RETAIL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rezerwy 2P ok. 60 mboe wydobycie ok. 22 k boe/d</td>
<td>2P reserves: ca. 60 mboe Production: ca. 22,000 boe/d</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,5 mln ton</td>
<td>10.5m tonnes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500+ stacji paliw</td>
<td>550+ service stations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nie więcej niż 1,5x</td>
<td>Max 1.5x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>200 mln PLN rocznie (run rate) względem bazy kosztowej 2015</td>
<td>PLN 200m annually (run rate) vs 2015 cost base</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wdrożony NPS (Net Promoter Score), pierwsze pomiary w 2017 roku</td>
<td>Net Promoter Score (NPS) implemented, first measurements in 2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tak</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The strategic metric levels achieved in the first strategic time horizon were as follows:
**Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018**

<table>
<thead>
<tr>
<th>Bezpieczeństwo</th>
<th>LTIF = 4,0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wydobycie</strong></td>
<td></td>
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<tr>
<td>Mierniki operacyjne</td>
<td>rezerwy 2P ok. 90 mboe wydobycie ok. 22 k boe/d</td>
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<tr>
<td>EBITDA LIFO mld PLN średnioroczna w latach 2017 – 18</td>
<td>0,9</td>
</tr>
<tr>
<td>CAPEX mld PLN całkowity 2017 - 18</td>
<td>0,9</td>
</tr>
<tr>
<td>Dług netto/EBITDA</td>
<td>na dzień 31.12.2016 0,6x</td>
</tr>
<tr>
<td>Satysfakcja klienta</td>
<td>wdrożony NPS (Net Promoter Score), pierwsze pomiary w 2017 roku</td>
</tr>
<tr>
<td>Zdolność dywidendowa</td>
<td>tak (1zł akcję wypłacone z zysku za lata 2016, 2017)</td>
</tr>
</tbody>
</table>
2.4. Implementation of strategic objectives

Grupa LOTOS S.A.’s Strategy for 2017–2022 is based on achieving five key objectives. In 2018, work was continued on the operationalisation of the Strategy. To achieve its objectives and initiatives, the Company has in place a system for comprehensive monitoring of progress in strategy implementation.

**OBJECTIVE 1: Effective use of assets along the value chain**

**New, safer concept for developing a balanced upstream portfolio**

The restructuring of the upstream segment was completed in 2018. The organisational changes were designed to establish two separate specialist entities. The first entity (the LOTOS Upstream Group) invests in production assets, and the other one (the LOTOS Petrobaltic Group) conducts operating activities.

In 2018, total production reached 20.4 thousand boe/d. Production declined in all markets where the Company is present (Poland, Norway, Lithuania). 2P reserves held by the segment totalled nearly 90 mboe.

The LOTOS Upstream Group has two projects under development, namely the Utgard and YME fields in the Norwegian Continental Shelf, where production is due to start in 2020.

The LOTOS Upstream Group’s upstream project portfolio also includes projects at a preparatory stage, i.e. the B4/B6 project in the Baltic Sea and NOAKA (originally the Frigg Gamma Delta project, to which new fields were added).

The LOTOS Upstream Group takes steps to identify new options and investment opportunities, including acquisitions of cross-border fields. Moreover, LUPS UK was registered in 2018 with a view to expanding operations on the British Shelf in the future.

The LOTOS Petrobaltic Group is a licence holder and operator for the B3 and B8 fields in the Baltic Sea. The company also holds exploration and production licences in the Baltic Sea (Łeba, Rozewie, and Gotland). The LOTOS Petrobaltic Group plans to expand its business by offering offshore and logistics services to external customers.

The restructuring also included changes in the segment’s financial activities. Financial links within the segment were simplified through equity increase at LOTOS Upstream, with concurrent reduction of some intra-group loans.

**Superior competitive advantage driven by innovative technologies and new products**

At present, the main project pursued by Grupa LOTOS S.A. is EFRA (Effective Refining), intended to ensure deeper and a more economically viable conversion of crude oil thanks to the construction of a state-of-the-art coking unit.

At the end of December 2018, the stage of completion of the EFRA Project was 98.1%, and the DCU\(^{10}\), the main unit of the Project, is to reach the RFSU\(^{11}\) status in late May 2019.

Concurrently with the ongoing projects, analytical and preparatory work is continued on further development directions for the refinery. In its Strategy for 2017–2022, Grupa LOTOS named the following three directions of the refinery’s further development:

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

and a project to construct a captive CHP plant. Additionally, an investment decision was declared to made in 2018 related to the implementation of growth projects. The HBO project, enabling the launch of production of high-quality hydrocracked base oils, was selected for further analytical and preparatory work. Once completed, the project will allow Grupa LOTOS to manufacture and sell new and high-margin products such as Group II and Group III base oils.

Another expansion scenario for the refinery would be to construct a motor gasolines complex using naphtha to make products offering higher margins, like motor gasolines, xylene and benzene. Due to the improved balance in the domestic gasoline market (a marked decline in net imports) and weaker margins on motor gasolines, the project was put on hold. It will be revisited if there are constructive shifts in the market.

Another expansion project taken under consideration was the construction of a new olefins complex with an ETBE unit. However, considering

- Grupa Azoty’s Polimery Police project to build PDH and polypropylene units and

\(^{10}\) DCU – Delayed Coker Unit: an integral part of the EFRA Programme

\(^{11}\) RFSU – Ready for Start Up
PKN Orlen’s petrochemical expansion programme 2023 providing for investments in aromatics, olefins and phenol production

That were announced in the past two years, Grupa LOTOS decided to re-consider investment opportunities in petrochemicals in search of attractive niches.

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

At the LOTOS Group, fuels, services and non-fuel products are sold on a retail basis by LOTOS Paliwa, which operates a service station chain.

At the end of 2018, the LOTOS retail chain comprised 495 service stations, including 306 CODO and 189 DOFO locations. The network included 20 Motorway Service Areas (MSAs).

Last year, the Company reviewed and updated its offering for franchise partners (DOFO). In addition to making fuel pricing more attractive, the range of store support services was also extended.

In 2018, 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. 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. Last year, a new line of drinks under the Dynamic brand was launched, comprising three types of the product. A broad range of motor oils is also sold under the LOTOS brand. New Subway restaurant outlets were opened, with 24 locations operating at LOTOS service stations as at the end of 2018. LOTOS Paliwa exploit sales opportunities as they arise, for instance the Sunday trading ban.

As part of its policy to improve customer service quality, the Company supports the service station staff through training and gradual improvement of working conditions and remuneration levels. The overall impact of these measures is a general improvement of profitability of the service station chain.

LOTOS is also keen to make its offering more attractive to businesses – in 2018, in cooperation with Alior Bank S.A., it made available the Mastercard Business LOTOS credit card.

At LOTOS service stations, solutions contributing to the development of electromobility are being deployed. As part of the LOTOS Blue Trail project, LOTOS Paliwa has launched charging points at 12 service stations along the road from Warsaw to the Gdańsk-Gdynia-Sopot agglomeration. In the future, more EV (Electric Vehicle) charging points are planned to be installed as part of the project.

OBJECTIVE 2: Effective processes to ensure stability

The Efficiency Improvement Programme, designed to support the identification and reporting of cost-saving measures at the LOTOS Group, was launched in 2018. To date, 250 measures have been identified as part of the Programme, of which 165 have been approved. As at the end of 2018, 85 cost saving measures were completed. The measures are still being reviewed to evaluate the savings generated, with largest share of the savings expected in Transport and Logistics, Refining and Energy, as well as HR/Business Travel.

In 2018, the Group achieved its highest ever refining throughput of close to 10.8m tonnes. At the same time, as part of the efforts aimed at diversifying the supply sources of raw materials, over 27% of the processed crude oil was purchased from directions other than the east. Diversification of supply sources plays a key role in ensuring continuity and stability of crude oil supplies to the LOTOS Group refinery. However, it also helps improve production efficiency (purchases based on economic rationale), while the Company also gains know-how and experience in processing various crude grades. From the point of view of integrated margin management, strong diversification of supply sources contributes to enhanced production flexibility which enables the LOTOS Group to quickly and actively respond to market changes and improve margin generation.

As part of the efforts to optimise refinery operations, measures have been taken to strengthen the Group’s leading (first quartile) position in the Solomon Associates ranking. These measures include initiatives aimed at improving the refinery’s energy efficiency as well as projects focused on launching the latest IT solutions with a view to implementing the Industry 4.0 concept (launch of cooperation with Microsoft, including with respect to development of expertise in advanced data analysis using cloud computing, as well as digital innovations, digitalization).
OBJECTIVE 3: Readiness to embrace innovation

In 2018, Grupa LOTOS S.A. took a number of initiatives in the area of fuels of the future. Grupa LOTOS S.A. launched the Pure H2 project to construct a hydrogen treatment and distribution unit together with two hydrogen refuelling points (in Gdańsk and Warsaw). Hydrogen is planned to be used in the first place by fuel municipal transport vehicles.

Grupa LOTOS S.A. is also active in undertaking other projects related to new generation alternative fuels, including LNG. The Company is continuing a project to prepare documentation for the construction of a small-scale LNG terminal in Gdańsk. A letter of intent has also been signed with Remontowa LNG Systems to build a pilot LNG dispensing system intended to serve road transport.

Pure H2 and the Feasibility Study on the Construction of a Small Scale LNG Terminal in Gdańsk and Innovative LNG Bunkering Facilities receive EU funding as part of the Connecting Europe Facility (CEF).

In 2018, the Group also carried out tasks related to advanced biofuel technologies and supporting the implementation of the National Indicative Target (NIT) by advancing the development of the co-hydrogenation technology. Last year, tests were carried out at Grupa LOTOS S.A. refinery units to check the viability of conducting co-hydrogenation processes in the units. Also last year Grupa LOTOS S.A. and LOTOS Lab Sp. z o.o. signed an agreement on R&D cooperation with the Warsaw University of Technology, providing grounds for more intensive work on innovation projects.

OBJECTIVE 4: Active opportunity and risk management

The LOTOS Group is developing and enhancing its competencies in opportunity and risk management. The Group has expanded its corporate risk management methodology, defining, among other things, risk appetite and risk exposure valuation. A Risk Committee has been established at Grupa LOTOS S.A., supporting the organisation in its risk management work. TOP RISK, a system for monitoring and describing key risks, has been implemented.

Other Group companies have been developing processes and resources to improve risk identification and management. Workshops are regularly held with the subsidiaries to improve their competence in risk management and identification of market opportunities.

The LOTOS Group has been promoting a culture of open risk communication to enable a quick and effective reaction, thus minimising the probability and mitigating the consequences of risk materialisation, and to take advantage of opportunities as they arise.

OBJECTIVE 5: Strong team, coherent CSR story and safety

Talent development as a key source of competitive advantage

Continuous professional development of the employees, including identification and development of talent within the organisation, is one of the strategic priorities for Grupa LOTOS S.A.

In 2018, the Company continued the project to build a knowledge management system based on modern channels (an e-learning platform). The launch of the platform in Q1 2019 will facilitate wider and effective knowledge transfer and development of staff competencies necessary to achieve near- and long-term business objectives.

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. In 2018, the Company designed a map of the desired management skills of key importance for the delivery of the adopted business strategy, and diagnosed the management staff’s potential using the development centre method. Individual development plans for the diagnosed participants as well as development programmes for individuals and the organisation at large were also devised.

Last year, Grupa LOTOS S.A. also took measures to optimise its HR processes with a view to better aligning its HR tools and processes with the expectations of its employees and managers. The IT systems supporting HR processes were upgraded and communication with employees was streamlined. The Company has put in place a HR Zone solution where the employees of Grupa LOTOS S.A. and some of its subsidiaries can obtain comprehensive support regarding employee-related matters.

Grupa LOTOS’ commitment to employee matters and its professional management of human resources was confirmed in 2018 by the Top-Quality Human Resources Certificate issued by the Polish HR Management Association, awarded to the Company for the fourth consecutive time.
Integrated CSR policy

In 2018, Grupa LOTOS continued its CSR activities intended for a broad range of stakeholders. The 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, youth and seniors), improvement of road traffic safety (such as the ‘LOTOS Safety Belt Champions’ project), and environmental protection.

In 2018, jointly with the Energa Group, the Company launched a new initiative, named ‘Dynamic Seniors with Energy’. The project, addressed to people aged 55 and older, is dedicated to promoting active lifestyles and local community integration. Other programmes run in 2018 included ‘Football Future with LOTOS’ and ‘Headed for the Baltic’.

The Company’s CSR policy is also pursued through the LOTOS Foundation, which supports initiatives in the area of environmental protection, safety and education, for instance by financing holidays for children and youth or by organising educational campaigns on road safety, dedicated to children.

In recognition of its CSR activity, in December 2018 Grupa LOTOS was again included in the WSE’s RESPECT Index of socially responsible businesses. Last year, for the first time in history, Grupa LOTOS shares were included by global rating agency FTSE Russel in FTSE4Good, London Stock Exchange’s index of ethical investment stocks.

In addition, in 2018 Grupa LOTOS was awarded the Silver CSR Leaf by the Polityka weekly.

Robust safety culture

Employee safety is an absolute priority across the entire LOTOS Group. We work continuously with the purpose of promoting a safe working culture, raising the awareness of a safe working environment and increasing commitment to employee safety at all levels of the organisation.

In 2018, the 18th Safety and Health Protection Days were held, information campaigns for employees are conducted on a regular basis, and top management is involved in activities aimed at building a safe working culture. Motivational measures are employed to promote safe behaviour and initiatives by employees. Employees can report dangerous incidents via the intranet, and their activity in this area is rewarded. In addition, objectives related to promoting safety are linked to the remuneration system by way of the quarterly incentive award scheme.

We understand safety also as the protection of infrastructure of key importance to national energy security. The LOTOS Group is running a programme aimed at enhancing cyber security by establishing appropriate organisational structures and implementing the necessary tools and new technological and infrastructural solutions. Training is also provided to raise the awareness of cyber security issues among the employees and to build a culture of safe work in this context. The wide scope of our efforts tangibly contributes to improving the safety of Poland’s energy infrastructure and meets legislative requirements and expectations (as provided for in the Act on the National Cybersecurity System).
Directors’ Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2018

Macroeconomic environment of Grupa LOTOS S.A.
and the LOTOS Group in 2018
3. Macroeconomic environment of Grupa LOTOS S.A. and the LOTOS Group in 2018

3.1. Drivers of crude oil and gas prices

3.1.1. World population

In 2018, the world population increased to 7.63bn, having grown on average by 1.6% annually over the last 50 years. 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 and demand for oil**

![Graph showing correlation between world population and demand for oil]

<table>
<thead>
<tr>
<th>Year</th>
<th>World population (bn)</th>
<th>Crude oil demand (mb/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>3.07</td>
<td>29.7</td>
</tr>
<tr>
<td>1970</td>
<td>3.51</td>
<td>34.1</td>
</tr>
<tr>
<td>1975</td>
<td>3.96</td>
<td>38.5</td>
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<tr>
<td>1980</td>
<td>4.41</td>
<td>42.9</td>
</tr>
<tr>
<td>1985</td>
<td>4.86</td>
<td>47.3</td>
</tr>
<tr>
<td>1990</td>
<td>5.31</td>
<td>51.7</td>
</tr>
<tr>
<td>1995</td>
<td>5.76</td>
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<tr>
<td>2000</td>
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<tr>
<td>2015</td>
<td>7.52</td>
<td>73.7</td>
</tr>
<tr>
<td>2020</td>
<td>7.96</td>
<td>78.1</td>
</tr>
</tbody>
</table>


**World population per square kilometre**

![World population per square kilometre map]

**Source:** [www.worldometers.info/world-population/world-population-by-year/](http://www.worldometers.info/world-population/world-population-by-year/)
Oil consumption in North and South America, Europe, China and India (mbbl/d)

<table>
<thead>
<tr>
<th>Year</th>
<th>Americas</th>
<th>Europe</th>
<th>China</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>13.5</td>
<td>10.8</td>
<td>3.8</td>
<td>4.0</td>
</tr>
<tr>
<td>2015</td>
<td>13.7</td>
<td>11.6</td>
<td>4.0</td>
<td>4.3</td>
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<td>2016</td>
<td>13.9</td>
<td>12.0</td>
<td>4.3</td>
<td>4.5</td>
</tr>
<tr>
<td>2017</td>
<td>14.3</td>
<td>12.4</td>
<td>4.6</td>
<td>4.8</td>
</tr>
<tr>
<td>2018</td>
<td>14.3</td>
<td>13.1</td>
<td>4.8</td>
<td>4.8</td>
</tr>
</tbody>
</table>


3.1.2. Global and regional changes in oil supply and demand in 2018

2018 was a year of strong global economic growth. According to OECD calculations, global economic growth was 3.7%, driven, among other things, by high trade volumes, growing employment (many countries recorded historically low unemployment rates), and strong investment. Favourable economic conditions prevailed particularly in developing countries (China and India).

GDP dynamics in 2016–2017

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>% y/y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global economy</td>
<td>3.8%</td>
<td>3.7%</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Developing countries</td>
<td>4.7%</td>
<td>4.6%</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Eurozone</td>
<td>2.4%</td>
<td>1.8%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>US</td>
<td>2.2%</td>
<td>2.9%</td>
<td>0.7%</td>
</tr>
<tr>
<td>China</td>
<td>6.9%</td>
<td>6.6%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>India</td>
<td>6.7%</td>
<td>7.3%</td>
<td>+0.6%</td>
</tr>
</tbody>
</table>

Source: Grupa LOTOS’ in-house analysis based on World Economic Outlook Update.

The global situation was strongly affected by the steps taken by the United States, which imposed customs tariffs on China and commenced negotiations with Canada and Mexico concerning a new trilateral trade agreement (NAFTA). The final agreement defining new terms of trade between the United States, Canada and Mexico was signed on November 30th during the G20 summit in Buenos Aires.
In 2018, the US became the world’s largest producer of crude oil. This would not have been possible without the shale revolution, which started several years ago, and its effects can be observed now. The high oil output pushed up exports – in 2018 the country exported an average of 1.96 million barrels per day (mb/d), more than the total output of the five OPEC countries with the lowest oil production. In 2018, WTI crude was on average 6.8 USD/bbl cheaper than Brent.

**Brent and WTI oil price and Brent-WTI spread (USD/bbl)**

![Graph showing Brent and WTI oil price and Brent-WTI spread](image1)

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

One of the key events affecting the global oil market in 2018 was the US’s decision of May 8th to re-impose sanctions on Iran, as well the decision taken on December 7th by OPEC members and Russia to cut down production by 1.2 mb/d.

**Global oil demand and supply (m bbl)**

![Graph showing global oil demand and supply](image2)

*Source: Grupa LOTOS' in-house analysis based on International Energy Agency data, www.iea.org*
3.1.3. Price drivers affecting crude oil prices

- 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
- 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
- Weather conditions and natural disasters
- 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, the US dollar exchange rate

In 2018, the US dollar appreciated relative to other major currencies. Typically, appreciation of the US dollar (which is the currency of international commodity transactions) is negatively correlated with the price of crude oil.

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

3.2. Crude oil and gas prices in 2018

Brent Dated prices declined sharply in Q4 2018, down to USD 51/bbl in late December. The average annual Brent Dated oil price rose to USD 71.2/bbl and was USD 17/bbl higher year on year.
In 2018, the annual average natural gas price was **44.70**, up 39% relative to 2017. In parallel with crude prices, natural gas prices rose in the second half of the year.

**Crude oil and gas prices in 2018**

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

* On February 28th 2018 and March 1st 2018, natural gas prices stood at USD 90/boe and USD 176/boe, respectively.

**Crude oil and gas prices in 2013–2017**
Source: In-house analysis based on Thomson Reuters data.
External and internal factors relevant to the LOTOS Group’s development

External 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, 2018 brought a rebound in the commodity market: the average price of crude reached USD 71/bbl, while the average price of natural gas grew to USD 45/bbl, which means an increase by nearly 38% on the average prices seen in 2017. At the same time, over the past five years the upstream sector saw major optimisation in costs of drilling and offshore services, lifting costs, and costs of new field development (standardisation of technical solutions, technological progress, improved processes of contracting and purchasing offshore products and services), with the average reduction in operating expenses 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. In the near future, the following regulatory factors may affect the performance of the upstream business: (i) regulatory changes in the taxation of hydrocarbon production; (ii) changes in environmental protection regulations, including the introduction of more stringent regulations and/or increase in mandatory collateral relating to the risk of environmental damage; (iv) amendments to the licensing 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 expenses.

In the near future, we expect the following regulatory factors to affect performance: (i) planned regulatory changes in the taxation of hydrocarbon production; (ii) continued tightening of environmental protection regulations; (iii) increase in mandatory collateral relating to the risk of environmental damage; and (iv) amendments to the regulations pertaining to emergency stocks of crude oil and certain petroleum products.

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.

External 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.
**Forecast global demand for refined products** (billion boe)

<table>
<thead>
<tr>
<th>Year</th>
<th>Europa</th>
<th>Reszta świata</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>80.5</td>
<td>15.2</td>
</tr>
<tr>
<td>2021</td>
<td>85.9</td>
<td>14.8</td>
</tr>
</tbody>
</table>


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

**Western Europe**

<table>
<thead>
<tr>
<th>Year</th>
<th>Western Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>438</td>
</tr>
<tr>
<td>2020</td>
<td>421</td>
</tr>
<tr>
<td>2025</td>
<td>400</td>
</tr>
<tr>
<td>2030</td>
<td>376</td>
</tr>
</tbody>
</table>

Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

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

Central and Eastern Europe

![Bar chart showing forecast demand for main transport fuels in Central and Eastern Europe from 2015 to 2030](chart.png)


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: forecast demand for key products and international balance (mln boe/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

![Net imports chart](chart2.png)

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 – may adversely affect demand for petroleum products, which in turn may result 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 2009–2018

<table>
<thead>
<tr>
<th>Year of closure</th>
<th>Location</th>
<th>Capacity ('000 bbl/d)</th>
<th>Nelson Complexity Index*</th>
<th>Owner</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Collombey</td>
<td>78</td>
<td>N/A</td>
<td>Tamoil</td>
<td>Switzerland</td>
</tr>
<tr>
<td>2015</td>
<td>Gela</td>
<td>105</td>
<td>13.1</td>
<td>Eni</td>
<td>Italy</td>
</tr>
<tr>
<td>2014</td>
<td>Milford Haven</td>
<td>135</td>
<td>7.0</td>
<td>Murphy Oil</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>2014</td>
<td>Mantova</td>
<td>57</td>
<td>8.4</td>
<td>Eni</td>
<td>Italy</td>
</tr>
<tr>
<td>2014</td>
<td>Paramo</td>
<td>15</td>
<td>N/A</td>
<td>Unipetrol</td>
<td>Czech Republic</td>
</tr>
<tr>
<td>2013</td>
<td>Harburg</td>
<td>107</td>
<td>9.6</td>
<td>Shell</td>
<td>Germany</td>
</tr>
<tr>
<td>2013</td>
<td>Porto Marghera</td>
<td>80</td>
<td>6.8</td>
<td>Eni</td>
<td>Italy</td>
</tr>
<tr>
<td>2012</td>
<td>Coryton</td>
<td>172</td>
<td>12.0</td>
<td>Petroplus</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>2012</td>
<td>Kherson</td>
<td>138</td>
<td>3.1</td>
<td>Alliance Oil Co.</td>
<td>Ukraine</td>
</tr>
<tr>
<td>2012</td>
<td>Drogobich</td>
<td>64</td>
<td>3.0</td>
<td>Ukraine Oil Co.</td>
<td>Ukraine</td>
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<tr>
<td>2012</td>
<td>Petit Couronne</td>
<td>141</td>
<td>7.3</td>
<td>Petroplus</td>
<td>France</td>
</tr>
<tr>
<td>Year</td>
<td>Location</td>
<td>Complexity Index</td>
<td>Refinery</td>
<td>Country</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>------------------</td>
<td>----------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Berre l’Etang</td>
<td>105</td>
<td>LyondellBasel</td>
<td>France</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Roma</td>
<td>92</td>
<td>Total ERG</td>
<td>Italy</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Arpechim</td>
<td>77</td>
<td>Petrom</td>
<td>Romania</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Cremona</td>
<td>90</td>
<td>Tamoil Raffnazione SPA</td>
<td>Italy</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Reichstett</td>
<td>78</td>
<td>Petroplus</td>
<td>France</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Teesside</td>
<td>117</td>
<td>N/A</td>
<td>United Kingdom</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Dunkirk</td>
<td>140</td>
<td>Total</td>
<td>France</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Odessa</td>
<td>56</td>
<td>Lukoil</td>
<td>Ukraine</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Wilhelmshaven</td>
<td>260</td>
<td>Hestya Energy</td>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Antwerp</td>
<td>24</td>
<td>Petroplus</td>
<td>Belgium</td>
<td></td>
</tr>
</tbody>
</table>

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.
Crack spreads (i.e. the difference between the price of petroleum products and the price of Brent crude). 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 2018, the crack spreads were as follows:

- Gasoline – low: USD 51.92/t, high: USD 205.13/t
  annual change: -16.72%, or USD -17.82/t
- Jet fuel – low: USD 105.02/t, high: USD 205.13/t
  annual change: -22.19%, or USD -25.93/t
- Diesel oil – low: USD 75.37/t, high: USD 189.29/t
  annual change: +17.92%, or USD +18.43/t
- Heavy fuel oil (HFO) – low: USD -196.88/t, high: USD -81.28/t
annual change: -34.06%, or USD -49.18/t

Crack spreads in 2018 (USD/t)

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

<table>
<thead>
<tr>
<th>Benzyna</th>
<th>Gasoline</th>
</tr>
</thead>
<tbody>
<tr>
<td>JET</td>
<td>JET FUEL</td>
</tr>
<tr>
<td>Diesel</td>
<td>Diesel oil</td>
</tr>
<tr>
<td>LOO</td>
<td>LFO</td>
</tr>
<tr>
<td>COO</td>
<td>HFO</td>
</tr>
</tbody>
</table>

- The Brent-Urals differential (spread) (i.e. the difference between the price of Brent crude and the price of Urals crude) – Urals crude is the key feedstock used in refining operations in the region, while crack spreads are based on prices of Brent crude.

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, jet fuel).

REBCO’s potential to yield a range of products with a historically lower aggregate margin is the reason why it is cheaper than the Brent crude. The difference in prices between the two types of crude is referred to as the Brent-Urals differential (USD/bbl). The larger the differential, the higher the refining margin earned by Grupa LOTOS S.A., which uses REBCO as its main feedstock.
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

**Brent Dated crude prices and Brent-Urals differential (USD/bbl) in 2018**

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

In 2018, the Brent-Urals differential ranged from USD 0.45/bbl to USD -3.80/bbl.

- **Exchange rates** – while the Polish zloty 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

For the last three years, refining margins have remained significantly above the long-term average.

**ERMI margins (USD/bbl)**

Source: Grupa LOTOS’ in-house analysis based on TOTAL data; European Refining Margin Indicator (ERMI) is an indicator intended to represent the margin after variable costs for a hypothetical complex refinery located around Rotterdam in Northern Europe that processes a mix of crude oil commonly supplied to this region and to markets at prevailing prices in this region.

Internal factors important for the LOTOS Group’s growth are discussed in Section 2.
3.3. **IMO 2020 regulations and their impact on the oil and fuel market in Europe**

For many years, the International Maritime Organisation (IMO) has been tightening the sulfur content standards for watercraft fuel. One of the key changes coming into force on January 1st 2020 will be a global reduction of sulfur content in fuel used on ships from 3.5% to 0.5% (a lower sulfur content, 0.1%, has to be ensured in emission control areas (ECA), which include Europe).

In order to meet IMO’s requirements, vessel owners may either: 1) switch to low-sulfur fuels (MGO 0.5%/Fuel Oil 0.5%); or 2) equip their vessels with sulfur control devices (scrubbers); or 3) switch to alternative fuels (such as LNG). There are more than 90,000 vessels worldwide (tankers, bulk carriers, cargo ships, container ships), of which some 60,000 qualify for the installation of scrubbers (approximately 2,000 vessels already had them as at December 21st 2018).

The IMO regulations present a challenge for refineries, which will have to produce fuel with a reduced sulfur content being faced with projected low demand for HSFO fuels. At present, at least 37 refineries in Europe have refining facilities enabling the production of low-sulfur fuels. At the same time, investment projects are under way in several refineries to equip them with coker and hydrocracking units. One possible solution is that refineries will use low-sulfur crude oil, which is likely to push up the price of some types (e.g., Brent, Forties, Azeri Light) and press down on other types (Urals, Arab Heavy, Basrah, Maya). In this context, the EFRA investment project pursued by Grupa LOTOS S.A., which involves the construction of a coker unit, is an important solution that will allow the Company to sell its fuels.

The shipping fuel market plays an important role due to the importance of maritime transport for the global economy. There is no doubt that the introduction of the IMO regulations will result in an increase in transport costs, and the costs of purchase of new (more expensive) fuels or ship adaptation are likely to be passed on by ship owners to customers. At the same time, IMO requirements will cause distress to a range of economic operators (for instance, low-conversion refineries may be forced to reduce their output), while the position of the Gdańsk refinery should remain stable given the investment programme it is implementing (the delayed coker unit with auxiliary infrastructure).
Directors’ Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2018

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 is engaged in upstream activity in Poland, Norway and Lithuania. In 2018, hydrocarbons were produced from fields located in the Baltic Sea (mainly crude oil with minor volumes of associated gas), on the Norwegian Continental Shelf (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 2018, LOTOS Group's average daily oil and gas output was 20,400 boe/d (barrels of oil equivalent per day), which translates into an annual capacity of almost 1 mtoe (million tonnes of oil equivalent). 74% of the overall output, i.e. 15,200 boe/d, came from the Norwegian fields.

At the end of 2018, LOTOS Group's total 2P (proved and probable) reserves were estimated at 89.8 mboe, including 69.8 mboe of crude oil (78% of the total 2P reserves) and 20.1 mboe of natural gas (22% of the total 2P reserves).

LOTOS Group's hydrocarbon reserves and output 2P oil and gas reserves as at December 31st 2018
Average daily oil and gas output in 2018

<table>
<thead>
<tr>
<th>Polska</th>
<th>Morze Bałtyckie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rezerwy 2P</td>
<td>49,6 mln boe</td>
</tr>
<tr>
<td>Produkcja</td>
<td>4,5 tys. boe/d</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Norwegia</th>
<th>Norweski Szeft Kontynentalny</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rezerwy 2P</td>
<td>37,3 mln boe</td>
</tr>
<tr>
<td>Produkcja</td>
<td>15,2 tys. boe/d</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Litwa</th>
<th>Złoża lądowe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rezerwy 2P</td>
<td>2,9 mln boe</td>
</tr>
<tr>
<td>Produkcja</td>
<td>0,8 tys. boe/d</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Segment Wydobywczy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rezerwy 2P</td>
</tr>
<tr>
<td>Produkcja</td>
</tr>
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<table>
<thead>
<tr>
<th>Polska</th>
<th>Morze Bałtyckie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rezerwy 2P</td>
<td>49,6 mln boe</td>
</tr>
<tr>
<td>Produkcja</td>
<td>15,2 tys. boe/d</td>
</tr>
<tr>
<td>Poland</td>
<td>Baltic Sea</td>
</tr>
<tr>
<td>2P reserves</td>
<td>49,6 mboe</td>
</tr>
<tr>
<td>Production: 15,200 boe/d</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Litwa</th>
<th>Złoża lądowe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithuania</td>
<td>Onshore fields</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Segment Wydobywczy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upstream segment</td>
</tr>
</tbody>
</table>
Organisation of the Upstream segment

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

**Business structure of the Upstream segment**

*as at December 31st 2018*

LOTOS Upstream ("LUPS"), a holding company, pursues 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 wspólncy sp. z o.o. sp.k. (B4/B6 gas field development project), and LOTOS Upstream UK Ltd (vehicle for potential development 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, and arrangement of external financing.

LOTOS Petrobaltic and its subsidiaries focus on upstream operations and services in the Baltic Sea, including production from the B3 field, development of the B8 field to start full 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**

LOTOS carries out upstream activities in Poland through two entities, LOTOS Petrobaltic and LOTOS Upstream, as well as their subsidiaries and joint ventures. This activity is mainly concentrated in the Polish Economic Zone of the Baltic Sea, but also in some onshore licence areas in north-eastern Poland.

In 2018, LOTOS Group’s average daily output in Poland was 4,500 boe/d and accounted for 22% of the Upstream segment’s total output. Oil was produced from the B3 and B8 fields in the Baltic Sea. As at the end of 2018, the LOTOS Group’s P2 hydrocarbon reserves in Poland totalled 49.6 mboe (including 45.3 m tonnes of crude oil and 4.3 mboe of natural gas) and accounted for 55% of the segment’s total reserves.
Poland – the Baltic Sea

In the Baltic Sea, the subsidiary LOTOS Petrobaltic holds three oil and gas exploration, appraisal and production licences (combined licences) for the Leba, Rozewie and Gotland licence areas and, through the special purpose vehicle B8 Sp. z o.o. Baltic s.k.a., two licences for the production of hydrocarbons from the B3 and B8 fields. The subsidiary LOTOS Upstream holds two licences for the production of hydrocarbons from the B4 and B6 fields (through the special purpose vehicle Baltic Gas Sp. z o.o.).

The key offshore licence assets in Poland include:

- B3 producing field: in 2018, the average output of crude oil and associated gas was 1,600 boe/d; the field’s remaining 2P recoverable reserves are estimated at 13.7 mboe as at December 31st 2018; based on the current licence validity date, production from the field is expected to continue until 2031.

- B8 field, under development, including initial production operations: a field development project run by B8 Sp. z o.o. Baltic s.k.a. (“SPV B8”). The SPV achieved 2,800 boe/d on average in 2018 from initial production and in parallel worked to convert the Petrobaltic platform into a production hub for the field. The field’s remaining 2P recoverable reserves are estimated at 35.9 mboe as at December 31st 2018. Based on the current licence validity date, production from the field is expected to continue until 2036.

- B4B6 gas fields, in preparation 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. 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, which is expected to be taken after the risks associated with connecting the project to the onshore gas transmission network have been mitigated. According to the current project schedule, the FID is to be made in the second half of 2019.

Poland – onshore licences:

Onshore operations in Poland are conducted by LOTOS in its own Młynary licence area (100% interest held by LOTOS Petrobaltic) and, jointly with PGNiG, in the Górowo Iławeckie licence area, where LOTOS Petrobaltic holds a 49% interest.

All the onshore projects are currently in the exploration phase. Exploration and appraisal efforts are under way to discover new hydrocarbon reserves. In 2018, in particular: (i) in the Młynary licence area, around 200 km of 2D seismic profiles were acquired, and 2D seismic data was processed and interpreted, (ii) in the Górowo Iławeckie licence area, a 3D seismic image was captured, covering a total area of 112 sq. km, the 3D seismic data output was processed and data interpretation started.

In Q4 2018, LOTOS Petrobaltic terminated its cooperation with PGNiG in the Kamień Pomorski onshore licence area (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 a 100% interest in the Kamień Pomorski licence to PGNiG.
Licences held by the LOTOS Group companies in Poland
as at December 31st 2018

Source: In-house analysis.

Exploration and production activities in Norway

Exploration and production activities in Norway are conducted through the subsidiary LOTOS E&P Norge AS ("LEPN") of Stavanger. At the end of 2018, LEPN held interests in 29 licenses for exploration, appraisal and production of hydrocarbon reserves in the Norwegian Continental Shelf.

In 2018, LOTOS Group’s average daily output in Norway was 15,200 boe/d and accounted for 74% of the Upstream segment’s total output. Oil was produced from the Sleipner and Heimdal fields. As at the end of 2018, the LOTOS Group’s P2 hydrocarbon reserves in Norway totalled 37.3 mboe (including 21.5 m tonnes of crude oil and 15.8 mb of natural gas) and accounted for 42% of the segment’s total reserves.

The key licence assets in Norway include:

- Heimdal producing fields: Atla (LEPN’s interest: 20%), Skirne (30% interest), Vale (25.8% interest), and Heimdal (5% interest). In 2018, the average output of natural gas and condensate (with a predominant share of gas – 86%) was 2,100 boe/d. The remaining 2P recoverable reserves are 1.5 mboe as at December 31st 2018;

- Sleipner producing fields: Sleipner Vest and Sleipner East, along with the Gungne and Loke satellite fields (LEPN’s interest: 15%). In 2018, the average output of natural gas and condensate (with a predominant share of gas – 71%) was 13,000 boe/d. The remaining 2P recoverable reserves are 14.8 mboe as at December 31st 2018;

- Utgard field, in the advanced development phase (17.36% interest): the field’s operator is Equinor, and the development is carried out in a fast-track model, leveraging synergies with the existing infrastructure of the Sleipner hub. The Utgard field’s recoverable P2 reserves corresponding to LOTOS interest are 8.1 mboe. Production is scheduled to start in Q1 2020;

- The Yme field, in the development phase (20% interest): the field’s 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. The Yme field’s recoverable P2 reserves corresponding to LOTOS interest are 8.1 mboe. Production is scheduled to start in Q2 2020;

- Greater Heimdal fields in preparation for development (Frigg Gamma Delta, Langfjellet, Rind, Fulla, Froy with a 10% interest on average): the project is at a stage of selecting the optimum development concept, with a potential to start production in 2023. The resource potential of the fields in the Greater Heimdal area corresponding to LOTOS interest is approximately 30 mboe;
Trell/Trine fields in preparation for development (an approximately 13.6% interest on average): the project is at the stage of selecting a development concept, with the base scenario to connect the nearby infrastructure of the Alvheim area; production is potentially due to start in 2021. The estimated hydrocarbon reserves of the Trell/Trine fields is approximately 5.5 mboe for LOTOS interest.

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

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

Source: In-house analysis.

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

In 2018, LOTOS Group's average daily output in Lithuania was 790 boe/d and accounted for 4% of the Upstream segment's total output. Oil was produced from onshore oil fields within the following licence blocks: Girkai, Genciai,
Kretinga, Nausodis, Plunge, Klaipėda, Gargždai. As at the end of 2018, the LOTOS Group’s P2 hydrocarbon reserves in Lithuania totalled 2.9 mboe (100% crude oil), representing 3% of the Segment’s total reserves.

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

Source: In-house analysis.

4.1.2. Key development projects of the segment

B8 Project
Development of an oil field in the Baltic Sea

The project is implemented by B8 Sp. z o.o. Baltic S.K.A. (an SPV), which is carrying out initial production operations, while continuing the conversion of the Petrobaltic oil platform into a production hub for the field.

Work was carried out in 2018 to erect and interconnect four technological modules: the crude oil separation system (M3), gas compression and export system (M1), water injection system (M2), and power system (M4). Electrical and automation work advanced significantly. At the end of 2018, the platform conversion project was advancing to mechanical completion (MC), which enables the launch of the testing and commissioning stage (COMM). Technical facilities in the B8 field were adapted for operation with the 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 35.9 mboe as at December 31st 2018 (crude oil: 81%, natural gas: 9%)
- Full-scale production Q2 2021
- Current output 2,800 boe/d (average in 2018)
Utgard project
Development of gas and condensate field in Norway through tie-back to Sleipner infrastructure

The Utgard project is nearing completion. The field’s operator is Equinor (formerly Statoil), and the development is carried out under a fast-track model, leveraging synergies with the existing infrastructure of the Sleipner hub.

2018 saw the installation of subsea field facilities, drilling of two production wells, and the necessary modifications to the Sleipner platform in order to adapt it to process and separate gas and condensate from the Utgard field. At the same time, work on the upgrade of the Sleipner T platform was continued, and material progress was recorded in the preparation of the subsea section of production systems and pipelines.

The project has been progressing in line with the budget and schedule, and the Operator has indicated that the First Oil may fall towards the end of 2019. LOTOS’s base assumptions still forecast the First Oil in Q1 2020.

Key parameters of the Utgard project (LOTOS interest):

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

Yme project
Development of an oil field in Norway

The Yme project is under implementation. The field’s operator is Repsol, and the project is carried out in line with the new plan for development and operation (PDO), approved by the Norwegian Ministry of Petroleum and Energy on March 23rd 2018.

The work carried out in 2018 included the preparation of subsea facilities and upgrading of the Maersk Inspiro platform to serve as a production hub for the field. Furthermore, a reinforcing structure was assembled for the caisson, subsea work was carried out to prepare the site for installing the caisson in place, and an oil loading system was prepared. During the coming winter season 2018/2019, a wellhead will be installed on the caisson. The next stage, to take place in Q2 2019, will involve installation of the caisson reinforcement. Rowan Stavanger was engaged to perform the work.

The progress of the project indicates that the field development is likely to be completed 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% crude oil)
- First Oil: Q2 2020
- Planned output: 5,000 boe/d (5-year average from production launch).

B4/B6 Project
Development of natural gas fields in the Baltic Sea

The B4B6 project is pending final investment decision. The project is being run by Baltic Gas LLP (an SPV), in cooperation with CalEnergy Resources Poland, and LOTOS holds a 51% interest in the project.

The following project milestones have been achieved: (i) selection of the development concept; (ii) complete 3-D seismic surveys; (iii) complete Front End Engineering & Design (FEED); (iv) complete review of in-place volumes and recoverable reserves, taking into account the prepared field development plan.
The current project schedule assumes that the final investment decision will be made in the second half of 2019, after the risks associated with connecting the project to the onshore gas transmission network have been mitigated (a 30 km long pipeline between Władysławowo and Kosakowo needs to be designed and constructed). To this end, the third stage of the preparatory phase was continued, including the design of a land pipeline, administrative, environmental and expropriation proceedings, as well as raising financing, and preliminary work (along the critical path) before the construction stage.

Key parameters of the B4B6 project (LOTOS interest):

- LOTOS interest: 51%
- 2C reserves: 17.9 mboe as at December 31st 2018 (natural gas: 74%, liquids: 26%)
- First Gas: 2022
- Planned output: 4,300 boe/d (5-year average from production launch).

**NOAKA project**

**Development of fields in the Greater Heimdal area in Norway**

The NOAKA project is at the concept phase and involves the development of fields discovered to the north of Heimdal (the Greater Heimdal area), including the following fields: Frigg Gamma Delta, Langfjellet, Rind, Fulla and Froy, with LOTOS holding a 10% interest on average and AkerBP as the operator. The project may also cover Krafla and Askja reserves, in which LOTOS does not currently hold any interest, whose operator is Equinor.

In 2018, analysis of the optimum field development scenario was carried out. For LOTOS, the project offers an attractive opportunity to increase production in the long term and to have interest in a major new Norwegian hub, in cooperation with experienced partners, AkerBP and Equinor. Production from the fields is likely to start in 2023.

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

- LOTOS interest: approximately 10%
- Estimated hydrocarbon reserves: approximately 30 mboe
- First Oil potential: 2023
- Output potential: approximately 9,000 boe/d (5-year average from production launch)

* The presented parameters are estimates and may be reviewed / changed in the course of formulation of an optimal field development concept. The final project parameters will be presented after the Final Investment Decision is approved.

**Potential new development project: Trell/Trine**

**Development of fields in the Heimdal area in Norway**

The project involves development of the Trell and Trine fields, in the Heimdal licence area (in which LOTOS Norge holds interest of 10% and 16%, respectively). The fields have not been included in development plans in the past, but following the change of the 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 of the Alvheim area. The estimated hydrocarbon reserves of the Trell/Trine fields is approximately 5.5 mboe for LOTOS interest. According to the operator, the fields may be developed in a fast-track model and production may start in 2021.

### 4.1.3. Scheduled maintenance shutdowns in 2019

**Norway:**

- Short shutdowns are scheduled to perform the necessary work relating to safety and security issues and start-up of the Utgard field
- Sleipner area: 7 days in total (1 day in Q1, 5 days in Q3, 1 day in Q4)
- Heimdal area: 7 days in total (Q3)
Longer, periodic maintenance shutdowns in the Sleipner area occur once every three years, with the next one scheduled for Q3 2021 (20 days)

Poland:

- A production shutdown for approximately one month is scheduled in the B8 field (in Q2 2019), due to the take-over of production by the Petrobaltic platform after its conversion and the launch of the final production hub

- Regular short shutdowns are scheduled in the B3 field to disconnect tankers and unload oil: 2 disconnections are scheduled for 2019 (3-day and 2-day shutdowns, respectively)
4.1.4. Segment 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 Norge holds interests in licences covering the production infrastructure in the Heimdal and Sleipner fields, including: the Heimdal gas and condensate processing and transport hub (operated by Equinor, LEPN holds a 5% interest), and the Sleipner gas and condensate processing and transport hub (operated by Equinor, LEPN holds a 15% interest).

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 by road to a marine terminal in Liepāja (Latvia). The oil is then transported to Gdańsk by a tanker ship and sold exclusively to the LOTOS Group. All associated natural gas is flared.

4.1.5. Competition for the upstream business

Poland

Key players on the upstream market in Poland are Polish state-owned companies. The leader here is PGNiG, which operates in 47 exploration and appraisal licence areas (42 on its own and 5 in cooperation with other operators), accounting for 71% of all licences issued in Poland as at December 31st 2018, and 203 production licences (95% 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 have been issued to LOTOS Group’s subsidiaries and their 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 wspólniczymi sp.k. partnership). LOTOS’ interest in the B4B6 project is 51%.
Companies holding the largest number of licences for exploration and appraisal of hydrocarbon resources in Poland (as at December 31st 2018)

<table>
<thead>
<tr>
<th>Company</th>
<th>Number of licences</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGNIG S.A.</td>
<td>47</td>
</tr>
<tr>
<td>Orlen Upstream Sp z o.o.</td>
<td>12</td>
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<tr>
<td>ShaleTech Energy Sp. z o.o.</td>
<td>7</td>
</tr>
<tr>
<td>LOTOS Petrobaltic S.A.</td>
<td>5</td>
</tr>
</tbody>
</table>

Companies holding the largest number of licences for production of hydrocarbons from sources in Poland (as at December 31st 2018)

<table>
<thead>
<tr>
<th>Company</th>
<th>Number of licences</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGNIG S.A.</td>
<td>203</td>
</tr>
<tr>
<td>The LOTOS Group (through its subsidiaries and jointly controlled companies)</td>
<td>4</td>
</tr>
<tr>
<td>ZOK Sp. z o.o.</td>
<td>2</td>
</tr>
</tbody>
</table>

Norwegian Continental Shelf

Highly prospective in terms of resources and offering a still significant potential for new oil and gas discoveries, 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 21st century saw a significant increase in 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 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. A new group of investors is made up of independent E&P companies, supported by private equity funds. On the other hand, large multi-national corporations, such as Neptune, Point Resources, or OKEA, are choosing to divest of their North Sea production portfolios, looking for greater growth opportunities appropriate to their scale and aspirations. As a result, the relative importance of companies such as ConocoPhillips, Shell, or ExxonMobil has diminished, although they are still among the leaders. On the other hand, gas companies such as Bayern Gas, Wintershall, Dea, or Centrica have opted for asset pooling to achieve scale and efficiencies. Strong competition is visible in the pursuit of production asset acquisitions and the tendency for high valuations, in particular by private equity-supported players. An aggressive asset acquisition strategy is also pursued by Aker BP, which has...
taken over assets from Total, Hess, BP, or Marathon, to name just some. The processes result in consolidation and reshuffling in the ranking of top players.

The largest market player is still Equinor (Statoil), holding approximately 30% of all production reserves in Norway and accounting for 30% of the current output, followed by state-owned Petoro. A further group of companies holding around 5% share each are large multinationals such as Total, ExxonMobil, AkerBP, or ConocoPhillips. This group has been joined by new companies, such as Var Energy and Wintershall-Dea, which have gained substantial scale through mergers (Var was created by merging Eni and Point Resources, and the latter had acquired assets from Exxon beforehand). Apart from the ‘giants’, there are also small and mid-sized companies conducting production operations on the Shelf, including Lundin, Spirit Energy, OMV, INEOS, Repsol, as well as Polish companies: LOTOS and PGNiG. With its current production of approximately 15,000 boe/d and 2P reserves of 37 mboe, LOTOS has more or less a 0.4% share in the Norwegian market.

**Lithuania**

There is no active E&P market in Lithuania. The LOTOS Geonafta Group companies are the only entities engaged in 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.
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group for 2018

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, one of the largest industrial projects 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 higher yields of high-margin products per barrel of crude processed and an increase in the volumes of fuels from 4m tonnes to 7.8m tonnes. It also enabled the Group 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 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 both by land from Russia via the PERN pipeline network, and by sea from numerous countries and the Group’s own fields. Access to two supply channels allows the LOTOS Group to diversify its raw material deliveries and to respond flexibly to volatile petroleum product and crude oil type prices. As a result, the LOTOS Group is able to effectively diversify its crude types and improve its bargaining power for the purchases of Russian crude oil.
Gdańsk refinery vs competitors in the region

Key competitors in the region:

- Płock refinery (PKN ORLEN), Poland – processing capacity of approximately 16.5m tonnes,
- Schwedt refinery (PCK Raffinerie GmbH), Germany – approximately 10.7m tonnes,
- Leuna refinery (TOTAL Group), Germany – approximately 11.4m tonnes,
- Schwechat refinery (OMV), Austria – approximately 9.7m tonnes,
- Mažeikiai refinery (PKN ORLEN), Lithuania – approximately 10.4m tonnes,
- Bratislava refinery (Slovnaft, MOL Group), Slovakia – approximately 6.2m tonnes,
- UniPetrol refineries in Kralupy, Litvinov (PKN Orlen), the Czech Republic – approximately 8.8m 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.

For more information on the model refining margin, go to: → inwestor.lotos.pl/1439/strefa_inwestora/modelowa_marza_rafineryjna

On December 10th 2018, the LOTOS Group began publishing its daily model margin.

The margin can be viewed at: →inwestor.lotos.pl/2730/strefa_inwestora/dzienna_modelowa_marza_rafineryjna
**Crude processing and yield structure**

In 2018, the LOTOS refinery processed 10.8m tonnes of crude oil, more than ever in its history. That was also 12% higher than the year before, when the six weeks long Spring 2017 maintenance shutdown took place. 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 73.1%, slightly lower than in previous years. Crude oil from other sources, including approximately 197 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.

**Structures of model yields of refineries operated by local competitors of Grupa LOTOS in 2018**

![Diagram showing yield structures of various refineries]

*Source: In-house analysis based on company data.*

<table>
<thead>
<tr>
<th>Grupa Lotos</th>
<th>Grupa LOTOS</th>
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<tbody>
<tr>
<td>Zużycie własne</td>
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<td>Ciężki olej opałowy</td>
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<td>Paliwo Lotnicze</td>
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<td>LPG</td>
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<tr>
<td>Benzyna surowa</td>
<td>Naphtha</td>
</tr>
<tr>
<td>Benzyna</td>
<td>Gasoline</td>
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</tbody>
</table>

**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)
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

- base oils

**Fuels**

**Unleaded gasoline** is used in spark-ignition engines. The LOTOS Group’s unleaded gasolines include premium gasoline – LOTOS DYNAMIC 98, containing antioxidants and cleaning additives which ensure better cleaning of the engine, extend its life, and reduce fuel consumption. This premium 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 offers more power efficiency and guarantees engine start at temperatures as low as -32°C thanks to the use of friction-reducing components. This premium fuel is marketed solely through LOTOS service stations. Diesel oil has the largest share in the LOTOS Group’s sales volume on the Polish 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** has three principal applications: as fuel for power generation, as bunker fuel, and as feedstock for further processing, including in coking units.

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, with industrial bitumens being the most popular component.

**Aviation fuel** is designed for use in jet engines.

**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** 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.

The LOTOS Group’s key **base oils** are Group I oils. They are used as feedstock for production of lubricant oils, including motor and industrial oils.

The LOTOS 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. Summary of key threats and opportunities

The situation in the Downstream segment will be influenced by macroeconomic factors (including continued economic slowdown in China and the eurozone, further strengthening of the US dollar) and geopolitical developments (e.g. China–US or Iran–US tensions).

Key threats in oil refining include growing competition from refineries in the Middle East and Russia. 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 threat is a possible further decline and low level of crack spreads for light distillates (motor gasolines and naphtha), as well as a falling supply of medium crudes, which may keep the Urals-Brent spread low.

Opportunities include the effect of the IMO regulations in 2020, which may translate into higher demand for middle distillates. Coupled with lower demand for heavy fuel oil, this could boost margins on middle distillates and reduce margins on heavy fractions. Such scenario may materialise in Q4 2019. Rising consumption of gasoline by retail customers is likely to be supported by attractive retail prices (resulting from the low and stable prices of feedstock and the product expressed in US dollars and the depreciation 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 2018, fuel output increased by 6.8% on 2017, and total imports fell by 9.7%, the figure including a 6.1% increase in imports by POPiHN members and a 30.1% decline in imports by independent entities (non-members). The largest output increase was reported for diesel oils (up 7.7%). Gasoline production grew 7.2% and light fuel oil fell by 12.4%.

In 2018, fuel was imported to Poland mainly by members of the POPiHN.

In 2018, the deficit in the Polish diesel oil market was 4.955 mcm and was covered with imports, mainly from Russia, Germany and Lithuania.

In 2018, the gasoline market was balanced, and exports and imports of gasolines followed from optimising crude processing at refineries.

Consumption of fuels grew 2.5% in 2018, with gasoline and diesel oil consumption up 5.3% and 2.2%, respectively. Light fuel oil market kept shrinking (down 9.6%). It is worth noting that consumption of motor fuels grew despite markedly higher prices at service stations (the price of gasoline 95 and diesel oil rose by PLN 0.34 and PLN 0.48, respectively). In addition, throughout the first three quarters of 2018 the gap between gasoline and diesel oil prices was narrowed and in Q4 the average price of diesel oil exceeded that of gasoline. The last time that happened was in 2012. The situation was caused by changes in the mix of crudes available on the market. The growth of global oil production was entirely attributable to American oil companies producing very light oil from shale deposits, which may yield even as much as 60% of gasoline. This affected the relationship between gasoline and diesel oil prices on international markets and, ultimately, at service stations.

Fuel consumption in Poland in 2016–2018 (mcm)

<table>
<thead>
<tr>
<th>Year</th>
<th>Benzyna</th>
<th>Olej nalędowy</th>
<th>Lekki olej opałowy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>23,5</td>
<td>0,9</td>
<td>5,4</td>
</tr>
<tr>
<td>2017</td>
<td>26,4</td>
<td>19,8</td>
<td>5,8</td>
</tr>
<tr>
<td>2018</td>
<td>27,1</td>
<td>20,2</td>
<td>6,1</td>
</tr>
</tbody>
</table>

Source: In-house analysis based on Polish Organisation of Oil Industry and Trade (POPiHN) data.
4.3.2. Distribution channels, products, markets

The LOTOS Group’s marketing activities in 2018 were carried out by Grupa LOTOS and its subsidiaries: LOTOS Paliwa, LOTOS Oil, LOTOS Asfalt, and LOTOS-Air BP. 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).

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**

<table>
<thead>
<tr>
<th>Retail</th>
<th>Wholesale</th>
<th>Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>• LOTOS service station network</td>
<td>• international oil companies*</td>
<td>• trading companies</td>
</tr>
<tr>
<td>• B2B customers**</td>
<td>• national institutions***</td>
<td></td>
</tr>
</tbody>
</table>

* International oil companies present on the Polish market, including Statoil, Shell, BP, and Lukoil.
** Independent operators with their 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 2018 totalled 11,690 thousand tonnes, which is the highest sales volume ever recorded by the Group. Year on year, sales grew 6.9%, driven by higher sales of diesel oil in Poland, among other factors.

**Downstream segment sales by key product categories** (million tonnes)

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pozostałe</td>
<td>10,9</td>
<td>11,8</td>
</tr>
<tr>
<td>Produkty ciężkie*</td>
<td>2,0</td>
<td>2,2</td>
</tr>
<tr>
<td>Olej napędowy</td>
<td>5,2</td>
<td>5,5</td>
</tr>
<tr>
<td>Benzyna + benzyna surowa</td>
<td>1,9</td>
<td>1,9</td>
</tr>
</tbody>
</table>

Source: in-house analysis; * heavy fuel oil and bitumens.
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**

<table>
<thead>
<tr>
<th>Product Category</th>
<th>2018 '000 tonnes</th>
<th>2017 '000 tonnes</th>
<th>change 2018/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gasolines</strong></td>
<td>1,668</td>
<td>1,555</td>
<td>7.23%</td>
</tr>
<tr>
<td><strong>Naphtha</strong></td>
<td>538</td>
<td>465</td>
<td>15.75%</td>
</tr>
<tr>
<td><strong>Reformate</strong></td>
<td>6</td>
<td>6</td>
<td>-1.64%</td>
</tr>
<tr>
<td><strong>Diesel oils</strong></td>
<td>5,470</td>
<td>5,198</td>
<td>5.24%</td>
</tr>
<tr>
<td><strong>Bunker fuel</strong></td>
<td>86</td>
<td>62</td>
<td>37.19%</td>
</tr>
<tr>
<td><strong>Light fuel oil</strong></td>
<td>240</td>
<td>279</td>
<td>-14.12%</td>
</tr>
<tr>
<td><strong>Heavy products</strong>*</td>
<td>2,110</td>
<td>1,892</td>
<td>11.48%</td>
</tr>
<tr>
<td><strong>JET A-1 fuel</strong></td>
<td>552</td>
<td>445</td>
<td>24.02%</td>
</tr>
<tr>
<td><strong>Lubricants</strong></td>
<td>57</td>
<td>60</td>
<td>-4.77%</td>
</tr>
<tr>
<td><strong>Base oils</strong></td>
<td>205</td>
<td>174</td>
<td>17.96%</td>
</tr>
<tr>
<td><strong>LPG</strong></td>
<td>234</td>
<td>235</td>
<td>-0.45%</td>
</tr>
<tr>
<td><strong>Crude oil (commodity)</strong></td>
<td>195</td>
<td>259</td>
<td>-24.79%</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>329</td>
<td>300</td>
<td>9.82%</td>
</tr>
<tr>
<td><strong>Downstream segment’s total</strong></td>
<td><strong>11,689</strong></td>
<td><strong>10,931</strong></td>
<td><strong>6.93%</strong></td>
</tr>
<tr>
<td><strong>petroleum products, merchandise and materials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Natural gas (toe)</strong></td>
<td>477</td>
<td>556</td>
<td>-14.28%</td>
</tr>
<tr>
<td><strong>Crude oil (upstream)</strong></td>
<td>105</td>
<td>124</td>
<td>-15.39%</td>
</tr>
</tbody>
</table>

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 2018, the LOTOS Group sold 5,470 thousand tonnes of diesel oil, representing 46.8% of total sales. Sales of diesel oil rose 5.24% year on year, exceeding the growth of domestic consumption of this fuel.
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

The second largest item in the sales structure was gasolines, with a 14.27% share. The LOTOS Group sold 1,668 thousand tonnes of gasoline, up 7.2% year on year (2017: 1,555 thousand tonnes).

The last product group accounting for more than 10% of the LOTOS Group’s total sales volume was heavy products. The Group sold 2,110 thousand tonnes of this product group in 2018, up 11.5% on 2017.

In 2018, the LOTOS Group’s Downstream segment sold 8,608 thousand tonnes of products in Poland (2017: 8,370 thousand tonnes) and exported 3,080 thousand tonnes (2017: 2,561 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)

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>change 2018/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>’000 tonnes</td>
<td>share (%)</td>
<td>’000 tonnes</td>
</tr>
<tr>
<td><strong>Domestic sales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gasolines</td>
<td>1,312</td>
<td>11.2%</td>
<td>1,360</td>
</tr>
<tr>
<td>Naphtha</td>
<td>0</td>
<td>0.0%</td>
<td>8</td>
</tr>
<tr>
<td>Diesel oils</td>
<td>5,455</td>
<td>46.7%</td>
<td>5,161</td>
</tr>
<tr>
<td>Bunker fuel</td>
<td>86</td>
<td>0.7%</td>
<td>62</td>
</tr>
<tr>
<td>Light fuel oil</td>
<td>240</td>
<td>2.1%</td>
<td>279</td>
</tr>
<tr>
<td>Heavy products*</td>
<td>611</td>
<td>5.2%</td>
<td>561</td>
</tr>
<tr>
<td>JET A-1 fuel</td>
<td>238</td>
<td>2.0%</td>
<td>206</td>
</tr>
<tr>
<td>Lubricants</td>
<td>26</td>
<td>0.2%</td>
<td>33</td>
</tr>
<tr>
<td>Base oils</td>
<td>12</td>
<td>0.1%</td>
<td>11</td>
</tr>
<tr>
<td>LPG</td>
<td>234</td>
<td>2.0%</td>
<td>235</td>
</tr>
<tr>
<td>Crude oil</td>
<td>195</td>
<td>1.7%</td>
<td>259</td>
</tr>
<tr>
<td>Other</td>
<td>200</td>
<td>1.7%</td>
<td>194</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8,609</td>
<td>73.6%</td>
<td>8,370</td>
</tr>
<tr>
<td><strong>Export sales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gasolines</td>
<td>356</td>
<td>3.0%</td>
<td>195</td>
</tr>
<tr>
<td>Naphtha</td>
<td>538</td>
<td>4.6%</td>
<td>457</td>
</tr>
<tr>
<td>Reformate</td>
<td>6</td>
<td>0.1%</td>
<td>6</td>
</tr>
<tr>
<td>Diesel oils</td>
<td>15</td>
<td>0.1%</td>
<td>37</td>
</tr>
<tr>
<td>Heavy products*</td>
<td>1498</td>
<td>12.8%</td>
<td>1331</td>
</tr>
<tr>
<td>JET A-1 fuel</td>
<td>314</td>
<td>2.7%</td>
<td>239</td>
</tr>
<tr>
<td>Lubricants</td>
<td>31</td>
<td>0.3%</td>
<td>27</td>
</tr>
<tr>
<td>Base oils</td>
<td>193</td>
<td>1.7%</td>
<td>163</td>
</tr>
<tr>
<td>LPG</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>129</td>
<td>1.1%</td>
<td>106</td>
</tr>
<tr>
<td><strong>Total export sales</strong></td>
<td>3,080</td>
<td>26.4%</td>
<td>2,561</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11,689</td>
<td>100.0%</td>
<td>10,931</td>
</tr>
<tr>
<td>Export sales (toe)</td>
<td>477</td>
<td>-</td>
<td>556</td>
</tr>
<tr>
<td>Export sales (tonnes) (upstream)</td>
<td>105</td>
<td>-</td>
<td>124</td>
</tr>
</tbody>
</table>

**Source:** In-house analysis; * heavy fuel oil and bitumens

Domestic sales rose 3% in 2018, driven chiefly by sales of diesel oils, supported by effective sales efforts both in retail and wholesale channels on the growing diesel oil market. Diesel oil sales rose by 6%.
A significant growth in domestic sales was also reported in the bitumens segment, Driven by domestic demand resulting from the implementation of construction projects and lower supplies from Polish and neighbouring countries’ refineries.

2018 was also another year of growth in the domestic sales of aviation fuel, an effect of higher sales by LOTOS-Air BP at Polish airports. In 2018, the company significantly increased its operating scale in Poland, and reported a 16% sales growth.

Export sales rose 20% compared with 2017. The increase was mainly attributable to the refinery processing crude volumes above its nominal capacity. The year-on-year increase in sales was also related to the fact that in 2017 the refinery underwent an overhaul shutdown, which limited the availability of products for export.

**Downstream segment’s domestic sales and exports in 2013–2018 (by volume)**

![Bar chart showing domestic sales and exports from 2014 to 2018.]

*Source: In-house analysis.*

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic sales</th>
<th>Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>38%</td>
<td>62%</td>
</tr>
<tr>
<td>2015</td>
<td>41%</td>
<td>59%</td>
</tr>
<tr>
<td>2016</td>
<td>36%</td>
<td>64%</td>
</tr>
<tr>
<td>2017</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td>2018</td>
<td>26%</td>
<td>74%</td>
</tr>
</tbody>
</table>

In 2018, the LOTOS Group’s share in the domestic fuel market was 31.4%.

**LOTOS Group’s share in the domestic fuel market**

![Bar chart showing LOTOS Group’s share in the domestic fuel market from 2015 to 2018.]

<table>
<thead>
<tr>
<th>Year</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>31.0%</td>
</tr>
<tr>
<td>2016</td>
<td>29.7%</td>
</tr>
<tr>
<td>2017</td>
<td>31.5%</td>
</tr>
<tr>
<td>2018</td>
<td>31.4%</td>
</tr>
</tbody>
</table>
According to the POPiHN, there were over 7,800 service stations on the Polish fuel market at the end of 2018. As in previous years, approximately one third of them belonged to Polish companies, 19.5% were owned by international corporations, while 48.7% 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 2018, the total number of service stations operating in the LOTOS chain increased by two, including the closing of eight Optima stations. The number of PKN ORLEN’s service stations operating under the Bliska economy brand also decreased, by 24 locations, some of which were rebranded as ORLEN stations. In total, the number of ORLEN service stations grew by 11. As for international corporations, the largest increase in the number of stations was reported by BP and TOTAL, up by 15 and 9, respectively. In the case of independent operators, the highest growth (up by +38) was recorded by Anwim stations operating under the Moya brand. The Avia service station chain, which launched operations two years ago, increased the number of its sites by 15. The number of service stations operated by retail chains also went up, by 5, with the newly opened sites owned by E. Leclerc and Intermarche.

At the end of 2018, there were 91 Motorway Service Areas (MSAs) in Poland, including 20 operated under the LOTOS brand. Four new sites were added to the PKN Orlen chain.

### Service stations in Poland at the end of 2018

![Service stations in Poland at the end of 2018](chart)

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

### Competition

In 2018, the share of domestic oil companies in the retail market rose by 0.9pp (from 33.3% in 2017 to 34.2% in 2018). The share of international companies remained unchanged year on year. However, independent operators’ share declined from 40.5% to 39.3%. The market share of service stations operated by retail chains remains unchanged at 6.6%.
4.3.3. 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.

In the last year, further changes were introduced that significantly contributed to higher fuel sales volumes. The IT systems were adapted to meet the requirements set out in the amendments to the Act on the Monitoring System for the Road Carriage of Goods (SENT). The first of the amendments to the Act covered rail transport, and the second applied to the monitoring of vehicles with transmission of data from GPS devices. As part of measures to improve the quality of services to key customers, the interfaces of electronic data exchange with BP and Shell were upgraded, with new data added to the messages. Work also began on implementing new interfaces with Circle K. The SCADA control systems and hardware infrastructure were also replaced at fuel terminals in Poznań, Piotrków and Rypin. This has improved the safety of product handover and will ensure failure-free operation of the fuel terminals in the coming years.

At the same time, in 2018 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 Group’s logistics chain.

In 2018, the Group began cooperation with a new operator of the fuel depot in Szczecin, in the area of storage of emergency stocks. The structure of emergency stocks was optimised to ensure that the cost of their holding was minimised while securing Grupa LOTOS S.A.’s needs as regards the requirement to maintain emergency stocks. Grupa LOTOS S.A. 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 S.A.).

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 2018, 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,
- Railway siding services for the LOTOS Group.

In 2018, LOTOS Kolej transported 12.5 million tonnes of cargo, 7.7 million 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 2018, LOTOS Kolej continued its four-year contract with the Polish Armed Forces for transport of F-34 aviation fuel. The contract was awarded following a 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 two years now. In 2018, using the services of its own and German train drivers, it transported more than 616,000 tonnes of products and plans to consistently 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)**
The share of LOTOS Kolej in the Polish rail freight market in terms of tonne-kilometers declined from 9.84% in 2017 to 8.94% in 2018 (based on the Office of Rail Transport data). The company maintained the second position among rail cargo carriers despite a slight decrease in tonne-kilometres (by 0.4%, from 5,351 million ntkm in 2017 to 5,332 million ntkm in 2018) and a 6.3% decrease in total tonnage carried (from 13,335 thousand tonnes in 2017 to 12,501 thousand tonnes in 2018). The company has been the market leader in transport of hazardous goods for many years.

Source: The LOTOS Group’s in-house analysis.
LOTOS Kolej’s share in domestic rail cargo transport in 2018 (tonne-kilometres)

Source: The LOTOS Group’s in-house analysis based on the Office of Rail Transport data.

In 2018, the company continued 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 its own means, in specialist rail cars.

In 2018, under a contract with the company, NEWAG upgraded another two SM42 locomotives to the 6Dg type, thus increasing the company’s fleet of modern locomotives to eleven.

Last year, the programme of upgrading the PKP PLK railway network was continued. Capital expenditure totalled approximately PLN 8.0bn, compared with PLN 5.5bn in 2017. Due to speed limitations related to repair and modernisation works on PKP PLK tracks, the average commercial speed fell by over 14% year on year (2017: 25.35 km/h, 2018: 22.22 km/h). The average train delay time was 435 minutes in 2018, up 7.2% year on year (2017: 406 minutes).

The company 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 amounted to about PLN 148m, and the requested co-financing was 50%. The complete competition documentation was submitted to the administrator of EU funds, the Centre for EU Transport Projects, and by virtue of its decision of October 29th 2018 the project was given co-financing of PLN 74m.

The following rolling stock will be purchased as part of the Project:

- 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 rolling stock to be purchased is to be gradually put into operation between 2019 and 2022.

Furthermore, the company signed cooperation agreements with the Russian and Lithuanian railways providing for cargo handover on border crossings, Which enabled the first transport of containers and coal from the Kaliningrad Oblast.
SEA TRANSPORT

Freight transport by sea is a vital element of the LOTOS Group logistics chain. The Group 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 9.2m tonnes of crude oil, petroleum products, and fuel components were loaded and unloaded by Grupa LOTOS at sea ports in 2018; During the year, the Group received or dispatched 326 tankers, including 79 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 2018, approximately 6.3m tonnes of crude oil were delivered to Grupa LOTOS by sea.

4.3.4. LOTOS service station network and its competitive position

Grupa LOTOS sells fuels to retail customers through a chain of CODO and DOFO stations. Following the addition of two new stations in 2018, at year’s end the LOTOS chain comprised 495 locations, including:

- 306 CODO stations
- 189 DOFO stations

2018 saw further consistent implementation of the LOTOS Group’s strategy by LOTOS Paliwa, including in particular higher sales efficiency, further cost optimisation, improvement of service station quality, as well as continuous improvement of customer service quality.

Successful efforts to increase sales and sales efficiency combined with strict cost control helped the LOTOS retail chain to deliver record-high financial results.

Record fuel sales

In 2018, retail sales (through CODO and DOFO stations) increased by 7%.

The share of fuel sales at LOTOS service stations in aggregate retail sales recorded by POPiHN at the end of 2018 was 11.2%, having increased by 0.2% year on year despite the slower pace of chain expansion compared with other petroleum companies (0.5% LOTOS, 1.8% POPiHN excluding Grupa LOTOS). This also attests to higher sales efficiency at the existing service stations, including in particular the average daily fuel sales: +5.7% (LOTOS) vs 4.2% (POPiHN), and average monthly store sales: +15.4% (LOTOS) vs +15.0% (POPiHN).
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

2018 was a record year for the LOTOS service station chain. Record levels were achieved in:
  o daily sales at CODO stations,
  o sales at DOFO stations,
  o sales of fuels to fleet customers, and
  o sales of fuels at CODO stations.

What is more, an unprecedentedly high number of fleet cards were issued, which is guaranteed to improve recognition of the LOTOS brand among service station users.

**Expansion and improved quality of service station chain**

The Company opened new LOTOS service stations in 2018. Two new locations were added to the chain, including one CODO and one DOFO station:
two new CODO stations were opened and one station was closed,
- twelve new DOFO stations were added to the chain while cooperation with eleven franchisees was terminated.

To enhance its position in the strategic segment of service stations located on motorways and expressways, in 2018 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.

LOTOS Paliwa’s bids were selected as the best and the company was awarded contracts for the lease of further Motorway Service Areas:

- Golina Wielka MSA on the S5 expressway
- Folwark MSA on the S5 expressway
- Rudniki Północ MSA on the S61 expressway

Additionally, five franchise contracts were signed for new sites currently under construction. Their inclusion in the chain is scheduled for Q2 and Q3 2019.

Number of LOTOS service stations

<table>
<thead>
<tr>
<th>Year</th>
<th>Premium</th>
<th>MSA</th>
<th>Optima</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>11</td>
<td>101</td>
<td>194</td>
</tr>
<tr>
<td>2013</td>
<td>14</td>
<td>151</td>
<td>169</td>
</tr>
<tr>
<td>2014</td>
<td>17</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>2015</td>
<td>18</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2016</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2017</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2018</td>
<td>20</td>
<td>197</td>
<td>18</td>
</tr>
</tbody>
</table>

**Standardisation of LOTOS service stations and their offering**

In 2018, the LOTOS Group took steps to improve the quality of the service station chain. 14 CODO stations were standardised to match the service station chain image (external and internal visual design of the service stations and modernisation of their interior).

As part of the standardisation of services within the LOTOS chain, Cafe Punkt cafeterias were opened at 28 more DOFO stations (21 PREMIUM and 7 OPTIMA stations), and are now available to motorists at 107 DOFO stations, with more cafeterias planned to be opened in the future.

The standardisation process also involved arranging LPG supplies to DOFO stations under a contract between LOTOS Paliwa and external suppliers, including GRUPA LOTOS. In 2018, LPG supplies were extended to include 24 new DOFO stations, and 38 more stations are planned to be included in 2019.

In 2018, the Petro Retail cash desk system, launched at the CODO stations a year earlier, was implemented at the DOFO stations. The project is scheduled for completion in late June 2019.
Q1 2018 saw the completion of work on the programme of the LOTOS value offering for DOFO service stations. One of the key elements of the programme was the development and implementation of a new sales policy.

**CODO stations profitability and non-fuel margin growth**

As a result of the continued efforts to enhance sales efficiency, the profitability of CODO stations improved markedly. Thanks to the Sunday trading ban and sales initiatives, store sales at CODO stations in 2018 went up by 18% year on year. At the same time, cost optimisation measures helped to push up the margin by 17%.

Various systemic changes were also made, including the introduction of product category management, active price management, and optimisation of procurement.

**Expansion of Subway restaurants**

One of the key image-building efforts in 2018 was the continued development of cooperation with an external partner as part of a corporate franchise arrangement concerning Subway restaurants. Seven Subway restaurants were opened in 2018. At the end of Q2, 35 Subway restaurants operated within the LOTOS chain.

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**Service quality**

In 2018, the Company continued its efforts to improve the efficiency of retail sales, with particular emphasis on enhancing customer service quality at LOTOS service stations. To this end, it provided a comprehensive training programme dedicated to all CODO service station managers.

In view of the challenges posed by the Polish labour market, the Company actively introduced solutions to reduce employee turnover at CODO service stations. In addition to the base pay rise, in 2018 decisions were also made to...
provide additional benefits to this group of employees (holiday entitlements, perquisites for working days on which trading is banned, private medical care, additional attendance bonus).

2018 saw the implementation of a system for annual assessment of the CODO service station managers’ performance, which is used to assess both the quality of the Dealers’ work as well as the performance of individual service stations. To this end, KPIs were defined for each service station, and the overall result will make it possible to reward the best employees and identify the development potential of those persons.

2018 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:

- competitions and incentive schemes for the LOTOS CODO stations personnel, based on sales performance and taking into account customer service quality,
- customer satisfaction surveys carried out to check compliance with customer service standards (including active sales) at the service stations (using the mystery shopping and Net Promoter Score methodologies),
- active management of fuel selling prices at CODO stations, initiating price rises on micromarkets during low-margin periods, and offering weekend price promotions at selected service stations,
- expanding the number of service stations featuring quick customer service points (enabling customers to pay for fuel directly at the pump, thus increasing stations’ ability to serve more motorists during periods of increased customer traffic by shortening queues at the pumps),
- stepping up acquisition activities to grow fleet sales,
- the Performance Assessment System for station managers,
- increasing the number of DOFO stations to reach or exceed 200 at the end of 2019.

Thanks to numerous initiatives, the LOTOS service station chain posted its best performance on record and is a mature business unit generating substantial positive cash flows. Within two years, LOTOS Paliwa repaid all the loans from its shareholder and became a dividend paying company that generates value for Grupa LOTOS Shareholders.

4.4 Electromobility and alternative fuels

Business development and innovation are a core element of the investment efforts undertaken by the LOTOS Group, encoded in its corporate DNA and allowing it to maximise profits and drive value for shareholders and other stakeholders. Thanks to an innovative and flexible approach to our operations, we are equipped to tackle major challenges facing the fuel industry, while bolstering our competitive position in the market and supporting the Polish government’s agenda.

These objectives are reflected in the electromobility project pursued by the LOTOS Group, which focuses on improving the accessibility of EV charging infrastructure across Poland along the TEN-T (Trans-European Transport Network), as well as in key urban agglomerations and other densely populated areas. The network would comprise fast charging points located at LOTOS service stations, and slow charging facilities in key urban areas.

Development of the alternative fuels market supported by LOTOS is of paramount importance to our country, mainly as an opportunity to win a competitive position in the newly emerging segment of Europe’s economy. This is a great chance, allowing Poland to build a new branch of the economy and a sector of key equipment sub-suppliers. LOTOS can see the research potential of Polish universities and businesses, which already supply a vast array of components to global industry operators. At the government level, these opportunities have been acknowledged and brought to light in the Responsible Development Strategy, the Electromobility Development Plan and the Ministry of Energy’s document entitled Energy Innovation Development Directions.

LOTOS has continued to rapidly expand its service station network across Poland. With the strongly growing retail network, the Group is able to actively participate in projects designed to foster the development of electromobility in Poland. Such projects are turned into the Group’s capital, on which it can build to innovate and expand the offering of its service stations.

In April 2017, LOTOS selected 50 of its service stations, located along motorways and expressways, to participate in the electromobility project. In July 2017, the European Commission selected a proposal submitted by LOTOS, called ‘LOTOS Electro Mobility (LEM) project – pilot implementation of electromobility along the TEN-T base network’ for EU financial assistance under the 2016 Connecting Europe Facility for Transport. This means that about 40% of the project budget (over EUR 400,000) will be funded through the EU’s CEF programme.
In late November 2018, Grupa Lotos officially launched the 'Blue Route', that is twelve EV charging points located along the A1 and A2 motorways between Gdańsk and Warsaw in both directions. The EV charging points were equipped with universal chargers compliant with three global standards (to ensure that any EV can be served):

- CHAdeMO – for Japanese and Korean vehicles (direct current),
- CCS (Combined Charging System) – for European vehicles (direct current),
- Type 2 – (direct current) with an adapter for Tesla vehicles (a separate standard).

In addition to its own projects, Lotos is also involved in joint initiatives with other Polish energy companies to develop electromobility. For instance, its collaboration with Energa enabled the launch of EV charging points equipped with CHAdeMO chargers at Lotos service stations in the Gdańsk-Gdynia-Sopot agglomeration back in 2014. The chargers installed at Lotos service stations were selected to ensure the maximum possible compatibility with EV models available on the market. Moreover, each charging point has a separate parking space. Access to adequate refuelling and recharging infrastructure is of key importance to increasing the sales and popularising the use of clean and energy-efficient alternative fuel/technology vehicles.

Lotos has also taken initiatives focusing on the use of hydrogen in alternative-drive vehicles.

We can see significant potential in hydrogen as a zero-emission fuel, especially for use in such sectors as heavy transport, water transport and, in the future, also aviation. In order to power hydrogen fuel cells driving an electric motor, hydrogen of very high purity is needed, which is why we are looking at opportunities to develop hydrogen purification technologies.

In 2018, Grupa Lotos received a decision to grant EU funding for its Pure H2 project, comprising the construction of hydrogen purification and dispensing units as well as two hydrogen fuelling points. The project is estimated to cost nearly EUR 10m, with the EU funding expected to reach about EUR 2m.

During the COP24 held in Katowice an agreement was signed on December 6th 2018 on granting funding from the Connecting Europe Facility (CEF) for the Pure H2 project, which will not only allow Grupa Lotos to become Poland’s first manufacturer of purified hydrogen suitable for use in means of transport based on fuel cells but, more importantly, will also enable it to build the first two pure hydrogen fuelling stations. On April 3rd 2018, we signed a letter of intent with the Municipality of Gdynia, concerning the supply of hydrogen for fuel cell buses. A similar letter of intent was signed earlier with the Municipality of Wejherowo. Currently, the Lotos refinery in Gdańsk produces about 13 tonnes of hydrogen per hour, an amount sufficient to keep a hydrogen-fuelled bus running all year round. If Gdynia decided to replace its entire fleet of 92 buses now serving the city with hydrogen-fuelled vehicles, they would consume 3.5 days’ worth of production from the refinery’s hydrogen generating units, i.e. approximately 1% of total output. In addition to road transport, purified hydrogen can also be used in the IT sector, medicine or food industry. For the time being, hydrogen of sufficient purity required for such applications must be imported, which is the key reason why its use is quite limited. Conceptual work is still ongoing to produce hydrogen in the natural gas steam reforming process, but also to generate it from renewable resources.

In 2018, the Hydrogen Technologies and Clean Energy Technologies Cluster was established on Lotos’s initiative, with a mission to initiate efforts aimed at boosting the role of hydrogen technologies.

On April 20th 2018, Grupa Lotos met in Warsaw with representatives of the Polish Post Office and Polish Television to initiate cooperation in efforts to identify potential business synergies that could support the development of low-emission transport in Poland. The companies will provide one another with mutual support in research and development work and in pilot launches of solutions promoting low-emission transport, including planning the roll-out and construction of recharging/refuelling infrastructure for alternative-drive vehicles.

Lotos Lab and Lotos Kolej are pursuing a project to build two prototype shunting locomotives with hybrid drive systems. Both locomotives will be electrically powered by a lithium-ion battery, and will also have an alternative drive system, diesel-based in one of them and hydrogen-based in the other. The time frame envisaged for the project, i.e. until 2022, corresponds with that of the development strategy currently being implemented by the Group.

At the end of September 2018, Grupa Lotos S.A. and Lotos Lab signed an R&D cooperation agreement with the Warsaw University of Technology to launch investigations into ionic and hydrogen cells used, among other things, to construct locomotive drive prototypes. Under the cooperative arrangement, the University is to deliver prototypes of specific devices, including converters and battery management systems, lithium-ion and flow batteries, stationary and mobile energy storage systems, low-temperature and high-temperature hydrogen batteries, and hydrogen purity optical testing devices. According to the agreement, the University is to provide laboratories and qualified staff to carry out specific tasks under individual projects. Specifically, the research work will be conducted at the Faculties of Physics, Electrical Engineering, Automotive and Construction Machinery Engineering, Chemistry and Materials Science and
Engineering. Grupa LOTOS, on the other hand, will be responsible for co-financing the purchase of the necessary equipment, technologies and licences.

In January 2018, Grupa LOTOS and Remontowa LNG Systems signed a letter of intent to build a pilot LNG dispensing system. A little earlier, Grupa LOTOS and Gaz-System had received EU funding under the Connecting Europe Facility (CEF) for a feasibility study on the construction of a small scale LNG terminal in Gdańsk and innovative LNG bunkering facilities.

On April 19th 2018, LOTOS Asfalt and PGNiG Obrót Detaliczny signed an agreement to jointly offer an LNG vessel bunkering service (the LNG would come from the Świnoujście LNG Terminal). The agreement has a commercial and environmental dimension, and will also expand the commercial use of the Świnoujście LNG Terminal facilities.

4.5 EFRA Project

EFRA Project is a continuation of technological modernisation of the refinery, naturally supplementing the crude oil processing configuration created under the 10+ Programme. New facilities, integrated with the oil processing line operating in the refinery, will enable the Company to produce higher amounts of products that enjoy strong market demand.

4.5.1 Project financing

In June 2015, the LOTOS Group closed the financing for EFRA. In order to raise some of the funding required for the project, towards the end of 2014 Grupa LOTOS S.A. carried out a successful share issue on the Warsaw Stock Exchange, raising almost PLN 1bn. The State Treasury subscribed for 53% of the new shares and entered into a support agreement with Grupa LOTOS, committing PLN 530m to finance the investment. Other sources of capital for the project include loans, credit facilities as well as equity of the LOTOS Group. Partial financing for the EFRA Project has also been provided by eight financial institutions – six banks and two insurance companies (PZU SA and PZU Życie SA). They have granted LOTOS Asfalt, a member of the LOTOS Group, an investment credit facility of USD 432m and a working capital facility of up to PLN 300m. The credit facility has been advanced under a project finance model until December 2024. When negotiating the financing of the EFRA project with the banks, Grupa LOTOS demonstrated that the project guaranteed a high rate of return and, thus, timely repayment of future liabilities.

4.5.2 Work on the Project

On March 7th 2016, Grupa LOTOS obtained a permit to construct the key units of the coking complex: the delayed coking unit (DCU) and the coker naphtha hydrotreating unit (CNHT). On February 24th 2016, the Municipal Office of Gdańsk issued a permit to construct a Hydrogen Generation Unit (HGU). Earlier, LOTOS obtained five permits to construct auxiliary facilities under the EFRA Project. The first contractor, Keller Polska, entered the construction site on September 23rd 2015. Its task was to reinforce the ground for the new electrical substation and trestles. The main contractor for the EFRA Project units is KT - Kinetics Technology S.p.A. of Italy. The key facilities comprising the new EFRA complex include The Delayed Coking Unit (DCU), Coking Naphtha Hydrotreating Unit (CNHT), LPG Treatment Unit (LPGTU), Coke Logistics and Storage Facility (CS-LF), Hydrowax Vacuum Distillation Unit (HVDU), and Hydrogen Generation Unit (HGU). As at December 31st 2018, the last units were placed in service.
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

**EFRA map**

- Nowe instalacje LOTOS Asfalt Sp z o.o. — New units at LOTOS Asfalt Sp. z o.o.
- Nowe instalacje Grupy LOTOS S.A. — New units at Grupa LOTOS S.A.
- Nowy budynek — New building
- Nowa estakada pod rurociągi — New pipeline trestle
- Nowe rurociągi — New pipelines

**EFRA scheme**

<table>
<thead>
<tr>
<th><strong>BENZYNA SUROWA</strong></th>
<th><strong>Zbiorniki produkcyjne</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Instalacja Hydroodsiarczania Benzyny CNHT</td>
<td>Instalacja Produkcji Wodoru HGU</td>
</tr>
<tr>
<td>Benzyna surowa</td>
<td>WODOR</td>
</tr>
<tr>
<td>Instalacja Destylacji Hydrowaku HVU</td>
<td>Zbiorniki LCGO HCGO</td>
</tr>
<tr>
<td>Koksowanie DCU</td>
<td>WYTwÓRNIa tlenu OGU</td>
</tr>
<tr>
<td>Koks</td>
<td>CIĘŻKI PÓZOSTAŁOŚCI</td>
</tr>
<tr>
<td>Port Północny</td>
<td>Instalacja Destylacji Hydrowaku HVU</td>
</tr>
</tbody>
</table>

Legend:  
- **Instruśne instalacje produkcyjne**  
- **Port Północny**  
- **Nowe instalacje Grupy LOTOS S.A.**  
- **Nowe instalacje LOTOS Asfalt Sp. z o.o.**

<table>
<thead>
<tr>
<th><strong>RAFINERIA</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Benzyna surowa</strong></th>
<th><strong>Naphtha</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Instalacja Hydroodsiarczania Benzyny CNHT</td>
<td>Coker Naphtha Hydrotreating Unit (CNHT)</td>
</tr>
<tr>
<td>Benzyna</td>
<td>Gasoline</td>
</tr>
<tr>
<td>Koksowanie DCU</td>
<td>Delayed Coking Unit (DCU)</td>
</tr>
<tr>
<td>Koks</td>
<td>Coke</td>
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</tbody>
</table>
4.5.3 EFRA Project products
The main objective of EFRA is to ensure a more efficient use of heavy residue, which is the heavy end of crude oil currently used to make heavy fuel oil or bitumens. The new units constructed under the EFRA Project perfectly supplement the existing oil processing line at the Gdańsk refinery and will eventually enable a shift in its product mix from low-margin products towards more engine fuels. Once EFRA is completed, the LOTOS refinery will have more flexibility in optimising production, which will strengthen its competitive position, also in the event of adverse movements in the market prices of crude oil and oil products.

When the project works are completed and the new units come onstream, the LOTOS refinery will be able to process each tonne of heavy residue into approximately 700 kg of fuels and 300 kg of coke, without having to produce heavy fuel oil.

4.5.4 EFRA implementation
As at December 31st 2018, the EFRA project was 98.1% complete.

In its Current Report of October 31st 2018, Grupa LOTOS announced that following talks with the general contractor Kinetics Technology the parties agreed for May 31st 2019 to be a new RFSU16 deadline for the Delayed Coker Unit. The change will not affect the total budget of the project, announced by the Company in Current Report No. 24/2015.

Assuming that the RFSU deadline referred to above is met, the Company’s Management Board estimates that the planned economic and financial effect of operating all of the EFRA project facilities will be fully reflected in the consolidated financial results in the fourth quarter of 2019.

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16 Ready-For-Start-Up.
Directors’ Report
on the operations of Grupa LOTOS S.A.
and the LOTOS Group
for 2018

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

<table>
<thead>
<tr>
<th></th>
<th>USD/bbl</th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
<th>2018 / 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATED Brent FOB prices</td>
<td>71.18</td>
<td>54.15</td>
<td>43.58</td>
<td>31.4%</td>
<td></td>
</tr>
<tr>
<td>Brent/Urals spread</td>
<td>1.47</td>
<td>1.40</td>
<td>2.45</td>
<td>5.0%</td>
<td></td>
</tr>
<tr>
<td>UK NBP natural gas prices</td>
<td>44.69</td>
<td>32.20</td>
<td>25.84</td>
<td>38.8%</td>
<td></td>
</tr>
<tr>
<td>Model refining margin</td>
<td>7.41</td>
<td>7.54</td>
<td>6.93</td>
<td>-1.7%</td>
<td></td>
</tr>
</tbody>
</table>

### Margin USD/t

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
<th>2018 / 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline</td>
<td>132.05</td>
<td>145.93</td>
<td>137.06</td>
<td>-9.5%</td>
</tr>
<tr>
<td>Naphtha</td>
<td>63.88</td>
<td>72.18</td>
<td>54.44</td>
<td>-11.5%</td>
</tr>
<tr>
<td>Diesel oil (10 ppm)</td>
<td>107.95</td>
<td>87.23</td>
<td>72.73</td>
<td>23.8%</td>
</tr>
<tr>
<td>Light fuel oil</td>
<td>94.93</td>
<td>76.70</td>
<td>64.72</td>
<td>23.8%</td>
</tr>
<tr>
<td>Aviation fuel</td>
<td>144.89</td>
<td>113.02</td>
<td>92.58</td>
<td>28.2%</td>
</tr>
<tr>
<td>Heavy fuel oil</td>
<td>-145.52</td>
<td>-111.56</td>
<td>-123.51</td>
<td>-30.4%</td>
</tr>
</tbody>
</table>

### Currency (USD/PLN)

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
<th>2018 / 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLN/USD exchange rate at year end</td>
<td>3.76</td>
<td>3.48</td>
<td>4.18</td>
<td>8.0%</td>
</tr>
<tr>
<td>Average PLN/USD exchange rate</td>
<td>3.61</td>
<td>3.78</td>
<td>3.94</td>
<td>-4.5%</td>
</tr>
</tbody>
</table>

5.1.2. Consolidated statement of comprehensive income

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17 Source: Thomson Reuters.

18 Source: Grupa LOTOS S.A., based on the methodology presented in → Current Report No. 26/2016, the presented model refining margin figure is an estimate rather than the actual refining margin generated by Grupa LOTOS S.A.’s refinery.

19 Source: National Bank of Poland.
In 2018, the LOTOS Group posted PLN 30,121.7m in revenue (up by 24.5% on 2017), 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 2018 was PLN 2,455 (up by PLN 372/t (toe), or 17.9%, on 2017).

The total volume of petroleum products, merchandise and materials sold in 2018 by the LOTOS Group increased by approximately 5.7% on 2017. The strongest growth was reported for diesel oils and heavy petroleum products (bitumens and heavy fuel oil).

### Key financial results of the LOTOS Group (PLNm)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>30,121.7</td>
<td>24,185.6</td>
<td>20,931.1</td>
<td>5,936.1</td>
<td>24.5%</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>-25,592.7</td>
<td>-20,194.1</td>
<td>-17,215.7</td>
<td>-5,398.6</td>
<td>26.7%</td>
</tr>
<tr>
<td>Gross profit</td>
<td>4,529.0</td>
<td>3,991.5</td>
<td>3,715.4</td>
<td>537.5</td>
<td>13.5%</td>
</tr>
<tr>
<td>Distribution costs</td>
<td>-1,355.6</td>
<td>-1,252.3</td>
<td>-1,291.1</td>
<td>-103.3</td>
<td>8.2%</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>-422.1</td>
<td>-450.0</td>
<td>-425.9</td>
<td>27.9</td>
<td>-6.2%</td>
</tr>
<tr>
<td>Other income</td>
<td>412.5</td>
<td>60.3</td>
<td>107.1</td>
<td>352.2</td>
<td>584.1%</td>
</tr>
<tr>
<td>Other expenses</td>
<td>-182.5</td>
<td>-121.0</td>
<td>-250.8</td>
<td>-61.5</td>
<td>50.8%</td>
</tr>
<tr>
<td>Operating profit</td>
<td>2,981.3</td>
<td>2,228.5</td>
<td>1,854.7</td>
<td>752.8</td>
<td>33.8%</td>
</tr>
<tr>
<td>LIFO-BASED EBIT</td>
<td>2,481.4</td>
<td>2,057.6</td>
<td>1,931.8</td>
<td>423.8</td>
<td>20.6%</td>
</tr>
</tbody>
</table>

In 2018, cost of sales of the LOTOS Group stood at PLN 25,592.7m (up 26.7% on 2017). In the same period, the estimated unit cost of sales was PLN 2,086/t (up PLN 347/t, or 20.0% on 2017). The unit sales margin in 2018 came in at PLN 369/t (up 7.3% on 2017). The LOTOS Group’s consolidated gross profit for 2018 was PLN 4,529.0m (up PLN 537.5m, or +13.5% on 2017).

Distribution costs in 2018 went up by PLN 103.3m (up 8.2% on 2017), driven chiefly by higher sales volumes, foreign sales in particular. In the reporting period, administrative expenses were reclassified to distribution costs and cost of sales at LOTOS Asfalt.

The PLN 27.9m decrease in administrative expenses (down 6.2% on 2017) followed mainly from changes in cost classification at LOTOS Asfalt.

In 2018, the Group reported other operating income of PLN 230.0m, including chiefly:

- PLN 349.5m reversal of impairment loss on expenditure on the YME field,
- PLN 118.3m received under insurance of a defective MOPU on the YME field,
- impairment loss of PLN 48.8m recognised on Heimdal fields,
- remeasurement of approximately PLN -69.2m of a provision for contingent payments recognised in connection with the Sleipner assets acquisition agreement,
- PLN 5.0m recognition and reversal of impairment loss on the Lithuanian assets,
- tax risk provision of PLN 52.5m,
- PLN 26.3 provision for deficit in CO₂ emission allowances,
- impairment losses of PLN 33.3m on service stations.
The Group’s operating profit for 2018, of PLN 2,981.3m, included:

- operating profit of PLN 1,928.7m in the Downstream segment,
- operating profit of PLN 1,046.2m in the Upstream segment,
- consolidation adjustments of PLN 6.4m.

The 2018 increase in operating profit was driven mainly by higher average annual prices of crude oil and natural gas, higher margins on key petroleum products, the uptrend in crude oil and petroleum product prices in the first three quarters of 2018, and higher sales volumes.

**LOTOS Group’s revenue by product category**

<table>
<thead>
<tr>
<th>Product Category</th>
<th>2018 PLNm</th>
<th>2018 share (%)</th>
<th>2017 PLNm</th>
<th>2017 share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasolines</td>
<td>4,450.5</td>
<td>14.8%</td>
<td>3,682.2</td>
<td>15.2%</td>
</tr>
<tr>
<td>Naphtha</td>
<td>1,157.1</td>
<td>3.8%</td>
<td>859.6</td>
<td>3.6%</td>
</tr>
<tr>
<td>Diesel oils</td>
<td>15,009.3</td>
<td>49.8%</td>
<td>11,864.5</td>
<td>49.1%</td>
</tr>
<tr>
<td>Bunker fuel</td>
<td>201.2</td>
<td>0.7%</td>
<td>121.3</td>
<td>0.5%</td>
</tr>
<tr>
<td>Light fuel oil</td>
<td>640.4</td>
<td>2.1%</td>
<td>646.9</td>
<td>2.7%</td>
</tr>
<tr>
<td>Heavy products</td>
<td>3,133.8</td>
<td>10.4%</td>
<td>2,314.8</td>
<td>9.6%</td>
</tr>
<tr>
<td>Aviation fuel</td>
<td>1,421.7</td>
<td>4.7%</td>
<td>913.1</td>
<td>3.8%</td>
</tr>
<tr>
<td>Lubricants</td>
<td>278.5</td>
<td>0.9%</td>
<td>297.3</td>
<td>1.2%</td>
</tr>
<tr>
<td>Base oils</td>
<td>587.3</td>
<td>2.0%</td>
<td>488.6</td>
<td>2.0%</td>
</tr>
<tr>
<td>LPG</td>
<td>543.8</td>
<td>1.8%</td>
<td>496.1</td>
<td>2.0%</td>
</tr>
<tr>
<td>Crude oil for resale</td>
<td>320.8</td>
<td>1.1%</td>
<td>432.6</td>
<td>1.8%</td>
</tr>
<tr>
<td>Crude oil, final product</td>
<td>285.4</td>
<td>0.9%</td>
<td>252.2</td>
<td>1.0%</td>
</tr>
<tr>
<td>Natural gas</td>
<td>662.1</td>
<td>2.2%</td>
<td>574.7</td>
<td>2.4%</td>
</tr>
<tr>
<td>Other refinery products, merchandise and materials</td>
<td>563.7</td>
<td>1.9%</td>
<td>440.5</td>
<td>1.8%</td>
</tr>
<tr>
<td>Other products, merchandise and materials</td>
<td>537.4</td>
<td>1.8%</td>
<td>463.2</td>
<td>1.9%</td>
</tr>
<tr>
<td>Services</td>
<td>420.3</td>
<td>1.4%</td>
<td>488.5</td>
<td>2.0%</td>
</tr>
<tr>
<td>Effect of cash flow hedge accounting</td>
<td>-91.6</td>
<td>-0.3%</td>
<td>-150.5</td>
<td>-0.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30,121.7</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>24,185.6</strong></td>
<td><strong>100.0%</strong></td>
</tr>
<tr>
<td>Domestic sales:</td>
<td>23,263.0</td>
<td>77.2%</td>
<td>19,090.5</td>
<td>78.9%</td>
</tr>
<tr>
<td>Export sales:</td>
<td>6,858.7</td>
<td>22.8%</td>
<td>5,095.1</td>
<td>21.1%</td>
</tr>
</tbody>
</table>
LOTOS Group’s key customers

In 2018 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)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1,463.7</td>
<td>1,358.7</td>
<td>1,228.5</td>
<td>105.0</td>
<td>7.7%</td>
</tr>
<tr>
<td>Operating profit</td>
<td>1,046.2</td>
<td>507.2</td>
<td>17.8</td>
<td>539.0</td>
<td>106.3%</td>
</tr>
<tr>
<td>Depreciation and amortisation</td>
<td>225.1</td>
<td>307.4</td>
<td>582.0</td>
<td>-82.3</td>
<td>-26.8%</td>
</tr>
<tr>
<td>EBITDA</td>
<td>1,271.3</td>
<td>814.6</td>
<td>599.8</td>
<td>456.7</td>
<td>56.1%</td>
</tr>
</tbody>
</table>

The higher revenues (up PLN 105.0m on 2017) and higher operating profit (up PLN 539.3m) reported by the Upstream segment in 2018 were primarily driven by growing prices of Brent Dated crude (up +31.4%) and natural gas (up +38.8%) on global markets.

Pushing up the Upstream segment’s operating profit in 2018 were positive net non-recurring items of approximately PLN 354.8m (listed above in the discussion of other income).

The decline in the segment’s depreciation and amortisation is due in particular to lower hydrocarbon production.

Downstream segment’s key financial data (PLNm)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>29,171.9</td>
<td>23,326.4</td>
<td>20,120.7</td>
<td>5,845.5</td>
<td>25.1%</td>
</tr>
<tr>
<td>Operating profit</td>
<td>1,928.7</td>
<td>1,730.7</td>
<td>1,834.7</td>
<td>198.0</td>
<td>11.4%</td>
</tr>
<tr>
<td>Depreciation and amortisation</td>
<td>497.6</td>
<td>537.9</td>
<td>487.4</td>
<td>-40.3</td>
<td>-7.5%</td>
</tr>
<tr>
<td>EBITDA</td>
<td>2,426.3</td>
<td>2,268.6</td>
<td>2,322.1</td>
<td>157.7</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

The higher revenue posted by the Downstream segment in 2018 relative to 2017 was mainly due to a 17.0% rise in average selling prices, caused by higher prices of petroleum products on global markets, offset by lower USD/PLN exchange rate. The revenue was also increased by higher sales volumes of petroleum products.

Operating profit reported by the Group in the Downstream segment for 2018 was PLN 1,928.7m, and its 11.4% year-on-year rise was partly due to the ‘Spring 2017’ maintenance shutdown.

In 2018, Downstream segment’s depreciation and amortisation charges decreased, 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)
In 2018, the Group posted a loss on financing activities of PLN -262.0m, chiefly as a result of:

- negative net balance of interest on debt, interest income and commission fees of PLN -168.2m (2017: PLN -201.0m),
- foreign exchange losses of PLN -75.2m (2017: PLN +107.9m),
- net loss on measurement and settlement of derivative instruments hedging market risk of PLN -7.2m (2017: PLN +314.1m).

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 2018, foreign exchange losses of PLN -77.8m were charged to cash-flow hedging reserve.

In 2018, the LOTOS Group posted net profit of PLN 1,587.4m (down 5% on 2017).
Items contributing to the LOTOS Group’s consolidated financial result (PLNm)

<table>
<thead>
<tr>
<th>Item</th>
<th>Value (PLNm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT segmentu wydobywczego</td>
<td>1,928.7</td>
</tr>
<tr>
<td>korekty konsolidacyjne</td>
<td>6.4</td>
</tr>
<tr>
<td>Wynik operacyjny EBIT</td>
<td>2,981.3</td>
</tr>
<tr>
<td>Korekty konsolidacyjne</td>
<td>41.1</td>
</tr>
<tr>
<td>Wspólne przedsięwzięcia</td>
<td>-303.1</td>
</tr>
<tr>
<td>Wynik brutto</td>
<td>2,722.5</td>
</tr>
<tr>
<td>Podatek</td>
<td>-1,352</td>
</tr>
<tr>
<td>Wynik netto</td>
<td>1,587.4</td>
</tr>
</tbody>
</table>

EBIT segmentu wydobywczego: Upstream segment’s EBIT
EBIT segmentu produkcji i handlu: Downstream segment’s EBIT
Korekty konsolidacyjne: Consolidation adjustments
Wynik operacyjny EBIT: EBIT
Przychody finansowe: Finance income
Koszty finansowe: Finance costs
Wspólne przedsięwzięcia: Joint ventures
Wynik brutto: Profit/(loss) before tax
Podatek: Tax
Wynik netto: Net profit/(loss)
### 5.1.3. Consolidated statement of financial position

#### Financial position – assets (PLNm)

<table>
<thead>
<tr>
<th></th>
<th>Dec 31 2018</th>
<th>Dec 31 2017</th>
<th>Dec 31 2016</th>
<th>Change in 2018</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td>22,223.9</td>
<td>21,171.2</td>
<td>19,326.3</td>
<td>1,052.7</td>
<td>5.0%</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td>13,078.0</td>
<td>12,462.1</td>
<td>12,330.7</td>
<td>615.9</td>
<td>4.9%</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>8,742.4</td>
<td>8,761.5</td>
<td>8,261.7</td>
<td>-19.1</td>
<td>-0.2%</td>
</tr>
<tr>
<td>of the Downstream segment</td>
<td>151.9</td>
<td>163.2</td>
<td>170.0</td>
<td>-11.3</td>
<td>-6.9%</td>
</tr>
<tr>
<td>Intangible assets of the Downstream segment</td>
<td>304.0</td>
<td>2,404.2</td>
<td>2,390.0</td>
<td>639.8</td>
<td>26.6%</td>
</tr>
<tr>
<td>Intangible assets of the Upstream segment</td>
<td>338.0</td>
<td>304.8</td>
<td>481.8</td>
<td>33.2</td>
<td>10.9%</td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td>9,145.9</td>
<td>8,709.1</td>
<td>6,995.1</td>
<td>436.8</td>
<td>5.0%</td>
</tr>
<tr>
<td>Inventories</td>
<td>4,848.9</td>
<td>3,559.6</td>
<td>3,333.6</td>
<td>1,289.3</td>
<td>36.2%</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>1,880.4</td>
<td>2,677.0</td>
<td>2,251.7</td>
<td>-796.6</td>
<td>-29.8%</td>
</tr>
<tr>
<td>Current tax assets</td>
<td>2.4</td>
<td>1.3</td>
<td>8.0</td>
<td>1.1</td>
<td>84.6%</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>15.3</td>
<td>161.8</td>
<td>80.0</td>
<td>-146.5</td>
<td>-90.5%</td>
</tr>
<tr>
<td>Other current assets</td>
<td>457.6</td>
<td>388.7</td>
<td>577.2</td>
<td>68.9</td>
<td>17.7%</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>1,941.3</td>
<td>1,920.7</td>
<td>744.6</td>
<td>20.6</td>
<td>1.1%</td>
</tr>
<tr>
<td><strong>Assets held for sale</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>0.5</td>
<td>0.0</td>
<td>-</td>
</tr>
</tbody>
</table>

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 (including emergency stocks) and 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 expenditure on YME,
- PLN 796.6m decrease in trade receivables, mainly due to crude oil sale 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.

Financial position – equity and liabilities (PLNm)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity and liabilities</td>
<td>22,223.9</td>
<td>21,171.2</td>
<td>19,326.3</td>
<td>1,052.7</td>
<td>5.0%</td>
</tr>
<tr>
<td>Equity</td>
<td>12,034.8</td>
<td>10,712.5</td>
<td>8,610.9</td>
<td>1,322.3</td>
<td>12.3%</td>
</tr>
<tr>
<td>Share capital</td>
<td>184.9</td>
<td>184.9</td>
<td>184.9</td>
<td>0.0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Share premium</td>
<td>2,228.3</td>
<td>2,228.3</td>
<td>2,228.3</td>
<td>0.0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Cash flow hedging reserve</td>
<td>-288.2</td>
<td>-225.2</td>
<td>-812.8</td>
<td>-63.0</td>
<td>28.0%</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>9,826.1</td>
<td>8,432.2</td>
<td>6,945.4</td>
<td>1,393.9</td>
<td>16.5%</td>
</tr>
<tr>
<td>Translation reserve</td>
<td>83.6</td>
<td>92.2</td>
<td>65.0</td>
<td>-8.6</td>
<td>-9.3%</td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Non-current liabilities</td>
<td>4,044.3</td>
<td>4,264.4</td>
<td>5,443.7</td>
<td>-220.1</td>
<td>-5.2%</td>
</tr>
<tr>
<td>Borrowings, other debt instruments and finance lease liabilities</td>
<td>2,345.3</td>
<td>2,738.3</td>
<td>3,980.5</td>
<td>-393.0</td>
<td>-14.4%</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>6.9</td>
<td>6.7</td>
<td>36.3</td>
<td>0.2</td>
<td>3.0%</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>324.9</td>
<td>277.7</td>
<td>57.4</td>
<td>47.2</td>
<td>17.0%</td>
</tr>
<tr>
<td>Employee benefit obligations</td>
<td>170.4</td>
<td>169.3</td>
<td>168.5</td>
<td>1.1</td>
<td>0.6%</td>
</tr>
<tr>
<td>Other liabilities and provisions</td>
<td>1,196.8</td>
<td>1,072.4</td>
<td>1,201.0</td>
<td>124.4</td>
<td>11.6%</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>6,144.8</td>
<td>6,194.3</td>
<td>5,271.7</td>
<td>-49.5</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Borrowings, other debt instruments and finance lease liabilities</td>
<td>1,538.7</td>
<td>1,687.6</td>
<td>1,576.7</td>
<td>-148.9</td>
<td>-8.8%</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>47.4</td>
<td>72.7</td>
<td>172.9</td>
<td>-25.3</td>
<td>-34.8%</td>
</tr>
<tr>
<td>Trade payables</td>
<td>1,913.7</td>
<td>2,201.7</td>
<td>1,718.2</td>
<td>-288.0</td>
<td>-13.1%</td>
</tr>
<tr>
<td>Current tax payables</td>
<td>565.3</td>
<td>210.0</td>
<td>49.2</td>
<td>355.3</td>
<td>169.2%</td>
</tr>
<tr>
<td>Employee benefit obligations</td>
<td>156.2</td>
<td>145.3</td>
<td>135.6</td>
<td>10.9</td>
<td>7.5%</td>
</tr>
<tr>
<td>Other liabilities and provisions</td>
<td>1,923.5</td>
<td>1,877.0</td>
<td>1,619.1</td>
<td>46.5</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

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 recognised in 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 170.0m 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 a 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 0.6x as at December 31st 2018.

5.1.4. Consolidated statement of cash flows

<table>
<thead>
<tr>
<th>Cash flows (PLNm)</th>
<th>2018</th>
<th>2017</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flows from operating activities</td>
<td>2,327.5</td>
<td>3,126.5</td>
<td>-799.0</td>
</tr>
<tr>
<td>Cash flows from investing activities</td>
<td>-1,086.6</td>
<td>-1,448.7</td>
<td>362.1</td>
</tr>
<tr>
<td>Cash flows from financing activities</td>
<td>-1,235.0</td>
<td>-482.7</td>
<td>-752.3</td>
</tr>
<tr>
<td>Effect of exchange rate fluctuations on cash held</td>
<td>11.8</td>
<td>-5.3</td>
<td>17.1</td>
</tr>
<tr>
<td>Change in net cash</td>
<td>17.7</td>
<td>1,189.8</td>
<td>-1,172.1</td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of period</td>
<td>1,920.6</td>
<td>730.8</td>
<td>1,189.8</td>
</tr>
<tr>
<td>Cash and cash equivalents at end of period</td>
<td>1,938.3</td>
<td>1,920.6</td>
<td>17.7</td>
</tr>
</tbody>
</table>

As at December 31st 2018, the LOTOS Group’s cash balance (including current account overdrafts) was PLN 1,938.3m. In 2018, net cash flows added PLN 17.7m to cash and cash equivalents. The Group generated positive cash flows from operating activities of PLN 2,327.5m (down PLN 799.0m on 2017), mainly on net profit before depreciation and amortisation, income tax and lower trade receivables, which were offset by higher inventories, impairment losses on property, plant and equipment and intangible assets, and lower trade payables.

Cash flows from investing activities of PLN -1,086.6m primarily included expenditure on key development projects, including the EFRA project, hydrocarbon production from the Norwegian and Baltic fields, as well as funds in the Sleipner decommissioning escrow account.

Net cash flows from financing activities of PLN -1,235.0m were due mainly to a negative balance of proceeds from borrowings, repayments of borrowings and payment of interest, dividend paid, and negative balance of proceeds from issue and redemption of the Group bonds.

5.1.5. Off-balance sheet items by entity, type and value

Material contingent liabilities

• An unconditional and irrevocable guarantee issued by LOTOS Upstream Sp. z o.o. 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 2018. The
guarantee replaced a similar earlier guarantee issued on December 17th 2008 by LOTOS Petrobaltic S.A. for the benefit of the government of Norway, covering the activities of LOTOS Exploration and Production Norge AS, which was returned to LOTOS Petrobaltic S.A. on January 3rd 2018. In the guarantee, LOTOS Upstream Sp. z o.o. 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 the LOTOS Group’s operating performance in 2018 included:
- impairment losses (reversal and recognition) on production assets
- impairment losses on service stations
- provision for tax risk related to expected VAT arrears
- compensation under YME insurance, related to the defective MOPU

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 %)

Profitability ratios: a slight increase in the operating profit margin and a lower net margin due to a higher operating result and lower net profit.

Ratio formulas

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT margin</td>
<td>operating profit/(loss) to net sales</td>
</tr>
<tr>
<td>EBITDA</td>
<td>EBIT before amortisation/depreciation</td>
</tr>
<tr>
<td>EBITDA margin</td>
<td>EBITDA to net sales</td>
</tr>
<tr>
<td>Net margin</td>
<td>net profit/(loss) to net sales</td>
</tr>
<tr>
<td>ROE</td>
<td>net profit/(loss) to equity at end of period</td>
</tr>
<tr>
<td>ROA</td>
<td>net profit/(loss) to assets at end of period</td>
</tr>
<tr>
<td>Return on average capital employed (ROACE)</td>
<td>operating profit/(loss) after tax to equity plus net debt at end of period</td>
</tr>
</tbody>
</table>
Liquidity ratios (PLNm, in absolute terms or in %)

- Current ratio (1.49) was higher year on year (up +5.9%), as current assets increased +5.0% and current liabilities declined -0.8%.
- Quick ratio (0.70) went down year on year by 15.9% as a result of a 36.2% increase in inventories (drop in the ratio mainly due to a 29.8% decrease in trade receivables).
- Capital employed was up PLN 486.3m, following an increase in current assets (up PLN 436.8m) and decrease in current liabilities (down PLN 49.5m), with a 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)
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

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)

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average collection period</td>
<td>37.2</td>
<td>27.6</td>
</tr>
<tr>
<td>Average payment period</td>
<td>35.4</td>
<td>29.3</td>
</tr>
</tbody>
</table>

- Average collection period in 2018 was 27.6 days – it shortened by 10 days on 2017 driven by lower average trade receivables (down 7.5%) and higher revenue (up +24.5%).
- Average payment period shortened by 6 days on the back of higher average trade payables (up +5.0%) and cost of sales (up +26.7%).

### Ratio formulas

- **Average collection period (days)**: average trade receivables to net sales times 365 days
- **Average payment period (days)**: average trade payables to cost of sales times 365 days
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

Capital structure and debt ratios (PLNm or %)

- Decrease in the share of liabilities in the financing of assets by 3.6pp as liabilities fell by 2.6% and assets rose by 5.0%.
- Decrease in net debt to equity ratio (financial leverage) by 7.2pp, as net debt fell by 22.5% while equity rose by 12.3%.
- Decrease in liabilities to equity ratio by 13.0pp, as liabilities fell by 2.6% and equity grew 12.3%.

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 2018, 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 a more detailed description of investment projects, see Subsection 2.4 (Implementation of strategic objectives).

5.1.9. **Explanation of differences between actual financial performance and previously published forecasts for 2018**

Grupa LOTOS S.A. did not publish consolidated financial guidance for 2018.

5.1.10. **Separate results and financial position of Grupa LOTOS S.A.**

In 2018, Grupa LOTOS S.A. posted PLN 26,737.3m in net revenue (up 27.3% on 2017). The improvement was mainly attributable to growing prices of petroleum products on global markets and higher sales volume. The Company’s average net selling price was PLN 2,341/t in 2018 (up PLN 399/t, or 20.6%, on 2017).

The total volume of petroleum products, merchandise and materials sold by the Company in 2018 was 11,423.2 thousand tonnes (up 601.8 thousand tonnes, or 5.6%, on 2017). In 2018, the share of export sales in the total sales volume increased 3.5pp.

Cost of sales came at PLN 24,342.7m (up 28.9% on 2017). The increase of PLN 5,463.8m in cost of sales, with revenue higher by PLN 5,728.1m, resulted in a PLN 264.3m growth of gross profit, to PLN 2,394.6m. The average unit cost of sales was PLN 2,131/t (up PLN 386/t, or +22.1%, on 2017), and was PLN 210/t lower than the average net selling price.

The 7.6% increase in distribution costs was mainly attributable to a 5.6% rise in sales volumes in 2018, mainly on foreign markets.

The Company’s administrative expenses rose 3.3% in 2018, mainly due to a higher employee benefits expense. The Company recorded net other expenses of PLN -93.5m in 2018 (2017: net other income of PLN 2.5m). The item includes mainly a provision for tax risk related to VAT in the amount of PLN 52.5m, a provision for covering shortage of CO₂ emission allowances of PLN 26.3m, and charitable donations of PLN 11.3m.

In 2018, Grupa LOTOS S.A. posted an operating profit of PLN 1,329.2m (up PLN 108.5m on 2017).

**Statement of comprehensive income of Grupa LOTOS S.A. (PLNm)**

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2018-2017</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>26,737.3</td>
<td>21,009.2</td>
<td>5,728.1</td>
<td>27.3%</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>-24,342.7</td>
<td>-18,878.9</td>
<td>-5,463.8</td>
<td>28.9%</td>
</tr>
<tr>
<td>Gross profit/loss</td>
<td>2,394.6</td>
<td>2,130.3</td>
<td>264.3</td>
<td>12.4%</td>
</tr>
<tr>
<td>Distribution costs</td>
<td>-747.5</td>
<td>-694.8</td>
<td>-52.7</td>
<td>7.6%</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>-224.4</td>
<td>-217.3</td>
<td>-7.1</td>
<td>3.3%</td>
</tr>
<tr>
<td>Other income</td>
<td>12.5</td>
<td>21.2</td>
<td>-8.7</td>
<td>-41.0%</td>
</tr>
<tr>
<td>Other expenses</td>
<td>-106.0</td>
<td>-18.7</td>
<td>-87.3</td>
<td>466.8%</td>
</tr>
</tbody>
</table>
EBIT  1,329.2  1,220.7  108.5  8.9%
Finance income  404.3  595.8 -191.5 -32.1%
Finance costs  -152.3 -117.7 -34.6  29.4%
Profit/(loss) before tax  1,581.2  1,698.8 -117.6 -6.9%
Income tax  -247.3 -279.3  32.0 -11.5%
Net profit/(loss)  1,333.9  1,419.5 -85.6 -6.0%

The key items that contributed to the Company’s net finance income of PLN 252.0m included:

- Dividends received in 2018: PLN +371.8m,
- Net interest on debt, interest income, bank commission fees and guarantees of PLN -80.5m,
- Provision for interest on expected tax arrears of PLN -17.1m,
- Foreign exchange losses of PLN -19.0m.

Grupa LOTOS S.A.’s financial position – assets (PLNm)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total assets</strong></td>
<td>16,281.4</td>
<td>15,779.3</td>
<td>502.1</td>
<td>3.2%</td>
</tr>
<tr>
<td>Total non-current assets</td>
<td>8,587.2</td>
<td>8,640.4</td>
<td>-53.2</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>5,836.4</td>
<td>6,042.6</td>
<td>-206.2</td>
<td>-3.4%</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>86.4</td>
<td>99.9</td>
<td>-13.5</td>
<td>-13.5%</td>
</tr>
<tr>
<td>Shares</td>
<td>2,654.5</td>
<td>2,288.5</td>
<td>366.0</td>
<td>16.0%</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>2.1</td>
<td>0.7</td>
<td>1.4</td>
<td>200.0%</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>7.8</td>
<td>208.7</td>
<td>-200.9</td>
<td>-96.3%</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>7,694.2</td>
<td>7,138.9</td>
<td>555.3</td>
<td>7.8%</td>
</tr>
<tr>
<td>Inventories</td>
<td>4,530.1</td>
<td>3,335.5</td>
<td>1,194.6</td>
<td>35.8%</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>1,815.4</td>
<td>2,597.1</td>
<td>-781.7</td>
<td>-30.1%</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>14.1</td>
<td>152.8</td>
<td>-138.7</td>
<td>-90.8%</td>
</tr>
<tr>
<td>Other current assets</td>
<td>140.9</td>
<td>225.4</td>
<td>-84.5</td>
<td>-37.5%</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>1,193.7</td>
<td>828.1</td>
<td>365.6</td>
<td>44.1%</td>
</tr>
</tbody>
</table>

As at December 31st 2018, the Company’s total assets were PLN 16,282.4m.

The key factors that contributed to the PLN 502.1m increase in assets included:

- a PLN 366.0m increase in shares following the share capital increase at LOTOS Upstream and acquisition of the new shares by Grupa LOTOS S.A.;
• PLN 1,194.6m increase in inventories, including in emergency stocks, on higher prices of products and crude oil, despite the recognised write-downs of inventories, and owing to higher inventory volumes of oil, petroleum products and semi-finished petroleum products;
• PLN 365.6m increase in cash and cash equivalents;
• PLN 285.4m decrease in other assets, including PLN 200.9m in non-current assets;
• PLN 781.7m decrease in trade receivables, mainly on the back of crude oil sold in December 2017 under contracts with the Material Reserves Agency;
• PLN 206.2m decrease in property, plant and equipment, mainly due to depreciation.

Grupa LOTOS S.A.’s financial position – equity and liabilities (PLNm)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity and liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total equity</td>
<td>9,978.3</td>
<td>8,892.3</td>
<td>1,086.0</td>
<td>12.2%</td>
</tr>
<tr>
<td>Share capital</td>
<td>184.9</td>
<td>184.9</td>
<td>0.0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Share premium</td>
<td>2,228.3</td>
<td>2,228.3</td>
<td>0.0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Cash flow hedging reserve</td>
<td>-288.2</td>
<td>-225.2</td>
<td>-63.0</td>
<td>-28.0%</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>7,853.3</td>
<td>6,704.3</td>
<td>1,149.0</td>
<td>17.1%</td>
</tr>
<tr>
<td>Total non-current liabilities</td>
<td>1,639.4</td>
<td>2,149.8</td>
<td>-510.4</td>
<td>-23.7%</td>
</tr>
<tr>
<td>Bank borrowings</td>
<td>1,295.6</td>
<td>1,839.8</td>
<td>-544.2</td>
<td>-29.6%</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>6.6</td>
<td>6.7</td>
<td>-0.1</td>
<td>-1.5%</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>260.9</td>
<td>227.2</td>
<td>33.7</td>
<td>14.8%</td>
</tr>
<tr>
<td>Employee benefit obligations</td>
<td>60.6</td>
<td>58.6</td>
<td>2.0</td>
<td>3.4%</td>
</tr>
<tr>
<td>Other provisions and liabilities</td>
<td>15.7</td>
<td>17.5</td>
<td>-1.8</td>
<td>-10.3%</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>4,663.7</td>
<td>4,737.2</td>
<td>-73.5</td>
<td>-1.6%</td>
</tr>
<tr>
<td>Bank borrowings</td>
<td>990.3</td>
<td>899.9</td>
<td>90.4</td>
<td>10.0%</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>46.8</td>
<td>72.7</td>
<td>-25.9</td>
<td>-35.6%</td>
</tr>
<tr>
<td>Trade payables</td>
<td>1,900.7</td>
<td>2,122.3</td>
<td>-221.6</td>
<td>-10.4%</td>
</tr>
<tr>
<td>Current tax payables</td>
<td>156.9</td>
<td>22.6</td>
<td>134.3</td>
<td>594.2%</td>
</tr>
<tr>
<td>Employee benefit obligations</td>
<td>53.0</td>
<td>51.9</td>
<td>1.1</td>
<td>2.1%</td>
</tr>
<tr>
<td>Other liabilities and provisions</td>
<td>1,516.0</td>
<td>1,567.8</td>
<td>-51.8</td>
<td>-3.3%</td>
</tr>
</tbody>
</table>

Grupa LOTOS S.A.’s equity as at the end of 2018 was PLN 9,978.3m (up PLN 1,086.0m on 2017). The increase was driven primarily by the net profit of PLN 1,333.9m earned in 2018, adjusted for PLN 184.9m paid in dividends, and the recognition in capital reserves of foreign exchange losses on valuation of cash flow hedges, adjusted for the tax effect of PLN -63.0m.

The share of equity in total equity and liabilities rose from 56.4% in 2017 to 61.3% in 2018.
The key factors that contributed to the PLN 583.9m decrease in liabilities included:

- PLN 453.8m decrease in bank borrowings, mainly due to the repayment of investment loans (PLN 632.5m), combined with the valuation of foreign currency loans at a higher exchange rate (up 8.0%) at the end of 2018;
- PLN 221.6m decrease in trade payables, mainly related to the crude oil purchase timetable;
- PLN 53.6m decrease in other provisions and liabilities, mainly liabilities to the state budget on lower VAT, excise duty, and fuel charge payable, adjusted for provisions (including for tax risk and for covering a CO₂ emission allowance deficit);
- PLN 134.3m increase in current tax payable.

As at December 31st 2018, the Company’s financial debt was PLN 2,285.9m (down PLN 453.8m on December 31st 2017). The ratio of financial debt adjusted for free cash to equity was 10.9%, down 10.6pp on December 31st 2017.

### Cash flows of Grupa LOTOS S.A. (PLNm)

<table>
<thead>
<tr>
<th>Cash flows</th>
<th>2018</th>
<th>2017</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flows from operating activities</td>
<td>987.5</td>
<td>1,754.1</td>
<td>-766.6</td>
</tr>
<tr>
<td>Cash flows from investing activities</td>
<td>253.4</td>
<td>-451.1</td>
<td>704.5</td>
</tr>
<tr>
<td>Cash flows from financing activities</td>
<td>-881.0</td>
<td>-1,007.9</td>
<td>126.9</td>
</tr>
<tr>
<td>Change in net cash</td>
<td>362.7</td>
<td>291.1</td>
<td>71.6</td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of period</td>
<td>828.0</td>
<td>536.9</td>
<td>291.1</td>
</tr>
<tr>
<td>Cash and cash equivalents at end of period</td>
<td>1,190.7</td>
<td>828.0</td>
<td>362.7</td>
</tr>
</tbody>
</table>

As at December 31st 2018, the Company’s cash balance, including current account overdrafts, was PLN 1,190.7m. In 2018, net cash flows were PLN 362.7m (up PLN 71.6m on 2017).

The Company generated positive cash flows from operating activities of PLN 987.5m (down PLN 766.6m on 2017), driven primarily by the 2017 net profit before depreciation and amortisation, adjusted for increase in inventories.

In 2018, net cash from investing activities was positive at PLN 253.4m, and mainly included received dividends (PLN 371.4m), repayment of a loan advanced to LOTOS Petrobaltic (PLN 171.7m), refund of the additional contribution to equity of LOTOS Paliwa (PLN 121.3m), less expenditure on purchase of shares in LOTOS Upstream (PLN -366.0m) and on purchase of property, plant and equipment (PLN -152.6m).

Net cash flows from financing activities of PLN -881.0m 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. LOTOS Group’s expenditure on property, plant and equipment

In 2018, the LOTOS Group’s capital expenditure was PLN 1,004m, 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 YME area fields on the Norwegian Continental Shelf.

LOTOS Group’s capital expenditure in 2018 by key downstream projects (PLNm)
### Downstream segment

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFRA</td>
<td>290.4</td>
</tr>
<tr>
<td>Expansion of service station network</td>
<td>63.5</td>
</tr>
<tr>
<td>Hydrogen Recovery Unit (HRU)</td>
<td>11.5</td>
</tr>
<tr>
<td>Other</td>
<td>77.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>443.2</strong></td>
</tr>
</tbody>
</table>

**LOTOS Group's capital expenditure in 2018 by key upstream projects** (PLNm)

### Upstream segment

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-8 field</td>
<td>132.8</td>
</tr>
<tr>
<td>Norway – Sleipner</td>
<td>127.4</td>
</tr>
<tr>
<td>Norway – Heimdal</td>
<td>14.7</td>
</tr>
<tr>
<td>YME, Norway</td>
<td>212.9</td>
</tr>
<tr>
<td>Other</td>
<td>73.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>560.8</strong></td>
</tr>
</tbody>
</table>

### 5.2.2. Grupa LOTOS S.A.'s equity investments

In 2018, Grupa LOTOS S.A. did not make any equity investments outside of the group of its related entities; for details, see Section 8.1.2. Ownership changes at the LOTOS Group.
### 5.3. Financing

#### 5.3.1 Sureties and guarantees issued and received by the Company and its subsidiaries in the financial year, including sureties and guaranties issued to related parties

<table>
<thead>
<tr>
<th>Issuer of surety, guarantee or other security</th>
<th>Beneficiary of surety, guarantee or other security</th>
<th>Bank or other institution to which surety, guarantee or other security has been issued</th>
<th>Type of security</th>
<th>Description</th>
<th>Financial terms on which surety, guarantee or other security has been provided, including information on the compensation received by the Company or its subsidiary for providing the surety, guarantee or other security</th>
<th>Valid until</th>
<th>Annexes to sureties issued in respect of bank and non-bank borrowings and notes, guarantees or other security (changes of dates or security amounts)</th>
<th>Nature of the links between the Company and the entity that contracted the borrowings or notes</th>
<th>Currency other than PLN</th>
<th>Balance as at in a currency other than PLN (as at Dec 31 2018)</th>
<th>PLN-denominated transactions and foreign currency transactions (restated in PLN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRUPA LOTOS S.A.</td>
<td>B8 Spółka z ograniczoną odpowiedzialnością Baltic Spółka komandytowo akcyjna</td>
<td>Bank Gospodarstwa Krajowego</td>
<td>Surety</td>
<td>The surety covers the existing and future monetary claims for payment of: (i) redemption amounts, (ii) redemption instalments, (iii) interest amounts, and (iv) potential early redemption premium, payable to the Noteholder (Bank Gospodarstwa Krajowego) by the issuer (B8 Sp. z o.o. SKA) under the Notes issued under the Senior Note Programme Agreement, amended by Annex 2</td>
<td>Agreement concerning compensation for the provision of the surety is being negotiated</td>
<td>Jul 25 2018</td>
<td>On the earlier of: (i) Dec 31 2019 (ii) completion of the B8 Project (iii) repayment of all liabilities arising under the note issue agreement</td>
<td>-</td>
<td>USD</td>
<td>surety for up to USD 91,500,000.00</td>
<td>at the exchange rate quoted by the National Bank of Poland for December 31st 2018, the maximum surety amount is PLN 344,012,550</td>
</tr>
</tbody>
</table>
of July 25th, 2018, under which the Company may issue notes for a total amount of USD 89,724,000. The surety replaced the previous surety provided to BGK and Fundusz Inwestycji Infrastrukturalnych – Dłużny Fundusz Inwestycyjny Zamknięty Aktywów Niepublicznych in December 2017.

### 5.3.2. Bank and non-bank borrowings

**LOTOS Group’s bank and non-bank borrowings as at December 31st 2018**

<table>
<thead>
<tr>
<th>Company</th>
<th>Lender</th>
<th>Principal amount as per agreement (million)</th>
<th>Outstanding amount (current portion) PLN (million) Currency</th>
<th>Outstanding amount (non-current portion) PLN (million) Currency</th>
<th>Maturity date of the current portion</th>
<th>Financial terms (interest rate, interest payment schedule, etc.)</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>Bank syndicate (1)</td>
<td>- 400.0 USD</td>
<td>752.8 PLN (million) Currency USD 200.2</td>
<td>-</td>
<td>Dec 20 2019</td>
<td>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 agreements, assignment of rights under inventory storage agreements, voluntary submission to enforcement</td>
<td></td>
</tr>
</tbody>
</table>

...
<table>
<thead>
<tr>
<th>Company</th>
<th>Lender</th>
<th>Principal amount as per agreement</th>
<th>Outstanding amount</th>
<th>Maturity date of the</th>
<th>Financial terms (interest rate, interest payment schedule, etc.)</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(million) (million)</td>
<td>(million) (million)</td>
<td>(million) (million)</td>
<td>current portion</td>
<td>non-current portion</td>
</tr>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>Bank syndicate (2)</td>
<td>- 1,125.0 USD</td>
<td>476.8 126.5 USD 946.8 251.2 USD</td>
<td>Oct 15 2019 Jan 15 2021</td>
<td>fixed interest rate 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.</td>
<td></td>
</tr>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>Bank syndicate (3)</td>
<td>- 425.0 USD</td>
<td>176.5 USD 46.6 348.8 USD 92.0</td>
<td>Apr 15 2019 Jan 15 2021</td>
<td>fixed interest rate</td>
<td></td>
</tr>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>Bank syndicate (4)</td>
<td>USD 200.0 or equivalent</td>
<td>3.0 USD 0.8 - -</td>
<td>Overdraft facility -</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>LOTOS Paliwa Sp. z o.o.</td>
<td>Bank syndicate (5)</td>
<td>150.0</td>
<td>16.7 - 58.2 - -</td>
<td>Dec 31 2019 Jun 30 2023</td>
<td>3M WIBOR + bank margin mortgages</td>
<td></td>
</tr>
<tr>
<td>LOTOS Paliwa Sp. z o.o.</td>
<td>Bank syndicate (6)</td>
<td>100.0</td>
<td>10.0 - 52.6 - -</td>
<td>Dec 31 2019 Mar 31 2025</td>
<td>3M WIBOR + bank margin mortgages</td>
<td></td>
</tr>
<tr>
<td>LOTOS Kolej Sp. z o.o.</td>
<td>Fund for Environmental Protection and Water</td>
<td>6.9</td>
<td>0.7 - 3.6 - -</td>
<td>Nov 30 2019 Jul 31 2024</td>
<td>0.8 of the rediscount rate on promissory notes, not less than 3% blank promissory note, assignment of claims</td>
<td></td>
</tr>
</tbody>
</table>
### Company

<table>
<thead>
<tr>
<th>Company</th>
<th>Lender</th>
<th>Principal amount as per agreement</th>
<th>Outstanding amount</th>
<th>Maturity date of the principal amount</th>
<th>Financial terms</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>PLN (million) Currency (million)</td>
<td>PLN (million) Currency (million) PLN (million) Currency (million)</td>
<td>current portion non-current portion</td>
<td>current portion</td>
<td>non-current portion financial terms interest rate, interest payment schedule, etc.</td>
</tr>
<tr>
<td>Management in Gdańsk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCEkoenergia Sp. z o.o.</td>
<td>Fund for Environmental Protection and Water Management in Katowice</td>
<td>1.2 - 0.3 - - - -</td>
<td>May 31 2019</td>
<td>-</td>
<td>0.95 of the rediscount rate on promissory notes, not less than 3%</td>
<td>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</td>
</tr>
<tr>
<td>LOTOS Asfalt Sp. z o.o.</td>
<td>Consortium of financial institutions (7)</td>
<td>300.0 - 0.2 - - - -</td>
<td>Feb 18 2019</td>
<td>-</td>
<td>3M LIBOR or 6M LIBOR + bank margin</td>
<td>mortgage and registered pledge, assignment of receivables and assignment of rights under insurance policies</td>
</tr>
<tr>
<td>LOTOS Terminale S.A.</td>
<td>Bank Millennium S.A.</td>
<td>- 357.0 USD 213.5 56.8 USD 686.0 199.7 USD</td>
<td>Dec 21 2019 Dec 31 2024</td>
<td>30.04.2025</td>
<td>3M WIBOR + bank margin</td>
<td>mortgage and registered pledge, assignment of receivables and assignment of rights under insurance policies</td>
</tr>
</tbody>
</table>
**Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018**

**Company** | **Lender** | **Principal amount as per agreement** | **Outstanding amount** | **Maturity date of the** | **Financial terms (interest rate, interest payment schedule, etc.)** | **Security** |
--- | --- | --- | --- | --- | --- | --- |
| | | PLN (million) | Currency | PLN (million) | Currency | PLN (million) | Currency | current portion | non-current portion | | |
| SPV Baltic Sp. z o.o. | PKO BP S.A. | 100.0 | - | 12.6 | - | 38.6 | - | Jun 30 2019 | Jan 31 2021 | 1M WIBOR + bank margin | registered and financial pledges over shares and assignment of rights under insurance policies |
| SPV Baltic Sp. z o.o. | Agencja Rozwoju Przemysłu S.A. | 100.0 | - | 12.6 | - | 38.6 | - | Jun 30 2019 | Jan 31 2021 | 1M WIBOR + bank margin | registered and financial pledges over shares, assignment of rights under insurance policies and blank promissory note |
| AB LOTOS Geonafta | Luminor Bank AB | - | 20.0 USD | 9.2 | 2.5 USD | - | - | Jun 30 2019 | - | 6M LIBOR USD + bank margin | registered pledge over inventories, registered pledge over bank accounts, assignment of rights under sale agreements, pledge over shares in subsidiaries |
| AB LOTOS Geonafta | Luminor Bank AB | - | 10.0 USD | 5.6 | 1.5 USD | - | - | Jun 30 2019 | - | 1M LIBOR USD + bank margin | |
| Funds in bank deposits securing payment of interest and principal* | - | - | (418.8) | (111.4) USD | - | - | - | - | - | |
| **TOTAL** | | 58.1 | - | 218.7 | - | | | | | | |
| 1,218.6 | 323.5 USD | 1,981.6 | 542.9 USD | 1,276.7 | 2,200.3 |

Grupa LOTOS S.A. did not borrow any funds in 2018.

Bank margins on the borrowings are within the range of 0.85pp. – 4.00pp.


*As at December 31st 2018, 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 2018, the nominal amount drawn under the credit facility for the refinancing and financing of inventories, advanced by Bank syndicate (1), was PLN 751.9m (USD 200m).

On October 10th 2018, an annex was signed to the agreement for the financing and refinancing of inventories of October 10th 2012. The annex extended the term of the agreement by 12 months (until December 20th 2019).

Investment facilities
As at December 31st 2018, the nominal amount outstanding under the investment facilities advanced by bank syndicates (2) and (3) to finance the 10+ Programme was PLN 1,951.2m (USD 519m). As at December 31st 2017, the amount was PLN 2,414.6m (USD 693.6m).

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 2018 and December 31st 2017, the Company carried no liabilities under these facilities.

Bank borrowings of other Group companies

As at December 31st 2018, the aggregate liabilities outstanding under credit facility agreements of other Group companies were PLN 1,135.3m (December 31st 2017: PLN 1,163.3m). 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 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.

As at December 31st 2018, the amount of outstanding liabilities under the above facility was PLN 899.7m (December 31st 2017: PLN 668.8m).

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 2018, the outstanding amount of liabilities under the investment facility agreements was PLN 137.5m (December 31st 2017: PLN 174.4m).

Bank borrowing 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 2018, the outstanding amount of liabilities under the credit facility was PLN 51.2m (December 31st 2017: PLN 63.1m).

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 AB LOTOS Geonafta:

- a long-term credit facility of up to USD 20m,
- a working-capital facility of USD 10m,

to refinance its previous credit facilities.

As at December 31st 2018, the outstanding amount of liabilities of AB LOTOS Geonafta under the agreement was PLN 14.8m (USD 4m). As at December 31st 2017, the amount was PLN 43.8m (USD 12.6m).
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 2018, the outstanding amount of liabilities under the loan was PLN 51.2m (December 31st 2017: PLN 63.1m).

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.

Other financing agreements

Financing of the B8 project

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

As at December 31st 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. The financing entities did not exercise this right. On July 25th 2018, B8 spółka z ograniczoną odpowiedzialnością Baltic S.K.A. and Bank Gospodarstwa Krajowego concluded an annex to the senior note programme agreement and annexes to the terms and conditions of the notes issued by the company and acquired by BGK. On July 27th 2018, B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A. issued notes with a total nominal value of USD 30m. The issue proceeds were used to redeem all notes acquired by Polski Fundusz Rozwoju S.A. As at December 31st 2018, the company had the right to issue additional notes for USD 27.9 under the agreement. All the issued notes are due at dates falling in the period from September 30th 2020 to June 30th 2022. In relation to the outstanding notes of B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A., because as at December 31st 2018 there was a default on one of the financial covenants changed by the annex, the non-current portion of liabilities under the agreement, amounting to PLN 227m, was presented under current liabilities. As at December 31st 2018, BGK did not accelerate the liabilities.

As at December 31st 2018, the liability under the outstanding notes issued by B8 Spółka z ograniczoną odpowiedzialnością Baltic S.K.A., net of issue costs, was PLN 226.9m (December 31st 2017: PLN 201.3m).

LOTOS Petrobaltic notes

In 2018, the Group redeemed the notes issued by LOTOS Petrobaltic S.A. and presented the related expenditure of PLN 113.8m in cash flows from financing activities.

Events subsequent to the reporting date

On February 20th 2019, Grupa LOTOS S.A. signed an agreement to grant a PLN 90.0m loan to LOTOS Exploration and Production Norge AS (“LOTOS E&P Norge”). The loan will be applied towards partial repayment of LOTOS E&P Norge’s debt to LOTOS Petrobaltic S.A. and/or towards ensuring current liquidity of LOTOS E&P Norge. The repayment date was set for December 31st 2026. The loan is secured with a blank promissory note with a ‘protest waived’ clause and a promissory note declaration. The loan bears interest at 3M NIBOR plus margin.
### 5.3.3. Intercompany loans

**LOTOS Group’s intercompany loans as at December 31st 2018:**

<table>
<thead>
<tr>
<th>Lender</th>
<th>Borrower</th>
<th>Principal as per loan agreement</th>
<th>Amount outstanding as at December 31st 2018</th>
<th>Maturity date of current portion</th>
<th>Financial terms (interest rate, interest payment schedule, etc.)</th>
<th>Security</th>
<th>Date of the agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOTOS Petrobaltic S.A.</strong></td>
<td>Energobaltic Sp. z o.o.</td>
<td>PLN 9.9</td>
<td>(million) 4.2 (million) 0.8 (million) 0.8</td>
<td>Jun 30 2019</td>
<td>1M WIBOR + margin</td>
<td>Blank promissory note with a ‘protest waived’ clause and promissory note declaration</td>
<td>Oct 30 2013</td>
</tr>
<tr>
<td><strong>LOTOS Petrobaltic S.A.</strong></td>
<td>LOTOS Norge AS</td>
<td>PLN 832.5</td>
<td>(million) 24.1 (million) 6.4 USD (million) 75.2 (million) 20.0 USD</td>
<td>Jan 31 2019</td>
<td>6M LIBOR + margin</td>
<td>Blank promissory note with a ‘protest waived’ clause and promissory note declaration</td>
<td>Aug 26 2008</td>
</tr>
<tr>
<td><strong>LOTOS Petrobaltic S.A.</strong></td>
<td>LOTOS Norge AS</td>
<td>PLN 26.2 NOK</td>
<td>(million) 237.6 (million) 674.0 NOK (million) - (million) -</td>
<td>Jan 31 2019</td>
<td>6M LIBOR + margin</td>
<td>Blank promissory note with a ‘protest waived’ clause and promissory note declaration</td>
<td>May 8 2015</td>
</tr>
<tr>
<td><strong>LOTOS Petrobaltic S.A.</strong></td>
<td>SPV Baltic Sp. z o.o.</td>
<td>PLN 42.6</td>
<td>(million) - (million) - (million) 65.0 (million) 17.0 USD (million) -</td>
<td>Jan 31 2022</td>
<td>6M LIBOR + margin</td>
<td>Blank promissory note</td>
<td>Dec 23 2013</td>
</tr>
<tr>
<td><strong>LOTOS Petrobaltic S.A.</strong></td>
<td>SPV Baltic Sp. z o.o.</td>
<td>PLN 46.3</td>
<td>(million) - (million) - (million) 53.9 (million) - (million) -</td>
<td>Jan 31 2022</td>
<td>6M WIBOR + margin</td>
<td>Blank promissory note</td>
<td>Jan 27 2014</td>
</tr>
</tbody>
</table>
## Directors' Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

<table>
<thead>
<tr>
<th>LOTOS Petrobaltic S.A.</th>
<th>B8 Sp. z o.o. SKA</th>
<th>8.5</th>
<th>-</th>
<th>-</th>
<th>9.9</th>
<th>-</th>
<th>Dec 31 2022</th>
<th>3M WIBOR + margin</th>
<th>Blank promissory note</th>
<th>Oct 20 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOTOS Petrobaltic S.A.</td>
<td>B8 Sp. z o.o. SKA</td>
<td>80.0</td>
<td>0.2</td>
<td>-</td>
<td>50.0</td>
<td>-</td>
<td>Jan 21 2019</td>
<td>Jan 31 2022</td>
<td>1Y WIBOR + margin</td>
<td>Blank promissory note</td>
</tr>
<tr>
<td>AB LOTOS Geonafta</td>
<td>LOTOS Norge AS</td>
<td>75.2</td>
<td>20.0 USD</td>
<td>75.0</td>
<td>20.0 USD</td>
<td>2.0</td>
<td>0.5 USD</td>
<td>Dec 31 2019</td>
<td>Mar 30 2020</td>
<td>3M LIBOR + margin</td>
</tr>
<tr>
<td>LOTOS Upstream Sp. z o.o.</td>
<td>LOTOS Upstream UK Ltd.</td>
<td>0.4</td>
<td>0.1 GBP</td>
<td>0.4</td>
<td>0.1 GBP</td>
<td>-</td>
<td>-</td>
<td>Feb 15 2019</td>
<td>-</td>
<td>3M LIBOR + margin, on principal repayment date</td>
</tr>
<tr>
<td>LOTOS Upstream Sp. z o.o.</td>
<td>LOTOS Upstream UK Ltd.</td>
<td>1.2</td>
<td>0.2 GBP</td>
<td>1.2</td>
<td>0.2 GBP</td>
<td>-</td>
<td>-</td>
<td>Dec 31 2019</td>
<td>-</td>
<td>3M LIBOR + margin, on principal repayment date</td>
</tr>
<tr>
<td>Kambr Navigation Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>0.8</td>
<td>0.2 USD</td>
<td>2.1</td>
<td>0.5 USD</td>
<td>-</td>
<td>-</td>
<td>Jun 30 2019</td>
<td>-</td>
<td>1M LIBOR + margin</td>
</tr>
<tr>
<td>Petro Icarus Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>4.1</td>
<td>1.1 USD</td>
<td>2.3</td>
<td>0.6 USD</td>
<td>-</td>
<td>-</td>
<td>Jun 30 2019</td>
<td>-</td>
<td>1M LIBOR + margin</td>
</tr>
<tr>
<td>Granit Navigation Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>0.7</td>
<td>0.2 USD</td>
<td>0.4</td>
<td>0.1 USD</td>
<td>-</td>
<td>-</td>
<td>Jun 30 2019</td>
<td>-</td>
<td>1M LIBOR + margin</td>
</tr>
<tr>
<td>Bazalt Navigation Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>0.6</td>
<td>0.2 USD</td>
<td>0.3</td>
<td>0.1 USD</td>
<td>-</td>
<td>-</td>
<td>Jun 30 2019</td>
<td>-</td>
<td>1M LIBOR + margin</td>
</tr>
<tr>
<td>Granit Navigation Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>2.4</td>
<td>0.6 USD</td>
<td>2.5</td>
<td>0.7 USD</td>
<td>0.6</td>
<td>0.2 USD</td>
<td>Dec 31 2019</td>
<td>Jun 30 2020</td>
<td>1M LIBOR + margin</td>
</tr>
<tr>
<td>Petro Icarus Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>13.4</td>
<td>3.6 USD</td>
<td>11.0</td>
<td>2.9 USD</td>
<td>2.4</td>
<td>0.6 USD</td>
<td>Dec 31 2019</td>
<td>Jun 30 2020</td>
<td>1M LIBOR + margin</td>
</tr>
<tr>
<td>Company Name</td>
<td>Allied Company Name</td>
<td>Currency Rate</td>
<td>USD Rate</td>
<td>PLN Rate</td>
<td>NOK Rate</td>
<td>GBP Rate</td>
<td>Date of Loan</td>
<td>Loan Type Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------------------------------</td>
<td>-------------------</td>
<td>----------</td>
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<td>--------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kambr Navigation Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>2.7 0.7 USD</td>
<td>2.7 0.7 USD 0.6 0.2 USD</td>
<td>Dec 31 2019</td>
<td>Jun 30 2020</td>
<td>1M LIBOR + margin</td>
<td>None</td>
<td>Dec 2014 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bazalt Navigation Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>2.2 0.6 USD</td>
<td>2.4 0.6 USD 0.5 0.1 USD</td>
<td>Dec 31 2019</td>
<td>Jun 30 2020</td>
<td>1M LIBOR + margin</td>
<td>None</td>
<td>Dec 2014 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miliana Shipping Group</td>
<td>Miliana Shipmanagement Limited</td>
<td>0.7 0.2 USD</td>
<td>0.7 0.2 USD - -</td>
<td>Dec 31 2018</td>
<td>-</td>
<td>1M LIBOR + margin</td>
<td>None</td>
<td>Aug 2016 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miliana Shipmanagement Limited</td>
<td>St. Barbara Navigation Company Limited</td>
<td>4.1 1.1 USD</td>
<td>0.7 0.2 USD 1.7 0.5 USD</td>
<td>Dec 31 2019</td>
<td>Feb 28 2023</td>
<td>1M LIBOR + margin</td>
<td>None</td>
<td>Nov 2016 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petro Aphrodite Company Limited</td>
<td>Miliana Shipmanagement Limited</td>
<td>0.8 0.2 USD</td>
<td>0.7 0.2 USD 0.2 0.0 USD</td>
<td>Dec 31 2019</td>
<td>Jun 30 2020</td>
<td>1M LIBOR + margin</td>
<td>None</td>
<td>Aug 2016 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>LOTOS Upstream Sp. z o.o.</td>
<td>8.9 -</td>
<td>7.6 - - -</td>
<td>Sep 30 2019</td>
<td>-</td>
<td>6M WIBOR + margin</td>
<td>Blank promissory note with a 'protest waived' clause</td>
<td>Oct 19 2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>ENERGOBALTIC Sp. z o.o.</td>
<td>10.0</td>
<td>10.2 - - -</td>
<td>Dec 31 2019</td>
<td>-</td>
<td>6M WIBOR + margin</td>
<td>Blank promissory note, mortgage of up to 15m</td>
<td>Dec 2016 19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| TOTAL                               |                                     | 22.2 PLN          | 114.6 PLN | 124.9 33.2 USD 148.2 39.1 USD | 237.6 674.0 NOK - - NOK | 1.6 0.3 GBP - - GBP | 386.3 262.8 |
5.3.4. Financial resources management

In 2018, LOTOS Group companies discharged all of their financial liabilities towards trading partners.

In the period from January 1st to December 31st 2018, 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 below the level specified in the facility agreement.

As at December 31st 2018 and December 31st 2017, the covenants were fully complied with.

5.3.5. Expected financial condition of Grupa LOTOS S.A. and its Group

The Management Board’s assessment of the projected future financial condition of Grupa LOTOS S.A. and its Group is discussed in Section 2.

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:

Mateusz Aleksander Bonca – President of the Management Board
Patryk Demski – Vice President of the Management Board, Chief Investment and Innovation Officer
Jarosław Kawula – Vice President of the Management Board, Chief Refining and Marketing Officer
Robert Sobków – Vice President of the Management Board, Chief Financial Officer
Jarosław Wittstock – Vice President of the Management Board, Corporate Affairs

hereby represent that, to the best of their knowledge, the full-year financial statements of Grupa LOTOS S.A. and the full-year consolidated financial statements of the LOTOS Group for 2018 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 2018 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. Management Board’s statement on auditor appointment, prepared based on Supervisory Board’s statement

The Management Board of Grupa LOTOS S.A. announces that the audit firm qualified to audit the consolidated financial statements of the LOTOS Group for 2018 and the financial statements of Grupa LOTOS S.A. for 2018 was appointed in accordance with the applicable laws, including the Company’s procedure for the selection of an audit firm, and that the audit 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, professional standards and principles of professional ethics.
Furthermore, the Company and the audit firm comply with the applicable laws and regulations governing the rotation of audit firms and lead auditors as well as with the mandatory cooling-off periods.

the Company has a policy for selection of an audit firm and a policy governing the provision to the issuer of additional non-audit services, including services conditionally exempt from the prohibition of certain non-audit services, by an audit firm, an entity related to the audit firm or a member of the audit firm’s network.

For information on the LOTOS Group’s auditor rotation policy, see the ‘Investor relations’ website

6. 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 2018.

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

- Amendments to IFRS 2 Share-based Payment – Classification and Measurement of Share-Based Payment Transactions (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IFRS 4 Insurance Contracts – Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts (effective for annual periods beginning on or after January 1st 2018 or from the first-time application of IFRS 9 Financial Instruments),
- Amendments to IFRS 15 Revenue from Contracts with Customers – Clarifications to IFRS 15 Revenue from Contracts with Customers (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IAS 40 Investment Property – Transfers of Investment Property (effective for annual periods beginning on or after January 1st 2018),
- Amendments to IFRS 1 and IAS 28 resulting from Annual Improvements to IFRS Standards 2014–2016 Cycle – amendments made as part of the annual IFRS improvements project (IFRS 1, IFRS 12, and IAS 28) primarily to correct conflicts and clarify wording (the amendments to IFRS 1 and IAS 28 are effective for annual periods beginning on or after January 1st 2018),
- IFRIC 22 Foreign Currency Transactions and Advance Consideration (effective for annual periods beginning on or after January 1st 2018),
- IFRS 16 Leases (effective for annual periods beginning on or after January 1st 2019),
- Amendments to IFRS 9 Financial Instruments – Prepayment Features with Negative Compensation (effective for annual periods beginning on or after January 1st 2019),
- IFRIC 23 Uncertainty over Income Tax Treatments (effective for annual periods beginning on or after January 1st 2019).

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

- IFRS 14 Regulatory Deferral Accounts (effective for annual periods beginning on or after January 1st 2016),
- IFRS 17 Insurance Contracts (effective for annual periods beginning on or after January 1st 2021),
- Amendments to IFRS 3 Business Combinations – Definition of a Business (effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1st 2020 and to asset acquisitions that occur on or after the beginning of that period),
- Amendments to IFRS 10 Consolidated Financial Statements and IAS 28 Investments in Associates and Joint Ventures: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture, and subsequent amendments (the effective date of the amendments has been postponed until the research project on the equity method has been concluded),
- Amendments to IAS 1 Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Materiality (effective for annual periods beginning on or after January 1st 2020),
- Amendments to IAS 19 Employee Benefits – Plan Amendment, Curtailment or Settlement (effective for annual periods beginning on or after January 1st 2019),
- Amendments to IAS 28 Investments in Associates and Joint Ventures – Long-term Interests in Associates and Joint Ventures (effective for annual periods beginning on or after January 1st 2019),
- Amendments to various standards introduced as part of the Annual Improvements to IFRS Standards 2015–2017 Cycle – amendments made to IFRS 3, IFRS 11, IAS 12 and IAS 23 primarily to correct conflicts and clarify wording (effective for annual periods beginning on or after January 1st 2019),
- Amendments to References to the Conceptual Framework in IFRS Standards (effective for annual periods beginning on or after January 1st 2020).
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 Company 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 2018.

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 2018

Risks in the LOTOS Group
7. 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 into account the risks involved,
- 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 enforced by all of its companies.

7.1. 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 measures used to manage particular risks.

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)
7.1.1. **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.

2018 saw continued efforts to improve risk management based on the ERM system development directions set out in 2017.

ERM activities are focused on key business risks, in particular on forecasting their impact on the company’s operations and performance, thus facilitating the development of pro-emptive 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 2018, as part of its risk management activities the LOTOS Group introduced:

- the definition of risk appetite, or the level of risk of variation relative to the achievement of the key LIFO-based EBITDA target,
- a risk exposure measurement method for constantly monitoring and estimating the impact of risks on the company’s performance,
- comprehensive guidelines with regard to the Group’s enterprise risk management methodology.

Also, efforts were undertaken to step up the development of a process for identifying and reporting risks and resources at the Group companies.

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.

7.1.2. **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 re-evaluated,
- 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.
7.1.3. Risk oversight – ERM participants

<table>
<thead>
<tr>
<th>OVERSIGHT LEVEL</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisory Board</td>
<td>o monitors the effectiveness of the enterprise risk management</td>
</tr>
<tr>
<td>Management Board</td>
<td>o determines risk appetite in the context of the adopted strategy</td>
</tr>
<tr>
<td></td>
<td>o takes key decisions regarding TOP RISKS, including resources and the ERM</td>
</tr>
<tr>
<td>Enterprise Risk Committee</td>
<td>o provides opinions on and recommends measures applicable to TOP RISKS and the ERM, including risk appetite</td>
</tr>
<tr>
<td></td>
<td>o monitors the performance of planned tasks</td>
</tr>
<tr>
<td></td>
<td>o the Committee consists of representatives of key corporate functions</td>
</tr>
<tr>
<td>Risk Management Office</td>
<td>o coordinates and supports enterprise risk management measures taken by Risk Owners at the LOTOS Group</td>
</tr>
<tr>
<td></td>
<td>o supports risk coordinators at LOTOS Group companies</td>
</tr>
<tr>
<td></td>
<td>o collates information on risks to the organisation</td>
</tr>
<tr>
<td></td>
<td>o assesses the Group’s risk exposure</td>
</tr>
<tr>
<td></td>
<td>o is responsible for coordinating and developing enterprise risk management</td>
</tr>
<tr>
<td>Risk owners</td>
<td>o manage individual risks, which includes defining risk treatment plans, monitoring risk levels, and overseeing risk mitigation and opportunities enhancement measures</td>
</tr>
<tr>
<td>Project teams/individuals</td>
<td>o identify new risks</td>
</tr>
<tr>
<td></td>
<td>o implement risk mitigation or opportunities enhancement measures</td>
</tr>
<tr>
<td>Internal Audit Office</td>
<td>o identifies and evaluates risks to the LOTOS Group’s operations</td>
</tr>
<tr>
<td></td>
<td>o verifies relevant controls and examines their effectiveness</td>
</tr>
<tr>
<td></td>
<td>o assesses the effectiveness of the enterprise risk management as part of the organisational maturity assessment</td>
</tr>
</tbody>
</table>

7.2. 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 2018, 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 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 constantly exposed to risks associated with megatrends, which tend to manifest themselves in the short term as materialisation of market risks.

Key to the LOTOS Group are also regulatory risks, present both at the national and European level. The legal environment and proposed regulatory changes (for instance regulations concerning the National Indicative Target and National Reduction Target) are continuously monitored to mitigate their potential adverse effects.
The Group identifies, analyzes and actively promotes growth opportunities, including innovation projects, related to the impacts megatrends, new regulations and technology advances have on the oil and gas market and, by extension, on the power 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 2018, 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 and compliance risks**

The LOTOS Group operates in a very complex legal and regulatory environment. In order to minimise non-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.
Detailed overview of key risks to the LOTOS Group

<table>
<thead>
<tr>
<th>NON-FINANCIAL CATEGORIES:</th>
<th>CATEGORY</th>
<th>BRIEF DESCRIPTION OF RISK</th>
<th>RISK MITIGATION/ RESPONSE MEASURES</th>
<th>POTENTIAL ADVERSE IMPACT OF RISK</th>
<th>RISK LEVEL</th>
<th>TREND</th>
</tr>
</thead>
</table>
| personnel                | Strategic risks | Delayed delivery of strategic projects such as EFRA, B8 field development or hydrogen recovery unit (HRU), B4B6 | • 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  
• Active project management, including close oversight and communication with contractors | • Delayed delivery of target financial results | ⬤ ⬤ ⬤ | ⬤ ⬤ ⬤ |
| social                   | 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 | ⬤ ⬤ ⬤ | ⬤ ⬤ ⬤ |
## Regulatory risk

<table>
<thead>
<tr>
<th>Adverse impact from amended legislation or failure to comply with new national or EU regulations (NIT, NRT, GDPR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Compliance Department</td>
</tr>
<tr>
<td>Monitoring new regulations and regulatory changes</td>
</tr>
<tr>
<td>Taking advantage of opportunities arising from new regulations</td>
</tr>
<tr>
<td>Active participation in dialogue led by the Regulator</td>
</tr>
<tr>
<td>Scenario analysis of potential impacts of regulations</td>
</tr>
<tr>
<td>Implementation of measures for adapting to planned or enacted regulatory changes</td>
</tr>
<tr>
<td>Increased finance costs of achieving compliance with new regulations</td>
</tr>
<tr>
<td>Non-compliance fines</td>
</tr>
</tbody>
</table>

## Risk from megatrends

<table>
<thead>
<tr>
<th>Fluctuating supply and demand trends on the fuel market</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
</tr>
<tr>
<td>Implementation of development projects to expand and diversify the existing asset portfolio</td>
</tr>
<tr>
<td>Implementation of development projects to improve the flexibility of production/refinery processing operations and energy efficiency</td>
</tr>
<tr>
<td>Implementation of innovation projects</td>
</tr>
<tr>
<td>Significant impact on financial performance</td>
</tr>
<tr>
<td>Significant impact on reputation</td>
</tr>
</tbody>
</table>

## Financial Risks

### Liquidity and financing risk

<table>
<thead>
<tr>
<th>Mismanagement of working capital and constrained financing capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessing and forecasting the Group’s cash flows and liquidity</td>
</tr>
<tr>
<td>Analysis of financing sources available to the Group</td>
</tr>
<tr>
<td>Diversification of financing sources.</td>
</tr>
<tr>
<td>Optimising liquidity and debt across the Group</td>
</tr>
<tr>
<td>Effective management of strategic project portfolio</td>
</tr>
<tr>
<td>Weaker operating performance</td>
</tr>
<tr>
<td>Reduced number of profitable investments</td>
</tr>
<tr>
<td>Suspended, delayed or abandoned development projects</td>
</tr>
</tbody>
</table>

### Market risk:

<table>
<thead>
<tr>
<th>Fluctuating prices of feedstock and petroleum products, fluctuating foreign exchange and interest rates (both a threat (adverse impact) and an opportunity (positive impact) to Grupa Lotos S.A.’s business)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following the adopted feedstock and petroleum product price risk management policy and currency risk management policy</td>
</tr>
<tr>
<td>Monitoring market risk exposure on a daily basis</td>
</tr>
<tr>
<td>Selecting a trading strategy in line with policy objectives, current market situation and applicable risk limits</td>
</tr>
<tr>
<td>Deteriorated financial performance by Segments</td>
</tr>
<tr>
<td>Deteriorated liquidity of Group companies</td>
</tr>
<tr>
<td>Impeded implementation of strategic projects</td>
</tr>
</tbody>
</table>

### Credit risk

<table>
<thead>
<tr>
<th>Insolvent trading partners or counterparties in financial contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring of partners’ ratings and financial standing</td>
</tr>
<tr>
<td>Setting trade credit limits and limits for counterparties in financial contracts in accordance with internal procedures</td>
</tr>
<tr>
<td>Employment of diverse financial tools to minimise risk</td>
</tr>
<tr>
<td>Deteriorated liquidity and financial performance</td>
</tr>
</tbody>
</table>
# Directors' Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

## 8. Exploration risk
- Incorrect estimation of resources, including incorrect estimation of hydrocarbon resources and reserves discovered by exploration wells; drilling of dry wells (without hydrocarbon flows).
- Conduct of numerous geological and reservoir engineering studies depending on the well (exploratory, appraisal, or appraisal and production well).
- 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.
- Loss of opportunity or investing in an unsuccessful project, resulting in drilling a dry well and consequent losses.
- Incurring high exploration costs.

## 9. Production risk
- 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.
- 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).
- Assessing well and pump performance on an ongoing basis.
- Taking measures to achieve projected production volumes, including workovers of producing wells.
- 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
- Accidents along the entire production cycle and logistics chain (including
- Regular inspections of OHS compliance at the workplace.
- Harm to people and damage to the environment.
### Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

<table>
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<tr>
<th>P</th>
<th>NE</th>
<th>HR</th>
</tr>
</thead>
</table>

#### Road and rail accidents during product transport and aircraft accidents during rig crews transport
- Raising employees’ awareness of and commitment to safety culture by taking various initiatives and engaging the Management in the process
- Implementation of the annual Health and Safety Plan for the LOTOS Group
- Regular OHS inspections as part of investment projects, including periodic OHS reviews with project site 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.
- Damage to reputation and costs of recovery from reputational crisis
- Site restoration and compensation costs
- Disrupted operations, reduced revenue and profits

#### 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

#### 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

#### Procurement risk
- 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

#### Legal risk
- 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
  - 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.
- Financial losses for the LOTOS Group
- Loss of reputation

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### REPUTATION AND COMPLIANCE RISK

#### Legal risk
- 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
  - 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.
- Financial losses for the LOTOS Group
- Loss of reputation

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### 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
- 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 ship-owners 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 Compliance with BAT requirements
- Implementation of environmental management plans
- Loss of reputation
- Fines

### 21. Personnel risk
- 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
<table>
<thead>
<tr>
<th>22.</th>
<th>Ongoing monitoring of employee sentiment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Difficulties with recruitment of qualified staff and retention of competent and experienced employees</strong></td>
<td><strong>Building a knowledge management system to enable effective knowledge sharing/transfer and develop staff competencies necessary to achieve near- and long-term business goals</strong>&lt;br&gt;<strong>Management staff development programme</strong>&lt;br&gt;<strong>Building an engaging work environment to enhance productivity</strong>&lt;br&gt;<strong>Creating space for development and innovation within the organisation</strong>&lt;br&gt;<strong>Building a good employer image inside and outside the organisation</strong></td>
</tr>
</tbody>
</table>

| 23. | Development project delays<br>Loss of reputation<br>Reduced revenue and profits |
| **Social risk** | **Social protests against the Group’s projects** |
| **S**<br>**HR** | **Maintaining good relations with stakeholders. Holding meetings to inform stakeholders about the Group’s projects**<br>**Open communication on the Group’s current operations and projects**<br>**Maintaining good relations with industry, local, nationwide and foreign media**<br>**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<br>Loss of reputation<br>Reduced revenue and profits** |
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group for 2018

Organisation and management at Grupa LOTOS S.A. and the LOTOS Group
8. Organisation and management at Grupa LOTOS S.A. and the LOTOS Group

8.1. Ownership links and management rules

8.1.1. Divisions of Grupa LOTOS S.A.

Grupa LOTOS S.A. has no divisions (establishments) within the meaning of the Polish Accounting Act.

8.1.2. Description of the Group’s organisation and consolidated entities as well as changes in the Group’s organisation and reasons for such 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 a foundation.

Key information on the Group entities and on the Group’s ownership interests in those entities as at December 31st 2018 is presented below. The ownership interests did not change relative to December 31st 2017.
Directors' Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

<table>
<thead>
<tr>
<th>Registered office</th>
<th>Business profile</th>
<th>The Group’s ownership interest</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PARENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Downstream segment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRUPA LOTOS S.A.</td>
<td>Gdańsk</td>
<td>manufacturing and processing of refined petroleum products (mainly fuels) and their wholesale</td>
</tr>
<tr>
<td><strong>DIRECT FULLY-CONSOLIDATED SUBSIDIARIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Upstream segment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOTOS Upstream Sp. z o.o.</td>
<td>Gdańsk</td>
<td>activities of head offices and holdings</td>
</tr>
<tr>
<td>LOTOS Petrobaltic S.A.</td>
<td>Gdańsk</td>
<td>acquisition of crude oil and natural gas deposits, extraction of hydrocarbons</td>
</tr>
<tr>
<td><strong>Downstream segment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOTOS Paliwa Sp. z o.o.</td>
<td>Gdańsk</td>
<td>wholesale and retail sale of fuels and light fuel oil, management of the LOTOS service station network</td>
</tr>
<tr>
<td>LOTOS Oil Sp. z o.o.</td>
<td>Gdańsk</td>
<td>manufacturing and sale of lubricating oils and lubricants, and sale of base oils</td>
</tr>
<tr>
<td>LOTOS Asfalt Sp. z o.o.</td>
<td>Gdańsk</td>
<td>manufacturing and sale of bitumens</td>
</tr>
<tr>
<td>LOTOS Kolej Sp. z o.o.</td>
<td>Gdańsk</td>
<td>railway transport</td>
</tr>
<tr>
<td>LOTOS Serwis Sp. z o.o.</td>
<td>Gdańsk</td>
<td>maintenance of mechanical and electric operations and controlling devices, overhaul and repair services</td>
</tr>
<tr>
<td>LOTOS Lab Sp. z o.o.</td>
<td>Gdańsk</td>
<td>laboratory testing</td>
</tr>
<tr>
<td>LOTOS Straż Sp. z o.o.</td>
<td>Gdańsk</td>
<td>fire service activities</td>
</tr>
<tr>
<td>LOTOS Ochrona Sp. z o.o.</td>
<td>Gdańsk</td>
<td>security services</td>
</tr>
<tr>
<td>LOTOS Terminale S.A.</td>
<td>Czechowice-Dziedzice</td>
<td>storage and distribution of fuels</td>
</tr>
</tbody>
</table>
## Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

<table>
<thead>
<tr>
<th>Company Name</th>
<th>City</th>
<th>Description</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOTOS Infrastruktura S.A.</td>
<td>Jasło</td>
<td>storage and distribution of fuels, renting and operating of own or leased real estate</td>
<td>100.00%</td>
</tr>
<tr>
<td>LOTOS Gaz S.A. w likwidacji (in liquidation)</td>
<td>Kraków</td>
<td>dormant</td>
<td>100.00%</td>
</tr>
<tr>
<td><strong>NON-CONSOLIDATED DIRECT SUBSIDIARIES (1)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastruktura Kolejowa Sp. z o.o. w likwidacji (in liquidation) (2)</td>
<td>Gdańsk</td>
<td>dormant</td>
<td>100.00%</td>
</tr>
<tr>
<td>LOTOS Foundation</td>
<td>Gdańsk</td>
<td>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</td>
<td>100.00%</td>
</tr>
<tr>
<td><strong>INDIRECT FULLY-CONSOLIDATED SUBSIDIARIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downstream segment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOTOS Lab Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOTOS Vera Sp. z o.o.</td>
<td>Warsaw</td>
<td>manufacture of cars</td>
<td>100.00%</td>
</tr>
<tr>
<td>LOTOS Infrastruktura Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCEkoenergia Sp. z o.o.</td>
<td>Czechowice-Dziedzice</td>
<td>production and distribution of electricity, heat and gas</td>
<td>100.00%</td>
</tr>
<tr>
<td>LOTOS Terminale Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOTOS Biopaliwa Sp. z o.o.</td>
<td>Czechowice-Dziedzice</td>
<td>production of fatty acid methyl esters (FAME)</td>
<td>100.00%</td>
</tr>
<tr>
<td>Upstream segment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOTOS Upstream Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOTOS Exploration and Production Norge AS</td>
<td>Norway, Stavanger</td>
<td>oil exploration and production on the Norwegian Continental Shelf, provision of services incidental to oil and gas exploration and production</td>
<td>100.00%</td>
</tr>
<tr>
<td>AB LOTOS Geonafta</td>
<td>Lithuania Gargždai</td>
<td>crude oil exploration and production, drilling services, and purchase and sale of crude oil</td>
<td>100.00%</td>
</tr>
<tr>
<td>○ UAB Genciu Nafta</td>
<td>Lithuania Gargždai</td>
<td>crude oil exploration and production</td>
<td>100.00%</td>
</tr>
<tr>
<td>○ UAB Manifoldas</td>
<td>Lithuania Gargždai</td>
<td>crude oil exploration and production</td>
<td>100.00%</td>
</tr>
<tr>
<td>LOTOS Upstream UK Ltd.</td>
<td>London, United Kingdom</td>
<td>exploration for and production of crude oil and gas</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

(1) Includes any indirect fully-consolidated subsidiaries.

(2) Includes any direct non-consolidated subsidiaries.

(3) Includes any direct non-consolidated subsidiaries.
<table>
<thead>
<tr>
<th>LOTOS Petrobaltic Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aphrodite Offshore Services N.V.</strong></td>
</tr>
<tr>
<td><strong>B8 Sp. z o.o.</strong></td>
</tr>
<tr>
<td><strong>B8 Spółka z ograniczoną odpowiedzialnością BALTIC S.K.A.</strong></td>
</tr>
<tr>
<td><strong>Miliana Shipholding Company Ltd.</strong></td>
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<tr>
<td><strong>Miliana Shipmanagement Ltd.</strong></td>
</tr>
<tr>
<td><strong>Miliana Shipping Group Ltd.</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>ENERGOBALTIC Sp. z o.o.</strong></td>
</tr>
</tbody>
</table>
The companies were excluded from consolidation due to immateriality of the amounts disclosed in their financial statements as at September 30th 2018 (IFRS 10 Consolidated Financial Statements).

On June 28th 2018, the Extraordinary General Meeting of Infrastruktura Kolejowa Sp. z o.o passed a resolution to dissolve the company and put it into liquidation.

A new company with a share capital of GBP 15 thousand. A wholly-owned subsidiary of LOTOS Upstream Sp. z o.o.

In H1 2018, the company was liquidated.

A new company with a share capital of PLN 5 thousand; a wholly-owned subsidiary of Technical Ship Management Sp. z o.o.
8.1.3. Ownership changes at Grupa LOTOS S.A. and the LOTOS Group

Below are discussed changes in the Group’s structure in 2018.

Lucea 3 Sp. z o.o. – acquisition of 100% of shares; share capital increase and amendments to the 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.

On February 14th 2018, the District Court for the Capital City of Warsaw in Warsaw registered the aforementioned share capital increase and the company’s restated and amended deed of incorporation, including the change of the company’s name to LOTOS Vera Sp. z o.o.

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 entered in the Business Register of the National Court Register.

LOTOS Upstream sp. z o.o. – share capital increase

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 entered 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 for the establishment of a foreign subsidiary based in London to conduct production operations on the British Shelf. Its share capital comprises 15,000 shares with a total value of GBP 15,000, which have been taken up and paid for by LOTOS Upstream Sp. z o.o. The company was registered by the Registrar of Companies for England and Wales under No. 11130960. The change of the company’s name to LOTOS Upstream UK Limited was registered on February 22nd 2018.

On March 28th 2018, the Extraordinary General Meeting of LOTOS Upstream Sp. z o.o. passed a resolution to increase the company’s share capital from PLN 520,005,000 to PLN 576,000,000, i.e. by PLN 55,995,000, through the issue of 559,950 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 55,995,000.

On May 9th 2018, the share capital increase was entered in the Business Register of the National Court Register.

On October 8th 2018, the Extraordinary General Meeting of LOTOS Upstream Sp. z o.o. passed a resolution to increase the company’s share capital from PLN 576,000,000 to PLN 886,000,000, i.e. by PLN 310,000,000, through the issue of 3,100,000 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 310,000,000.

The share capital increase to PLN 886,000,000.00 was registered in the Business Register of the National Court Register on November 30th 2018.

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 the 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.

On October 4th 2018, the General Meeting of LOTOS Exploration and Production Norge AS passed a resolution on private placement with LOTOS Upstream Sp. z o.o. of 800,000,000 warrants, each carrying the right to acquire one Series B share with a par value of NOK 1.00 per share. The rights incorporated in the warrants may be exercised by June 30th 2019.

On October 15th 2018, in the exercise of its rights attached to the warrants held, LOTOS Upstream sp. z o.o. made a declaration on acquiring 624,355,030 new Series B shares with a par value of NOK 1 per share for a cash contribution of NOK 624,355,030.

The share capital increase to NOK 3,635,158,575.00 was registered in the Brønnøysund business register on November 20th 2018.

On November 5th 2018, in the exercise of its rights attached to the warrants held, LOTOS Upstream sp. z o.o. made a declaration on acquiring 51,684,547 new Series B shares with a par value of NOK 1 per share for a cash contribution of NOK 51,684,547.

The share capital increase to NOK 3,686,843,122.00 was registered in the Brønnøysund business register on November 22nd 2018.

LOTOS Petrobaltic S.A. – sale of shares in Baltic Gas Sp. z o.o. to LOTOS Upstream Sp. z o.o.

On April 3rd 2018, LOTOS Petrobaltic S.A. (the seller) and LOTOS Upstream Sp. z o.o. (the buyer) entered into an agreement for sale of 2,450 shares in Baltic Gas Sp. z o.o. of Gdańsk, representing 50% of the company’s share capital. The purchase price was PLN 122.5 thousand. The transaction was settled on April 3rd 2018.

LOTOS Petrobaltic S.A. – sale of all of its rights and obligations as the limited partner in Baltic Gas Spółka Komandytowa to LOTOS Upstream Sp. z o.o.

On April 3rd 2018, LOTOS Petrobaltic S.A. (the seller) and LOTOS Upstream Sp. z o.o. (the buyer) entered into an agreement for sale of all of LOTOS Petrobaltic S.A.’s rights and obligations as the limited partner in Baltic Gas Spółka z ograniczoną odpowiedzialnością i Wspólnicy spółka komandytowa of Gdańsk. The purchase price was PLN 77,448.0 thousand. The transaction was settled on April 3rd 2018.

Baltic Gas Sp. z o.o. – share capital increase

On May 30th 2018, the Annual General Meeting of Baltic Gas Sp. z o.o. passed a resolution to increase the company’s share capital by PLN 102,000, from PLN 245,000 to PLN 347,000, through the issue of 2,040 new shares with a par value of PLN 50 per share. All new shares were taken up and paid for by the existing shareholders in the following manner:

LOTOS Upstream Sp. z o.o. took up 1,020 shares with a par value of PLN 50 per share, for a cash contribution of PLN 51,000, and CalEnergy Resources Poland Sp. z o.o. took up 1,020 shares with a par value of PLN 50 per share, for a cash contribution of PLN 51,000.

On September 11th 2018, the share capital increase was entered in the Business Register of the National Court Register.

Infrastruktura Kolejowa Sp. z o.o. – liquidation

On June 28th 2018, the Extraordinary General Meeting of Infrastruktura Kolejowa Sp. z o.o. passed a resolution to dissolve the company and open liquidation proceedings as of June 28th 2018. On the same day, Marek Zygało, President of the Management Board, was appointed as liquidator of Infrastruktura Kolejowa Sp. z o.o. by way of a resolution of the General Meeting.

On August 10th 2018, the company’s changed name, i.e. Infrastruktura Kolejowa Sp. z o.o. w likwidacji (in liquidation), was entered in the Business Register.

Negros 1 Sp. z o.o. – company acquisition and amendments to the company’s Articles of Association (including a change of the company’s name to SPV Petro Sp. z o.o.)

In order to purchase a drilling platform, a concept was developed which provides for the acquisition of a special purpose vehicle in the form of a limited liability company which will ultimately become the owner of the drilling platform. In line
with the concept, Technical Ship Management Sp. z o.o. of Gdańsk ("TSM"), a Miliana Shipholding Group company, will acquire 100% of shares in the SPV, with a share capital of PLN 5,000.00, (five thousand zloty). On June 21st 2018, the General Meeting of TSM passed a resolution approving the acquisition of 100% of shares in Negros 1 Sp. z o.o., a limited liability company of Warsaw. On June 26th 2018, the parties entered into a share purchase agreement under which TSM acquired all shares in Negros 1 Sp. z o.o. (100 shares) for PLN 8,000.00. On June 21st 2018, the Company’s Articles of Association were amended. The amendments included change of the Company’s name and registered office SPV Petro spółka z ograniczoną odpowiedzialnością of Gdańsk.

On August 10th 2018, the Company’s new Articles of Association were registered, including the change of its name to SPV Petro Sp. z o.o.

On December 20th 2018, the Extraordinary General Meeting of SPV Petro Sp. z o.o. passed a resolution to increase the Company’s share capital by PLN 15,000.00, from PLN 5,000.00 to PLN 20,000.00, through an issue of 300 new shares with a par value of PLN 50.00 per share. All the new shares were subscribed and paid for with a cash contribution by the existing Shareholder, i.e. Technical Ship Management spółka z ograniczoną odpowiedzialnością.

As at the date of this report, the share capital increase had not been entered in the Business Register of the National Court Register.

Baltic Gas Spółka z ograniczoną odpowiedzialnością i Wspólnicy sp.k. – increase in contribution amounts agreed on by limited partners

On October 18th 2018, the General Meeting of Baltic Gas Spółka z ograniczoną odpowiedzialnością i Wspólnicy sp.k. passed resolutions to increase the contribution amounts agreed on by the company’s limited partners:

- the contribution amount of LOTOS Upstream sp. z o.o. of Gdańsk, a limited partner in the company, from PLN 86,396,383 to PLN 95,245,383, i.e. by PLN 8,849,000, through a cash contribution of PLN 8,849,000; and
- the contribution amount of CalEnergy Resources Poland sp. z o.o. of Warsaw, a limited partner in the company, from PLN 109,645,403 to PLN 121,340,541, i.e. by PLN 11,695,138, through a cash contribution of PLN 11,695,138.

The change in the agreed contribution amounts was entered in the Business Register of the National Court Register on December 3rd 2018.

Upstream segment’s reorganisation

On December 20th 2017, the General Meeting of Aphrodite Offshore Services N.V. (AOS 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. On January 29th 2018, the liquidation procedure of Aphrodite Offshore Services N.V. was closed, with the liquidation amount remaining to be distributed. On April 30th 2018, the company’s accounting records were closed and the liquidation amount was finally distributed and transferred to LOTOS Petrobaltic S.A.’s bank account on April 27th 2018. On June 4th 2018, LOTOS Petrobaltic S.A. received from the Company’s liquidator a document dated May 17th 2018, issued by the Supreme Court of Curaçao, confirming that no objections were raised to the liquidation proceedings conducted with respect to AOS N.V., finally closing the liquidation of the Company and providing grounds for deleting AOS N.V. from the register of assets of LOTOS Petrobaltic S.A.

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 (wholly-owned subsidiary of LOTOS Petrobaltic) 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 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 website and in the Cyprus Official Government Gazette on December 28th and December 29th 2017, respectively. On February 26th 2018 and March 13th 2018, respectively, LOTOS Petrobaltic S.A. (as the acquirer) sent to Grupa LOTOS S.A. the first and second notification of its intention to merge the Acquirer with Miliana Shipholding Company Ltd., on the terms set forth in the merger plan announced on December 28th 2017.

On January 8th 2018, the Boards of Directors of Miliana Shipholding Company Ltd. and Miliana Shipping Group Ltd., both registered in Cyprus, approved the merger plan for the two 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 assets and liabilities of the acquiree will be transferred to the acquirer, and the acquiree will be deleted from the relevant register.

The merger plans for the above companies, approved by their respective Boards of Directors, have been sent to the Cypriot court with jurisdiction over the companies’ registered offices. The merger will be effected in two stages. In the first stage, a joint meeting of the merging companies (Directors’ Meeting) is planned to be held to hear the parties and to jointly adopt the merger plan and its approval. On September 12th 2018, a meeting of shareholders and creditors of the merging companies, i.e. Miliana Shipholding Company Ltd. and Miliana Shipping Group Ltd., was held with the participation of the adviser appointed by the Cypriot court, during which the merger plan was adopted. The next step in the merger process is approval of the merger plan by the Cypriot court.

8.1.4. Changes in the Group’s organisation and reasons for such changes

Except changes in the composition of the Management Board and in the Company’s organisational structure as well as restoration of the segmental management model, there were no other changes of key management policies of Grupa LOTOS S.A. and the LOTOS Group.
### 8.2. Employment at the LOTOS Group

#### 8.2.1. Structure of the LOTOS Group workforce

**Breakdown of the LOTOS Group workforce by type of position**

<table>
<thead>
<tr>
<th>Company</th>
<th>Blue-collar jobs</th>
<th>White-collar jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRUPA LOTOS S.A.</td>
<td>495</td>
<td>1018</td>
</tr>
<tr>
<td>LOTOS Paliwa Sp. z o.o.</td>
<td>0</td>
<td>283</td>
</tr>
<tr>
<td>LOTOS Kolej Sp. z o.o.</td>
<td>694</td>
<td>339</td>
</tr>
<tr>
<td>LOTOS Oil S.A.</td>
<td>84</td>
<td>171</td>
</tr>
<tr>
<td>LOTOS Lab Sp. z o.o.</td>
<td>12</td>
<td>117</td>
</tr>
<tr>
<td>LOTOS Serwis Sp. z o.o.</td>
<td>351</td>
<td>139</td>
</tr>
<tr>
<td>LOTOS Straż Sp. z o.o.</td>
<td>79</td>
<td>14</td>
</tr>
<tr>
<td>LOTOS Asfalt Sp. z o.o.</td>
<td>120</td>
<td>128</td>
</tr>
<tr>
<td>LOTOS Upstream sp. z o.o.</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>LOTOS Ochrona Sp. z o.o.</td>
<td>163</td>
<td>24</td>
</tr>
<tr>
<td>LOTOS Air BP Polska Sp. z o.o.</td>
<td>42</td>
<td>18</td>
</tr>
<tr>
<td>LOTOS Infrastruktura S.A.</td>
<td>40</td>
<td>31</td>
</tr>
<tr>
<td>LOTOS Terminale S.A.</td>
<td>64</td>
<td>49</td>
</tr>
<tr>
<td>RC Ekoenergia Sp. z o.o.</td>
<td>41</td>
<td>30</td>
</tr>
<tr>
<td>LOTOS Biopaliwa Sp. z o.o.</td>
<td>24</td>
<td>15</td>
</tr>
<tr>
<td>LOTOS Petrobaltic S.A.</td>
<td>171</td>
<td>217</td>
</tr>
<tr>
<td>Energobaltic Sp. z o.o.</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>LOTOS E&amp;P Norge AS</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>AB LOTOS Geonafta</td>
<td>32</td>
<td>9</td>
</tr>
<tr>
<td>UAB Genciu Nafta</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>UAB Manifoldas</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Miliana Shipping Ltd</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>LOTOS Asfalt Sp. z o.o.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Technical Ship Management</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>SPV Baltic Spółka z o.o.</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

Company Workforce (as at December 31st 2018)

<table>
<thead>
<tr>
<th>Company</th>
<th>Blue-collar jobs</th>
<th>White-collar jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,422</td>
<td>2,683</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5105</td>
</tr>
</tbody>
</table>

Breakdown of Grupa LOTOS S.A. workforce by sex (as at December 31st 2018)

<table>
<thead>
<tr>
<th>Job type</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>blue-collar jobs</td>
<td>495</td>
<td>0</td>
<td>495</td>
</tr>
<tr>
<td>white-collar jobs</td>
<td>533</td>
<td>485</td>
<td>1,018</td>
</tr>
<tr>
<td>Total</td>
<td>1,028</td>
<td>485</td>
<td>1,513</td>
</tr>
</tbody>
</table>

Structure of the LOTOS Group workforce by gender (as at December 31st 2018)

<table>
<thead>
<tr>
<th>Job type</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>blue-collar jobs</td>
<td>2,348</td>
<td>74</td>
<td>2,422</td>
</tr>
<tr>
<td>white-collar jobs</td>
<td>1,594</td>
<td>1,089</td>
<td>2,683</td>
</tr>
<tr>
<td>Total</td>
<td>3,942</td>
<td>1,163</td>
<td>5,105</td>
</tr>
</tbody>
</table>

Headcount at the LOTOS Group in 2013-2018

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>1,345</td>
<td>1,350</td>
<td>1,364</td>
<td>1,406</td>
<td>1,445</td>
<td>1,513</td>
</tr>
<tr>
<td>The LOTOS Group</td>
<td>4,983</td>
<td>5,106</td>
<td>4,850</td>
<td>4,936</td>
<td>4,897</td>
<td>5,105</td>
</tr>
</tbody>
</table>

8.2.2. Control systems for employee stock option plans

In 2018, the LOTOS Group did not operate any employee stock option plan.
8.2.3. Agreements between the Company and the management staff; remuneration, awards and benefits paid, payable or potentially payable 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 2018 (PLNm)

<table>
<thead>
<tr>
<th>Management Board members</th>
<th>Short-term employee benefits (salaries)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mateusz Aleksander Bonca</td>
<td>0.71</td>
</tr>
<tr>
<td>Piotr Ciach</td>
<td>0.12</td>
</tr>
<tr>
<td>Patryk Demski</td>
<td>0.37</td>
</tr>
<tr>
<td>Marcin Jastrzębski(^{20})</td>
<td>0.59</td>
</tr>
<tr>
<td>Jarosław Kawula</td>
<td>0.69</td>
</tr>
<tr>
<td>Robert Sobków</td>
<td>0.35</td>
</tr>
<tr>
<td>Jarosław Wittstock</td>
<td>0.16</td>
</tr>
<tr>
<td>Mariusz Machajewski(^{21})</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.08</strong></td>
</tr>
</tbody>
</table>

For information on short-term liabilities under the annual bonus for the Management Board members, see Note 30.3 to the consolidated financial statements of Grupa LOTOS S.A. 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 2018 (PLNm)

<table>
<thead>
<tr>
<th>Supervisory Board members</th>
<th>Short-term employee benefits (salaries)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ciach Piotr</td>
<td>0.07</td>
</tr>
<tr>
<td>Figura Dariusz</td>
<td>0.08</td>
</tr>
<tr>
<td>Golecki Mariusz</td>
<td>0.08</td>
</tr>
<tr>
<td>Kozłowska-Chyła Beata</td>
<td>0.10</td>
</tr>
<tr>
<td>Lewandowska Katarzyna</td>
<td>0.08</td>
</tr>
<tr>
<td>Lewandowski Adam</td>
<td>0.08</td>
</tr>
<tr>
<td>Rybicki Grzegorz</td>
<td>0.03</td>
</tr>
<tr>
<td>Szklarczyk-Mierzwa Agnieszka</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Razem</strong></td>
<td><strong>0.60</strong></td>
</tr>
</tbody>
</table>

\(^{20}\) Including a severance pay and non-compete compensation.

\(^{21}\) Non-compete compensation.
8.2.4. **Liabilities arising from pensions or similar benefits to former members of management, supervisory or administrative bodies, and any liabilities incurred in connection with such pensions**

The Company has no liabilities arising from pensions or similar benefits to former members of its management or supervisory bodies.

8.2.5 **Any agreements between the company and its management staff, providing for compensation in the event of resignation or removal from office without a good reason or following acquisition of the company by another company**

Former Management Board Members are entitled to receive non-competition compensation calculated by reference to the following formula: 0.5 of fixed monthly remuneration x 6. The compensation is paid in six equal monthly instalments.

Contracts are concluded for the duration of the manager’s appointment.

In the event of expiry of a Management Board Member’s mandate, including in particular as a result of the Member’s death, removal or resignation, the Contract is terminated on the last day of the Member’s holding the position, without notice and with no further action required.

Either Party may terminate the Contract for reasons other than those specified in Section 4 on:

- 1 (one) month notice if the Management Board Member held the position for less than 12 (twelve) months,
- 3 (three) months notice if the Management Board Member held the position for 12 (twelve) months or longer.

If the Contract is terminated (other than with immediate effect as provided for in Section 13.5 of the Contract), the Management Board Member will be entitled to a severance payment equal to three times the fixed remuneration, provided that the Member held the position for at least 12 (twelve) months prior to termination.
8.3. Environmental Protection

In 2018, the Company continued to implement the initiatives launched in previous years. The BAT Conclusions for the oil refining industry, which entered into force in late October 2018, introduced a number of new environmental protection requirements. The refinery units operated by the LOTOS Group are compliant with those requirements. Only two areas needed to be addressed, namely the scope and method of pollution monitoring.

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). Depending on the findings, the level of annual emissions was determined, frequently based on other process parameters. 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)). These are referred to as power generation emissions.

Following the entry into force of the new requirements, the Grupa LOTOS refinery in Gdańsk was required to begin:

- 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 due to the exhaust gas from the Claus plant.

The new systems were started up in October 2018 and successfully passed the QAL2 tests.

In January 2019, the first emission reports were submitted to relevant authorities, with no exceedance indicated by the measurements. Power generation emissions from other sources are measured at regular intervals in accordance with the previous requirements.

In addition, the BAT conclusions require that refiners in Europe 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. Initial measurements were also taken, and their results submitted to relevant authorities. It should be noted that no permissible limits for PCDD/F content in flue gases have been specified, and so Grupa LOTOS is only required to monitor and report it.

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 should 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.

Another 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. 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 2018, the first pilot test was carried out under the LDAR programme on the entire gasoline desulphurisation unit (0200) and on parts of the naphtha isomerisation (0350), semi regenerative reforming (0410) and diesel oil desulphurisation (0500) units. Preliminary stock taking of equipment that may be a source of fugitive emissions was also carried out. A dedicated team was also assembled to take over further stages of the LDAR development programme, i.e. physical marking of all unit components covered by the LDAR, adding the results of regular measurements to the database, and removing any identified leaks.
Two new units came on stream in 2018. These were the HGU III hydrogen generation unit (0290, LOTOS Asfalt) and hydrowax vacuum distillation unit (HVDU) (0160, Grupa LOTOS). In compliance with relevant legal requirements, emissions from the units were measured and the results were sent to competent authorities. In both cases, the measurement results showed that the permitted emission levels were not exceeded.

The preparations for the fourth EU ETS trading period 2021–2030 will enter the most important phase in 2019. The LOTOS Group companies participating in the ETS and included on the carbon leakage list are preparing to file applications for free emission allowances for 2021–2025. The applications, after a review by an accredited body, must be submitted by the end of May 2019.

During the reporting period, there were changes to a number of external and internal conditions regarding waste management, which had their implications for the Group’s waste management practices.

In April 2018, new regulations came into force in the Gdańsk area that aim to maximise recovery from municipal waste. Residents and businesses who opt for sorting waste in exchange for lower waste collection charges must now sort their municipal waste into bio waste, metal and plastic, glass, paper and waste paper, and residual waste. All LOTOS Group companies operating in the Gdańsk area comply with the new regulations.

Under new legislation in force a large number of businesses in Poland that are involved in some form of waste processing are required to prepare a fire protection plan for their waste storage facilities and landfill sites, which must be attached to the next application they file for waste management permit or integrated permit. As at the date of this Report, a lack of secondary legislation to the new law posed some obstacles, but no major problems are expected with implementing the latter across the LOTOS Group within the prescribed time limit.

Environmental policy – impact of implemented measures on the value chain

### Overview and performance indicators of the environmental policy pursued by the Company and the Group

<table>
<thead>
<tr>
<th>European benchmark</th>
<th>Benchmark europejski</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic target</td>
<td>Cel strategiczny</td>
</tr>
<tr>
<td>Grupa LOTOS</td>
<td>Grupa LOTOS</td>
</tr>
</tbody>
</table>

In 2018, the Gdańsk refinery’s emissions intensity ratio was further reduced, to 27.5 kg CO2/CWT. This further reduction was achieved thanks to minimum consumption of fuel oil (only 1,000 tonnes in December) relative to gaseous fuels as fuel for the units, coupled with record-high volume of crude oil processed (10.5 million tonnes in the year) and high load on other units.
Air emissions

CO2 emissions from LOTOS Group's units covered by the EU ETS

<table>
<thead>
<tr>
<th>Company</th>
<th>Annual CO2 emissions [Mg]</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grupa LOTOS</td>
<td></td>
<td>1,899,938</td>
<td>1,717,335</td>
<td>1,884,570</td>
</tr>
<tr>
<td>CHP plant</td>
<td></td>
<td>282,019</td>
<td>249,951</td>
<td>283,056</td>
</tr>
<tr>
<td>Refinery units</td>
<td></td>
<td>1,617,919</td>
<td>1,467,384</td>
<td>1,601,514</td>
</tr>
<tr>
<td>LOTOS Asfalt</td>
<td></td>
<td>12,041</td>
<td>11,962</td>
<td>29,513</td>
</tr>
<tr>
<td>Gdańsk Plant</td>
<td></td>
<td>7,966</td>
<td>7,633</td>
<td>24,925</td>
</tr>
<tr>
<td>Jasło Plant</td>
<td></td>
<td>4,075</td>
<td>4,329</td>
<td>4,588</td>
</tr>
<tr>
<td>EnergoBaltic</td>
<td></td>
<td>8,055</td>
<td>6,991</td>
<td>6,643</td>
</tr>
<tr>
<td>RC Ekoenergia</td>
<td></td>
<td>29,565</td>
<td>30,266</td>
<td>32,015</td>
</tr>
</tbody>
</table>

Emission of air pollutants from Grupa LOTOS units

<table>
<thead>
<tr>
<th>Unit</th>
<th>Annual emissions [Mg]</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SO2</td>
<td>NOx</td>
<td>PM</td>
<td>CO</td>
</tr>
<tr>
<td>CHP plant</td>
<td>1</td>
<td>87</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Refinery units</td>
<td>1613</td>
<td>775</td>
<td>133</td>
<td>281</td>
</tr>
</tbody>
</table>

PZG LOTOS Asfalt reported an increase in CO2 emissions following the launch of the HGU III unit in August.
8.4. Agreements significant to the Company’s and Group’s business, including shareholder agreements, insurance, partnership or cooperation agreements known to the Group

In 2018, the commercial agreements significant to Grupa LOTOS S.A.’s and the Group’s operations, i.e. with a value exceeding 15% of the Company’s equity, were related to the Group’s core business. These included:

Crude oil supply contracts
Grupa LOTOS S.A. had significant oil supply agreements with four business partners: Rosneft Oil Company, Tatneft Europe AG, Vitol SA, and Petraco Oil Company LLP.

Contracts for sale of petroleum products
Grupa LOTOS S.A. had significant contracts for sale of liquid fuels with two customers: CIRCLE K Polska Spółka z o.o. and BP Europa SE Poland Branch.

Insurance contracts
The significant insurance contracts included:

General insurance
- Property insurance against physical damage, plant failure and business interruption (PD/BI/Inventories)
- Business liability insurance
- Directors and Officers liability insurance (D&O)
- Aviation liability insurance
- Terrorism risk insurance
- Property insurance against fire and other acts of God (stocks at third-party terminals)
- Cargo insurance for domestic shipments
- Property insurance for domestic pipeline transport
- Cargo insurance for international shipments

Downstream business insurance
- EFRA Project insurance policy scheme:
  - Professional indemnity insurance (PI)
  - Terrorism risk insurance against property damage/loss of income
  - Construction and erection all risks insurance (CAR/EAR)
  - Delay in Start-Up insurance (DSU)
  - Directors and Officers liability insurance (D&O)
  - Third-party liability insurance

Upstream business insurance
- LOTOS Petrobaltic: insurance coverage for onshore operations and wharf, personal accident insurance for onshore personnel, personal accident and emergency medical treatment insurance, marine insurance coverage including: liability and all risks insurance for the B3 Offshore Oil And Gas Production Facility, PG-1 and BB platform (employees and offshore equipment)
- B8: insurance coverage for the B8 Project and liability insurance for the B8 Offshore Oil And Gas Production Facility
- SPV Baltic: insurance coverage for the LPB platform (P&I, all risks)
- Miliana: P&I insurance for vessels and all risks insurance for vessels and equipment.

Investment agreements
On December 4th 2018, the Company’s subsidiary, LOTOS Asfalt Sp. z o.o. and KT-Kinetics Technology S.p.A. (“KT”) signed an annex to the Company’s key investment agreement for engineering, procurement and construction of key EFRA units. In the course of the negotiations, the parties to the annex agreed on a new Ready-For-Start-Up (“RFSU”) date and stated that the Delayed Coking Unit (DCU) should reach the RFSU status by May 31st 2019. The total project budget remained unchanged.
Shareholder agreements

On February 27th 2018, the State Treasury (Grupa LOTOS S.A.’s main shareholder) and PKN ORLEN S.A. signed a letter of intent concerning PKN ORLEN S.A.’s acquisition of control over Grupa LOTOS S.A., understood as PKN ORLEN S.A.’s direct or indirect acquisition of at least 53% of Grupa LOTOS S.A.’s share capital.

8.4.1. Material related-party transactions executed on non-arms’ length terms

In the year ended December 31st 2018, no related-party transactions were concluded on non-arms’ length terms.

8.4.2. Agreement with qualified auditor of financial statements

Under the agreement executed with Grupa LOTOS S.A. on June 20th 2018 (including annexes), Deloitte Audyt 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 2018,
- Audit of the full-year separate and consolidated financial statements for 2018.

Total fees for audit, review and verification procedures performed by Deloitte Audyt sp. z o.o. sp. k. in 2018 (PLNm)

<table>
<thead>
<tr>
<th>Service Description</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit of full-year separate and consolidated financial statements of selected companies of the LOTOS Group, including: (1)</td>
<td>1.0</td>
</tr>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>0.6</td>
</tr>
<tr>
<td>Assurance services, including:</td>
<td></td>
</tr>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>0.3</td>
</tr>
<tr>
<td>Tax advisory services</td>
<td>-</td>
</tr>
<tr>
<td>Other services, including:</td>
<td>0.0</td>
</tr>
<tr>
<td>Grupa LOTOS S.A.</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>1.3</td>
</tr>
</tbody>
</table>

(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 the AB LOTOS Geonafta Group due to, respectively, Deloitte AS and Deloitte Lietuva (companies of the Deloitte Group) for 2018 amounted to PLN 0.5m.

In 2017, total fees for the audit, review and verification procedures amounted to PLN 1.12m (Grupa LOTOS S.A.: PLN 0.4m), of which: for the audit of full-year separate and consolidated financial statements of selected companies of the LOTOS Group – PLN 0.9m (Grupa LOTOS S.A.: PLN 0.2m), for assurance services – PLN 0.2m (Grupa LOTOS S.A.: PLN 0.2m), and other services – PLN 0.02m.
8.4.3. Court, arbitration or administrative proceedings

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 2017, 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 2017.

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 Gdansk. The Director of the Tax Chamber in Gdansk 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. In Q3 2016, the Company lodged cassation complaints with the Supreme Administrative Court of Warsaw. On December 11th 2018, the Supreme Administrative Court dismissed the Company’s complaint against the ruling of the Provincial Administrative Court of Gdansk of July 20th 2016, specifying the Company’s VAT liability for the individual months of 2011. The date of a hearing concerning VAT for the individual months of 2010 was set for March 27th 2019. In connection with other VAT inspections, provisions for tax risk were recognised, as presented in Notes 9.4 and 9.6.

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. GAAR defines tax avoidance 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.
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 the 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 subsea 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 agreement made with SBM, the balance of the Group’s share in the amount due to the consortium members under the agreement (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 2018, available cash deposited in the escrow account, denominated in the presentation currency, was recognised in the amount of PLN 2.8m 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 2.4m and was recognised under the short-term portion of Other liabilities and provisions.

On August 11th 2017, SBM Offshore confirmed the conclusion of an agreement with a majority of MOPU insurers to settle insurance claims relating to the faulty execution of the MOPU. On September 10th 2018, SBM announced that the insurance claim concerning the YME project was fully and finally settled. The gross amount received by SBM as insurance compensation was USD 390m. The share of LOTOS E&P Norge AS (net of the cost of legal services and other expenses) is expected at USD 30.7m. The Group recognised its share in the compensation under Other income, in the amount of PLN 118.3m.

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 the risk of imposition of contractual penalties on LOTOS Kolej Sp. z o.o. was low, therefore no provisions were recognised in these consolidated financial statements.

In the twelve months ended December 31st 2018, there were no material settlements under court or other proceedings, save for those presented above.
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group for 2018

Grupa LOTOS shares
9. Grupa LOTOS shares

9.1. Grupa LOTOS shares on the Warsaw Stock Exchange

Grupa LOTOS shares have been listed on the Warsaw Stock Exchange since June 9th 2005.

<table>
<thead>
<tr>
<th>ISIN</th>
<th>Warsaw Stock Exchange</th>
<th>Thomson Reuters</th>
<th>Bloomberg</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLLOTOS00025</td>
<td>LTS</td>
<td>LTSP.WA</td>
<td>LTS PW</td>
</tr>
</tbody>
</table>

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 2018 was approximately PLN 16.4bn.

**Grupa LOTOS share price (PLN) and trading volume (number of shares)**

<table>
<thead>
<tr>
<th>Wolumen obrotu</th>
<th>Trading volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurs zamknięcia</td>
<td>Closing price</td>
</tr>
<tr>
<td>Min 7,27 zł</td>
<td>Low PLN 7.27</td>
</tr>
<tr>
<td>Max 89,62 zł</td>
<td>High PLN 89.62</td>
</tr>
</tbody>
</table>
In 2018, 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

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free float shares (million shares)</td>
<td>129.87</td>
<td>129.87</td>
<td>184.87</td>
<td>184.87</td>
<td>184.87</td>
<td>184.87</td>
</tr>
<tr>
<td>Low</td>
<td>32.97</td>
<td>24.05</td>
<td>23.83</td>
<td>24.10</td>
<td>37.00</td>
<td>51.28</td>
</tr>
<tr>
<td>High</td>
<td>45.45</td>
<td>40.96</td>
<td>33.15</td>
<td>40.40</td>
<td>68.85</td>
<td>89.62</td>
</tr>
<tr>
<td>Close</td>
<td>35.45</td>
<td>25.50</td>
<td>27.00</td>
<td>38.25</td>
<td>57.70</td>
<td>88.50</td>
</tr>
<tr>
<td>Rate of return at end of period (%)</td>
<td>-13.96</td>
<td>-28.07</td>
<td>4.40</td>
<td>44.00</td>
<td>50.30</td>
<td>48.00</td>
</tr>
<tr>
<td>Trading value (PLNm)</td>
<td>2,211</td>
<td>1,589</td>
<td>2,228</td>
<td>2,230</td>
<td>5,062</td>
<td>10,012</td>
</tr>
<tr>
<td>Share in trade (%)</td>
<td>1.00</td>
<td>0.77</td>
<td>1.10</td>
<td>1.10</td>
<td>2.16</td>
<td>6.2</td>
</tr>
<tr>
<td>Average trading volume per session</td>
<td>229,877</td>
<td>203,839</td>
<td>314,239</td>
<td>292,032</td>
<td>372,519</td>
<td>299,578</td>
</tr>
</tbody>
</table>
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

Average number of trades per session

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of trades per session</td>
<td>877</td>
<td>851</td>
<td>1,534</td>
<td>1,569</td>
<td>2,739</td>
<td>2,350</td>
</tr>
</tbody>
</table>

Company valuation

| Capitalisation (PLNbn) | 4.6  | 3.3  | 5.0  | 7.1  | 10.7 | 16.4 |
| EV (PLNbn)             | 10.3 | 9.6  | 11.1 | 13.4 | 13.2 | 18.7 |

Valuation of shares

| Earnings per share (PLN) | 0.30 | -    | -    | 5.50 | 9.00 | 8.60 |
| P/E (x)                  | 118  | -    | -    | 6.90 | 6.40 | 10.30|
| EV/EBITDA (x)            | 12.85| -    | 10.22| 4.58 | 4.30 | 6.10 |

*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
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

Grupa LOTOS share price in 2018

<table>
<thead>
<tr>
<th>Wolumen obrotu</th>
<th>Trading volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurs zamknięcia</td>
<td>Closing price</td>
</tr>
<tr>
<td>Min 51.28 zł</td>
<td>Low PLN 51.28</td>
</tr>
<tr>
<td>Max 89.62 zł</td>
<td>High PLN 89.62</td>
</tr>
<tr>
<td>Close 88.50 zł</td>
<td>PLN 88.50m</td>
</tr>
</tbody>
</table>

Grupa LOTOS share price performance vs index performance in 2018

* Rebased (100 = closing price at December 29th 2017)

Brokers’ recommendations on Grupa LOTOS shares

Recommendations on Grupa LOTOS shares are issued by 15 investment firms (including brokerage houses and investment banks):
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

Recommendations on Grupa LOTOS shares issued by brokerage houses

<table>
<thead>
<tr>
<th>Based in Poland</th>
<th>Based abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM Banku Handlowego (Citi)</td>
<td>HSBC</td>
</tr>
<tr>
<td>DM mBanku</td>
<td>Erste Bank</td>
</tr>
<tr>
<td>DM BZ WBK</td>
<td>Raiffeisen Centrobank</td>
</tr>
<tr>
<td>DM BOŚ</td>
<td>Societe Generale</td>
</tr>
<tr>
<td>DM PKO BP</td>
<td>Wood &amp; Co.</td>
</tr>
<tr>
<td>DM BDM</td>
<td>Haitong Bank</td>
</tr>
<tr>
<td>DM Vesor</td>
<td>Reneissance Capital</td>
</tr>
<tr>
<td>DM Trigon</td>
<td></td>
</tr>
<tr>
<td>DM Pekao</td>
<td></td>
</tr>
</tbody>
</table>

9.2. Dividend

On June 28th 2018, the Annual General Meeting of Grupa LOTOS S.A. (“AGM”) passed a resolution on the allocation of the Company’s 2017 profit. In particular, the Meeting resolved to distribute PLN 184,873,362.00 as dividend to the shareholders.

The dividend per share will be PLN 1, pre-tax.

The number of shares in respect of which dividend would be paid was 184,873,362. The AGM also set the dividend record date for September 12th 2018 and the dividend payment date for September 28th 2018.

Dividend and dividend yield (PLN)

<table>
<thead>
<tr>
<th>Financial year</th>
<th>Dividend</th>
<th>Dividend per share</th>
<th>Share price at year end</th>
<th>Dividend yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>0.0</td>
<td>0.0</td>
<td>44.2</td>
<td>-</td>
</tr>
<tr>
<td>2006</td>
<td>40,932,000.0</td>
<td>0.4</td>
<td>49.3</td>
<td>0.7</td>
</tr>
<tr>
<td>2007</td>
<td>0.0</td>
<td>0.0</td>
<td>44.5</td>
<td>-</td>
</tr>
<tr>
<td>2008</td>
<td>0.0</td>
<td>0.0</td>
<td>12.0</td>
<td>-</td>
</tr>
<tr>
<td>Financial year</td>
<td>Dividend per share</td>
<td>% of net profit</td>
<td>Dividend record date</td>
<td>Dividend payment date</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------</td>
<td>-----------------</td>
<td>----------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>2005</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2006</td>
<td>0.4</td>
<td>10.1</td>
<td>11.06.2007</td>
<td>not later than Jul 31 2007</td>
</tr>
<tr>
<td>2007</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2008</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2009</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2010</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2011</td>
<td>0.0</td>
<td>0.0</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Dividend yield – dividend per share to price per share.*
9.3. Share buyback

Grupa LOTOS S.A. did not buy back any of its shares in 2018.

9.4. 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 25th 2019 the Management and Supervisory Board members did not hold any shares in Grupa LOTOS S.A.’s related companies.

9.5. 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 2018

Corporate governance
10. Corporate governance

10.1. Statement of compliance with corporate governance standards

This Statement meets the requirements stipulated in Section 70.6.5 of the Minister of Finance’s Regulation of March 29th 2018 on current and periodic information to be published by issuers of securities and conditions for recognition as equivalent of information whose disclosure is required under the laws of a non-member state (Dz.U. 2018, item 757). This Statement is also issued pursuant to Section 29 of the Rules of the Warsaw Stock Exchange.

10.1.1. The corporate governance rules applicable to the Company and the place where the rules are publicly available

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 the first listing of its shares in June 2005, Grupa LOTOS has adhered to most of the recommendations contained in the Best Practices for Public Companies. Since 2016, Grupa LOTOS has been bound by the corporate governance standards set out in the Code of Best Practice for WSE Listed Companies, which was approved by the WSE Supervisory Board’s Resolution No. 26/1413/2015 of October 13th 2015.

On January 4th 2016, Grupa LOTOS published a report announcing the adoption of new best practices and posted an update on its compliance with the standards and recommendations set out in the Code of Best Practice 2016 on its website, as required under Section I.Z.1.13 → List of the Best Practices applied by the Company.

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.

10.1.2. Standards and recommendations which were not applied by the Company

The Company applied the standards set out in the Code of Best Practice for WSE Listed Companies in 2018, except for the following:

A company should operate a corporate website and publish on it, in a legible form and in a separate section, in addition to information required under the legislation:

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
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

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.

10.1.3. Key features of the Company’s internal control and risk management systems used in the preparation of financial statements and consolidated financial statements

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 Petrotalit 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, 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.

10.2. Shareholding structure

10.2.1. Shareholders holding directly or indirectly major holdings of Grupa LOTOS S.A. shares

In 2018, the share capital of Grupa LOTOS S.A. did not change relative to 2017 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.

<table>
<thead>
<tr>
<th>Shareholder</th>
<th>Number of shares</th>
<th>Ownership interest</th>
<th>Number of votes</th>
<th>Share of total voting rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Treasury</td>
<td>98,329,515</td>
<td>53.19%</td>
<td>98,329,515</td>
<td>53.19%</td>
</tr>
<tr>
<td>Nationale Nederlanden OFE</td>
<td>9,324,720</td>
<td>5.044%</td>
<td>8,500,000</td>
<td>5.044%</td>
</tr>
</tbody>
</table>

On January 30th 2019, the Company received a notification, given under Art. 69 of the Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organised Trading, and Public Companies, from the shareholder Nationale-Nederlanden Otwarty Fundusz Emerytalny concerning a reduction of the shareholder’s share in total voting rights at the Company’s General Meeting below the 5% threshold.

Shareholders with major holdings of Grupa LOTOS S.A. shares as at March 7th 2019
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

<table>
<thead>
<tr>
<th>Shareholder</th>
<th>Number of shares</th>
<th>Ownership interest</th>
<th>Number of votes</th>
<th>Share of total voting rights</th>
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<tr>
<td>State Treasury</td>
<td>98,329,515</td>
<td>53.19%</td>
<td>98,329,515</td>
<td>53.19%</td>
</tr>
</tbody>
</table>

Shareholding structure of Grupa LOTOS S.A. as at December 31st 2018

- **Skarb Państwa**: 53.19%
- **w wolnym obrocie**: 46.81%

<table>
<thead>
<tr>
<th>Shareholder</th>
<th>State Treasury</th>
</tr>
</thead>
<tbody>
<tr>
<td>W wolnym obrocie</td>
<td>Free float</td>
</tr>
</tbody>
</table>

Structure of Grupa LOTOS share capital

<table>
<thead>
<tr>
<th>Series A shares</th>
<th>55,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series B shares</td>
<td>78,700,000</td>
</tr>
<tr>
<td>Series C shares</td>
<td>16,173,362</td>
</tr>
<tr>
<td>Series D shares</td>
<td>35,000,000</td>
</tr>
</tbody>
</table>
10.2.2. 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.

Special rights of the State Treasury and their exercise at companies

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 Polish 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.

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.
The above limitation does not apply to:

- 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;
- 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:

- 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.
- A parent or a subsidiary is any person which:
  - meets the relevant criteria set forth in Art. 4.1.4) of the Commercial Companies Code, or
  - 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
  - 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
  - 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
  - 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:

- 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;
- 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;
- 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;
- in any case, a shareholder whose voting rights have been limited retains the right to exercise at least one vote;
- 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.

10.2.3. Restrictions on transfer of securities

There are no restrictions on transfer of title to any Grupa LOTOS shares.

10.2.4. Operation of the General Meeting and its key powers; shareholders’ rights and the manner of exercising those rights

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 July 9th 2018) 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 2018, the Annual General Meeting (AGM) was held on June 28th and resumed on July 12th after an adjournment.

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.

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.

10.3. Activities of the management, supervisory and administrative bodies of Grupa LOTOS S. A. and their committees, including composition of such bodies and changes in their composition in 2018

10.3.1. Supervisory Board of Grupa LOTOS S.A.

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 from office at any time prior to the expiry of their term of office. Notwithstanding the foregoing, as long as the State Treasury remains a shareholder in the Company, the entity authorised to exercise voting rights attached to the shares held by the State Treasury shall have the right to appoint one member of the Supervisory Board by way of a written statement to that effect. 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: the Audit Committee, Strategy and Development Committee, and Organisation and Management Committee.

In view of the approaching expiry of the ninth term of office of the Company’s Supervisory Board, the Annual General Meeting 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 tenth joint term of office (expiring in 2020) at eight. The following persons were appointed to the Supervisory Board: Beata Kozłowska-Chyla, Katarzyna Lewandowska, Agnieszka Szklarczyk-Mierzwa, Piotr Ciach, Dariusz Figura, Mariusz Golecki, and Adam Lewandowski.

The Annual General Meeting held on June 28th 2018 appointed Grzegorz Rybicki to the Company’s Supervisory Board by way of Resolution No. 18.

Accordingly, from June 28th to December 31st 2018 and as at the date of issue of this Directors’ Report, the composition of the Supervisory Board was as follows: Beata Kozłowska-Chyla, Piotr Ciach, Katarzyna Lewandowska, Dariusz Figura, Mariusz Golecki, Adam Lewandowski, Agnieszka Szklarczyk-Mierzwa, Grzegorz Rybicki.

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. (10th term)**

<table>
<thead>
<tr>
<th>Supervisory Board members</th>
<th>Position held on the Supervisory Board of the 10th term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beata Kozłowska-Chyla</td>
<td>Chairperson since June 14th 2017</td>
</tr>
<tr>
<td>Piotr Ciach</td>
<td>Member from June 14th 2017 to July 14th 2017</td>
</tr>
<tr>
<td></td>
<td>Deputy Chairperson since July 14th 2017</td>
</tr>
<tr>
<td>Katarzyna Lewandowska</td>
<td>Member from June 14th 2017 to July 14th 2017</td>
</tr>
<tr>
<td></td>
<td>Secretary since July 14th 2017</td>
</tr>
<tr>
<td>Dariusz Figura</td>
<td>Member since June 14th 2017</td>
</tr>
<tr>
<td>Mariusz Golecki</td>
<td>Member since June 14th 2017</td>
</tr>
<tr>
<td>Piotr Ciach</td>
<td>Member since June 14th 2017</td>
</tr>
<tr>
<td>Adam Lewandowski</td>
<td>Member since June 14th 2017</td>
</tr>
<tr>
<td>Grzegorz Rybicki</td>
<td>Member since June 28th 2018</td>
</tr>
</tbody>
</table>

**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 Gdansk 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 Obrony 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 defence industry, entities managing sea ports of primary importance to the national economy, an entity discharging the State Treasury’s responsibilities in the area of the state’s monopoly over numerical and cash lottery, 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.
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

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 in 2007–2009, she worked as Chief Specialist at the Department of International Cooperation and European Law at the Ministry of Justice. She gained experience in the oil and liquid fuel markets working at the Oil and Gas Department of the Ministry of Economy as Chief Specialist (from 2009) and as Head of the Department of Oil and Liquid Fuel Markets at the Ministry of Energy (from 2015). Currently, she is a legal counsel at the Legal Office of the Ministry of Energy. She has experience in international law, EU law, as well as business and energy law, with particular expertise in regulations governing fuel security and cooperation in this area.

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.

Grzegorz Rybicki  
Member since June 28th 2018

On June 28th 2018, Grzegorz Rybicki was appointed by the Annual General Meeting of Grupa LOTOS S.A. to the Supervisory Board of the tenth joint term of office.

Grzegorz Rybicki is a graduate of the Faculty of Law and Administration of the University of Warsaw. In 1990–1992, he completed judge training at the Regional Court of Warsaw, and in 1992–1994 he completed legal training as an attorney-at-law. Since 1995, he has worked as an attorney-at-law in a Warsaw-based law firm. In 1993, he completed training and internship for attorneys-at-law in Chicago, USA, organised by the American Bar Association, the Polish Bar Council, and DePaul University of Chicago.

In 1997–1998, he completed a post-graduate course in copyright, publishing and press law at the Faculty of Management and Social Communication of the Jagiellonian University, Institute of Intellectual Property Rights. Since 2001, he has been an arbitrator at the Copyright Commission appointed by the Minister of Culture and National Heritage.

Previously, he has served on the supervisory boards of large commercial-law companies. Since the beginning of his professional career, Mr Rybicki’s legal work has focused on a wide range of matters related to commercial and business law, as well as on legal support and advisory services to commercial-law companies.
Delegation of specific duties to individual Supervisory Board members

The Supervisory Board may delegate its members to individually perform certain tasks or functions.

On February 12th 2018, the Supervisory Board delegated two of its members, Mariusz Golecki and Adam Lewandowski (separately), to individually perform supervisory functions with respect to assessing the effectiveness and correctness of supervision over the ‘Hydrogen Recovery Unit (HRU)’ project (Resolution No. 36/X/2018).

On March 19th 2018, the Supervisory Board delegated Piotr Ciach to temporarily perform the duties of a member of the Grupa LOTOS Management Board (Resolution No. 42/X/2018). The delegation was revoked with effect from May 21st 2018 (Resolution No. 65/X/2018).

On August 10th 2018, the Supervisory Board delegated two of its members, Piotr Ciach and Katarzyna Lewandowska (separately), to individually perform supervisory functions with respect to the conclusion of a crude oil supply contract between Grupa LOTOS S. A. and Rosneft Oil Company.

Operation and composition of the Audit Committee

The Audit Committee of the Supervisory Board of Grupa LOTOS S. A. is an advisory and opinion-forming body supporting the Company’s Supervisory Board.

The obligation to establish the Audit Committee is imposed by the Act on Qualified Auditors and Their Self-Government, Entities Qualified to Audit Financial Statements and Public Supervision of May 7th 2009 (Dz.U. of 2016, item 1948, as amended).

As Polish law requires that audit committees be established at entities supervised by the Polish Financial Supervision Authority, the Office of the Polish Financial Supervision Authority has prepared a code of best practice for audit committees. The code was prepared based on international standards, press articles, guidelines from international organisations, as well as knowledge and experience of audit firms and internal auditors. The purpose of the recommendations was to provide audit committee members with a tool that may contribute to a more effective performance by committee members by providing guidance on how the committee should operate, and identify areas that require special attention of the supervisory board considering the statutory tasks and responsibilities imposed on the audit committee.

Acting as an analytical and controlling body and giving the Supervisory Board material recommendations, the Audit Committee perform its activities pursuant to the Rules of Procedure for the Supervisory Board and the Rules of Procedure for the Audit Committee.

The main tasks of the Audit Committee include the provision of ongoing advice to the Supervisory Board on proper implementation of the budget reporting, financial reporting and internal control standards at the Company, as well as collaboration with the Company’s auditors, including in particular:

- monitoring of the financial reporting process,
- monitoring of the effectiveness of the Company’s internal control, internal audit and risk management systems,
- monitoring of financial auditing procedures, including monitoring of the audit of full-year and consolidated financial statements,
- monitoring of the work and reports of the independent qualified auditor, including monitoring of the independence of the auditor and the audit firm, including active participation in selecting the audit firm,
- analysing selected economic events relevant to the Company’s operations,
- ongoing reporting of any material issues related to the Audit Committee’s operations to the Supervisory Board.

The Audit Committee, appointed by the Supervisory Board from among its members, consists of three to five members.

The composition of the Audit Committee from January 1st 2018 to December 31st 2018 and as at the issue date of this Report was as follows:

<table>
<thead>
<tr>
<th>Audit Committee</th>
<th>Dariusz Figura</th>
<th>Chairman</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From January 1st to December 31st 2018, the Audit Committee held thirteen meetings:

- January 30th – the meeting was continued on February 12th,
- February 27th,
- March 19th – the meeting was continued on March 24th and March 27th,
- April,
- April 24th,
- May 14th,
- May 29th,
- June 23rd,
- August,
- September 28th – the meeting was continued on September 29th,
- October 25th,
- November 20th,
- December 17th

and passed eight resolutions.

**Audit Committee of Grupa LOTOS S.A.**

According to the representations received by the Company, the following persons meet the independence criteria:

- Dariusz Figura,
- Adam Lewandowski.

The following persons have accounting or financial auditing knowledge and skills:

- Dariusz Figura,
- Katarzyna Lewandowska,
- Adam Lewandowski,
- Mariusz Golecki.

The following persons have the knowledge and skills specific to the fuel industry:

- Dariusz Figura,
- Katarzyna Lewandowska,
- Adam Lewandowski,
- Mariusz Golecki,
- Piotr Ciach.

Having assessed the threats to the independence of the audit firm (Deloitte Audyt Spółka z ograniczoną odpowiedzialnością sp.k.) as well as the safeguards applied to mitigate those threats, the Audit Committee of the Supervisory Board of Grupa LOTOS S.A. approved the provision by a member of the audit firm’s network, i.e. Deloitte Advisory Sp. z o.o., of an additional service to Grupa LOTOS S.A., which is not an audit at a public-interest entity (Resolution No. KA/2018/08 of October 25th 2018).
The assessment was performed in accordance with the policy on providing permitted additional services by an audit firm to Grupa LOTOS S. A. and the LOTOS Group companies, and in accordance with the procedure for approval by the Audit Committee of permitted additional services provided by the audit firm.

**Key assumptions underlying the audit firm selection policy:**

On October 10th 2017, the Supervisory Board of Grupa LOTOS S.A. approved the Policy for the selection of an audit firm to audit financial statements of Grupa LOTOS S.A. and the LOTOS Group companies. Key provisions of the Policy:

1. Pursuant to the Articles of Association of Grupa LOTOS S.A., the Supervisory Board selects an audit firm or extends the agreement with the existing audit firm.

2. The selection or extension is made on the basis of the Audit Committee’s recommendation. The Audit Committee’s recommendation is based on an assessment of the bids submitted by audit firms in the selection procedure, or based on the grounds for extending the agreement with the audit firm.

3. The selection of an audit firm or extension of the agreement with the existing audit firm is made in compliance with the laws in force at the time of selection or extension.

4. In selecting an audit firm, the Company applies the supervisory body’s guidelines concerning the rules and procedures for selection of qualified auditors to audit financial statements of companies in which the State Treasury holds equity interests.

5. Audit firms with small market shares may also submit their bids in the selection procedure.

6. The selection procedure should not exclude an audit firm which has obtained less than 15% of its total audit remuneration from public-interest entities in a given EU country in the preceding calendar year, and which is included in the list of audit firms published by the Polish Audit Oversight Commission on its website.

7. It is prohibited to introduce any contractual clauses that would require the Supervisory Board to select an audit firm from among a specific category or list of audit firms. Such clauses are invalid by law.

8. In order to ensure the highest consistency, and thus reliability of the consolidated financial statements, while taking into account the optimisation of the Group’s audit costs, it is deemed reasonable and advisable that the financial statements of the Group’s key companies be audited by the audit firm/member of the network of the audit firm selected to audit the financial statements of Grupa LOTOS S.A. (the leading audit firm).

9. The Supervisory Board’s resolution to appoint an audit firm or extend an agreement with the existing audit firm is a recommendation for the supervisory boards of companies covered by the audit firm selection procedure.

10. While selecting an audit firm to audit their own financial statements, the other LOTOS Group companies apply the rules set out in the Policy.

11. The Supervisory Board – while making the final selection, and the Audit Committee – while preparing its recommendation act in line with the following guidelines concerning the audit firm:

   a) compliance with formal requirements;
   b) the auditor’s independence and impartiality, including in the context of agreements already signed by the audit firm/member of the audit firm’s network with the LOTOS Group companies;
   c) position in the audit services market;
   d) the price for the audit taking into consideration the workload (quoted as an aggregate amount and separately for each Group company covered by the audit firm selection procedure);
   e) knowledge of the industry and the Group companies;
   f) experience in the audit of listed companies applying IAS/IFRS;
   g) audit schedule;
   h) composition of the team appointed to audit the parent and the Group companies covered by the audit firm selection procedure;
   i) draft audit agreement.

12. Tender documentation contains transparent and non-discriminatory selection criteria to be used in the evaluation of bids.

13. The Supervisory Board is guided by the principle of audit firm and lead auditor rotation, as described in the procedure for selecting an audit firm to audit financial statements.

14. Agreements with audit firms are made for at least two and not more than five years.
Directors' Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

Operation and composition of the Strategy and Development Committee

The Strategy and Development Committee of the Grupa LOTOS Supervisory Board is a standing analysis and consultation body operating collectively within the Company's Supervisory Board and supporting it. The Strategy and Development Committee discharges its duties by presenting to the Supervisory Board proposals, recommendations, opinions and reports, based on the Rules of Procedure for the Supervisory Board and the Rules of Procedure for the Strategy and Development Committee.

The main tasks of the Strategy and Development Committee include presenting to the Supervisory Board opinions and recommendations on planned investment projects with a material effect on the Company's assets, including in particular:

- issuing opinions on the Company's and the Group's long-term development strategies;
- assessing the effect of proposed and actual investment projects on the Company's assets;
- monitoring the implementation of investment projects resulting from the objectives of the share issues carried out to increase the share capital;
- assessing any actions, agreements, and other documents related to steps taken to acquire, sell, encumber or otherwise dispose of the Company's material assets;
- giving opinions on all strategic documents submitted to the Supervisory Board by the Management Board.

The Strategy and Development Committee, appointed by the Supervisory Board from among its members, consists of three to five members. The Committee is chaired by the Chairperson of the Supervisory Board.

The composition of the Strategy and Development Committee from January 1st 2018 to December 31st 2018 and as at the issue date of this Report was as follows:

<table>
<thead>
<tr>
<th>Member Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beata Kozłowska-Chyła</td>
<td>Chairwoman</td>
</tr>
<tr>
<td>Piotr Cach</td>
<td>Member</td>
</tr>
<tr>
<td>Dariusz Figura</td>
<td>Member</td>
</tr>
<tr>
<td>Mariusz Golecki</td>
<td>Member</td>
</tr>
<tr>
<td>Agnieszka Szklarczyk-Mierzwa</td>
<td>Member</td>
</tr>
</tbody>
</table>

Members of the Organisation and Management Committee, including its Chairperson, are appointed by the Supervisory Board from among its members. The Committee consists of three to five members.

Composition of the Organisation and Management Committee in the reporting period:

From January 1st 2018 to July 30th 2018, the composition of the Organisation and Management Committee was as follows:

<table>
<thead>
<tr>
<th>Organisation and Management Committee</th>
<th>Beata Kozłowska-Chyła</th>
<th>Chairwoman</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Katarzyna Lewandowska</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Mariusz Golecki</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Adam Lewandowski</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Agnieszka Szklarczyk-Mierzwa</td>
<td>Member</td>
</tr>
</tbody>
</table>

On July 30th 2018, the Supervisory Board passed Resolution No. 110/X/2018 to change the composition of OMC by accepting resignation tendered by Mariusz Golecki and appointing Grzegorz Rybicki.

Accordingly, the composition of the Organisation and Management Committee from July 30th 2018 to December 31st 2018 and as at the issue date of this Report was as follows:

<table>
<thead>
<tr>
<th>Organisation and Management Committee</th>
<th>Beata Kozłowska-Chyła</th>
<th>Chairwoman</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Katarzyna Lewandowska</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Grzegorz Rybicki</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Adam Lewandowski</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Agnieszka Szklarczyk-Mierzwa</td>
<td>Member</td>
</tr>
</tbody>
</table>

10.3.2 Management Board of Grupa LOTOS

The Management Board of Grupa LOTOS S.A. and its powers, in particular the power to make decisions to issue or buy back shares.

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.
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

In 2018, the composition of the Grupa LOTOS Management Board was as follows:

As at January 1st 2018, the composition of the Grupa LOTOS Management Board was as follows:

<table>
<thead>
<tr>
<th>Management Board members</th>
<th>Position held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marcin Jastrzębski</td>
<td>President of the Management Board</td>
</tr>
<tr>
<td>Jarosław Kawula</td>
<td>Chief Refining Officer</td>
</tr>
<tr>
<td>Mateusz Bonca</td>
<td>Chief Strategy and Development Officer</td>
</tr>
</tbody>
</table>

On March 19th 2018, the Supervisory Board removed Marcin Jastrzębski, President of the Management Board, from the Grupa LOTOS Management Board of the 9th joint term of office, and appointed Mateusz Aleksander Bonca, Vice President of the Management Board, as acting President of the Management Board of Grupa LOTOS S.A. Moreover, the Supervisory Board delegated Piotr Ciach, Deputy Chairman of the Supervisory Board, to temporarily perform the duties of a member of the Grupa LOTOS Management Board.

On May 18th 2018, the Supervisory Board removed Mateusz Aleksander Bonca and Jarosław Kawula from the Grupa LOTOS Management Board of the 9th joint term of office, with effect from May 21st 2018. In addition, the Supervisory Board resolved to revoke, with effect from May 21st 2018, delegation granted to Piotr Ciach, Deputy Chairman of the Supervisory Board, to temporarily perform the duties of a Member of the Company’s Management Board.

At the same time, on May 18th 2018, following the conclusion of the recruitment procedure initiated on April 25th 2018, the Supervisory Board elected and appointed Mateusz Aleksander Bonca as President, Jarosław Kawula as Vice President and Chief Refining and Marketing Officer, and Patryk Demski as Vice President and Chief Investment and Innovation Officer of the Grupa LOTOS Management Board of the 10th joint term of office, with effect from May 22nd 2018.

On June 6th 2018, following the conclusion of the recruitment procedure initiated on May 18th 2018, the Supervisory Board elected and appointed Robert Sobków as Vice President and Chief Financial Officer of the Grupa LOTOS Management Board of the 10th joint term of office, with effect from June 11th 2018.

Thus, from June 11th 2018 to September 11th 2018, the composition of the Grupa LOTOS Management Board was as follows:

<table>
<thead>
<tr>
<th>Management Board members</th>
<th>Position held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mateusz Aleksander Bonca</td>
<td>President of the Management Board</td>
</tr>
<tr>
<td>Jarosław Kawula</td>
<td>Vice President of the Management Board, Chief Refining and Marketing Officer</td>
</tr>
<tr>
<td>Patryk Demski</td>
<td>Vice President of the Management Board, Chief Investment and Innovation Officer</td>
</tr>
<tr>
<td>Robert Sobków</td>
<td>Vice President of the Management Board, Chief Financial Officer</td>
</tr>
</tbody>
</table>

On September 10th 2018, following conclusion of the recruitment procedure initiated on August 31st 2018, the Supervisory Board appointed Jarosław Wittstock as Vice President for Corporate Affairs.
Thus, from September 11th 2018 to December 31st 2018 and as at the issue date of this Report, the composition of the Grupa LOTOS Management Board was as follows:

<table>
<thead>
<tr>
<th>Management Board members</th>
<th>Position held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mateusz Aleksander Bonca</td>
<td>President of the Management Board</td>
</tr>
<tr>
<td>Jarosław Kawula</td>
<td>Vice President of the Management Board, Chief Refining and Marketing Officer</td>
</tr>
<tr>
<td>Patryk Demski</td>
<td>Vice President of the Management Board, Chief Investment and Innovation Officer</td>
</tr>
<tr>
<td>Robert Sobków</td>
<td>Vice President of the Management Board, Chief Financial Officer</td>
</tr>
<tr>
<td>Jarosław Wittstock</td>
<td>Vice President of the Management Board, Corporate Affairs</td>
</tr>
</tbody>
</table>

For more information on the professional experience of the Management Board members and their careers to date, see the Company's [website](#).
Management Board resolutions

The following matters require resolutions by the Management Board:

- adoption or amendment of the Rules of Procedure for the Management Board,
- adoption or amendment of the Organisational Rules for the Company, including the Company’s organisational structure,
- adoption of any rules or regulations which are required for the Company by law,
- granting of powers of proxy (which shall require unanimous vote by all Management Board members),
- adoption of the Company’s annual budget,
- adoption of the strategy for the LOTOS Group,
- adoption of the Company’s financial statements for the previous financial year, prepared in accordance with the International Financial Reporting Standards, along with the Directors’ Report on the Company’s operations in the previous financial year (not later than within three months of the reporting date),
- adoption of the consolidated financial statements for the previous financial year, prepared in accordance with the International Financial Reporting Standards, along with the Directors’ Report on the LOTOS Group’s operations in the previous financial year (not later than within three months of the reporting date),
- 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 (in due time),
- determining a General Meeting’s agenda,
- any equity investments or projects involving capital expenditures made by the Company, including incurrence of related liabilities, as well as related divestments, if such investments, projects or divestments entail expenses, charges or disposals exceeding PLN 500,000 (VAT exclusive),
- execution by the Company of any transactions other than those referred to in Section 11.11 above as a result of which the Company incurs liabilities or disposes of assets for an amount exceeding in any single case PLN 500,000 (VAT exclusive), with the exception of:
  - agreements entered into by the Company based on framework agreements defining a cap on the Company’s total liabilities, approved by resolutions of the Management Board,
  - agreements entered into with companies of the Grupa LOTOS Group,
  - purchase and sale of:
    - crude oil,
    - natural gas,
    - electricity,
    - biocomponents and fuel components,
    - finished and semi-finished petroleum products and merchandise,
    - maritime transport services,
  - unless the applicable laws, provisions of the Company’s Articles of Association or the Company’s internal regulations adopted by the Management Board provide otherwise,
- purchase from a specific supplier, by way of negotiations, of goods or services with a value exceeding PLN 200,000 (VAT exclusive), in accordance with the procurement procedure applicable at the Company,
- exercise of the Company’s voting rights at General Meetings of its subsidiaries with regard to:
- share capital increase or reduction,
- mergers with other companies or company transformations,
- disposal or lease of the company’s business and/or its encumbrance with usufruct rights,
- formation of companies under commercial law and foreign companies,
- acquisition and disposal of shares and interests in companies,
- acquisition and disposal of shares, except where the 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,
- acquisition or disposal of property, perpetual usufruct rights or an interest in property,
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

- establishment and joining of partnerships, organisations or ventures which involve unlimited liability enforceable against the Company’s assets,
- any matters which require the Supervisory Board’s or General Meeting’s resolution,
- matters falling outside the scope of day-to-day management of the business,
- matters which have been objected to by at least one of the Management Board members,
- any matters to be decided by way of a Management Board resolution at the request of the President or any other member of the Management Board.

Any matters not listed above are managed by the individual Management Board members in accordance with the provisions laid down below, or by persons to whom the Management Board or its members have entrusted such matters based on a power of attorney or through a designated scope of duties.

Subject to the sentence below, ordinary matters of the Company, not requiring a Management Board resolution, are carried out by the President independently and by individual Management Board members in line with the division of powers and responsibilities defined under the Organisational Rules of Grupa LOTOS S.A.

In special circumstances, including a given Management Board member’s prolonged absence (due to sickness or other reasons), the President of the Management Board may delegate a matter to another Management Board member or may decide to deal with the matter personally, contrary to the division of powers and responsibilities. The President of the Management Board’s decision in this respect must be made in writing and contain a statement of reasons.

Any disputes between members of the Management Board relating to the division of powers and responsibilities are resolved by the President of the Management Board.

Any matters not reserved for individual members of the Management Board in accordance with ??? are conducted and supervised by the President of the Management Board or by a person designated by the President.

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 2018, the Grupa LOTOS Management Board held 48 meetings and passed 325 resolutions, including 77 resolutions passed in accordance with Section 21.7 of the Rules of Procedure for the Management Board.

10.3.3 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 10th joint term of office commenced on May 22nd 2018 and will expire in 2021.
10.3.4. Rules governing amendments to 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.

The Company’s Management Board added to the agenda of the Annual General Meeting items concerning amendments to the Company’s Articles of Association and authorising the Supervisory Board to adopt the consolidated text of the Company’s Articles of Association, in accordance with a request received on June 7th 2018 from the Company’s shareholder – the State Treasury – the Prime Minister of the Republic of Poland, prepared in accordance with Art. 401.1 of the Commercial Companies Code and Art. 8.6 of the Company’s Articles of Association.

Therefore, on June 28th, the Annual General Meeting of Grupa LOTOS S.A. passed Resolutions No. 19 and No. 20 on amending the Company’s Articles of Association and authorising the Supervisory Board to adopt a consolidated text of that document.

The amendments to the Articles of Association were registered in the National Court Register on July 9th 2018.

10.3.5. 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 2018, Grupa LOTOS S.A. focused its sponsorship initiatives on sports, culture, social and environmental 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 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.

Sport sponsorship

As part of its sport sponsorship activities, Grupa LOTOS continued to build and foster the LOTOS brand’s image by engaging in sponsorship of professional senior sports teams. The LOTOS brand was present in sports projects with a social agenda, as well as the most important sporting events in Poland, Europe and the world. 2018 saw the implementation of 22 sports sponsorship projects in the following areas:

1. Projects of strategic importance and with a wide reach – projects with a nationwide reach, promoting the brand through sponsorship of nationwide projects. These include sponsorship of Poland’s national football team (Polish Football Association), ski jumping and cross-country skiing teams (Polish Skiing Association), and sponsorship of Poland’s largest cycling event (Tour de Pologne). In 2018, we commenced sponsorship cooperation with the Pomeranian Hockey Club and the Academic Sports Association, and we also sponsored the Fight Exclusive Night gala event. In 2018, we ended our cooperation with Robert Kubica, whose image was used to promote the Dynamic engine oils and energy drinks, as well as with Agnieszka Radwańska, who finished her sports career and whom we supported starting from 2017.
2. Motor rallying – we continued a motorsports project, particularly the support of the LOTOS Rally Team, whose crew comprising Kajetan Kajetanowicz and Maciek Szczepaniak made their debut in the World Rally Championship (WRC).

3. Nationwide and regional projects – we lent our support to the following local initiatives: the LOTOS Stadion Letni Gdańsk facility, where we organised a Fan Zone during the football World Cup. Similar zones were created by LOTOS also in Warsaw and Wrocław. We also became involved in speedway-related projects, such as: the Golden Helmet annual speedway event, Polish Pairs Speedway Championship, speedway matches featuring Poland’s national speedway team (Poland vs Denmark, and Poland vs Sweden), 1st Round of Speedway Euro Championship.

4. Physical education among children and teenagers – as a socially committed business we continued our involvement with sports projects with a social agenda, addressed to children and teenagers, focusing mainly on football (‘Football Future with LOTOS’), winter sports (‘In Search for the Champion’s Successors’), as well as training young volleyball and basketball players by the Treffi Gdańsk sports club.

Culture sponsorship

In 2018, Grupa LOTOS and its Subsidiaries sponsored 17 culture and arts projects. The main cultural sponsorship projects we were involved in included:

• cooperation on the following projects: LOTOS Siesta Festival, Atelier Theatre, Theatre Summer – Sopot 2018, events organised at the Gdansk Shakespeare Theatre, collaboration in the making of a documentary film ‘Przyjaźń w cieniu Kremla. Jutro Ukraina’ (’Friendship in the shadow of the Kremlin. Tomorrow - it will be Ukraine.’). In 2018, we ended cooperation with The Centre for the Thought of John Paul II.

In Southern Poland, key events sponsored by LOTOS included:

• LOTOS Jazz Festival, Jasło Days, Czechowice-Dziedzic Days, Autumn Theatre Days, International Festival of Carpathian Folklore, Summer with Jasło County Culture, and the Major Henryk Dobrzański ‘Hubal’ commemorative show jumping competition.

Social and environmental initiatives – overview of implemented projects

Social initiatives implemented in 2018 focused on the key areas covered by the LOTOS Group’s Corporate Social Responsibility Strategy. In 2018, Grupa LOTOS and its Subsidiaries carried out social and environmental initiatives in the areas listed below:

• Environmental protection
Grupa LOTOS continued the ‘Headed for the Baltic’ programme, which is designed to educate adults, children and youths on environmental protection matters in line with the Company’s corporate social responsibility strategy. Another reason for pursuing the programme is the Company’s involvement in exploration and production activities in the Baltic Sea.

• Education of children and teenagers.
In partnership with the Advanced Technologies Foundation, Grupa LOTOS supported the organisation of the E(x)plory Scientific Competition, a nationwide educational programme supporting young talents and development of innovation. Other educational programmes include ‘Talent from Czechowice-Dziedzice, a Town of Fiery Enthusiasm’, organised in collaboration with the municipality of Czechowice – Dziedzice, and the ‘We are looking for an IT Genius’ competition, run together with the Wyższa Szkoła Biznesu – National Louis University in Nowy Sącz.

10.3.6. Remuneration policy for key managers

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:

• 1.7 – for the Chairman of the Supervisory Board,
• 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 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

and 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 statement – separate and consolidated disclosures
11. Non-financial information – separate and consolidated disclosures

11.1. 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 2018 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.
11.2. CSR policy – impact on the value chain

11.2.1. 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.

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<th>Czystość</th>
<th>Transparency</th>
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<td>Otwartość</td>
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<td>Innowacyjność</td>
<td>Innovativeness</td>
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<td>Odpowiedzialność</td>
<td>Responsibility</td>
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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.

The LOTOS Group considers corporate social responsibility as an element of its management and improvement processes. In the process of building lasting and positive relations with its stakeholders, LOTOS strives to effectively integrate its strategy and take steps designed to face our social and environmental challenges. Grupa LOTOS’s Business Strategy for 2017–2022 includes Objective 5 relating to the CSR area. The objective is pursued through the implementation of programmes designed to permanently solve the social and environmental problems important to the stakeholders. In 2018, 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 (continuation of the ‘Headed for the Baltic’ Programme);
- **Road traffic safety** – which we influence through the quality of our products as well as comprehensive educational campaigns (continuation of the ‘LOTOS Safety Belt Champions’ Programme, LOTOS Foundation’s projects);
- 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 (e.g. the E(x)plory Programme).

**CSR ratings**

In line with its commitment to Openness, the LOTOS Group has independent institutions regularly review, audit, and assess its activities. The findings of those reviews and audits give the Company high positions in key CSR ranking lists. In December 2018, Grupa LOTOS was included for the 12th 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 31 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. Last year, for the first time in history, Grupa LOTOS shares were included by the global rating agency FTSE Russel in FTSE4Good, London Stock Exchange’s index of ethical investment stocks.

In 2018, Grupa LOTOS came second in the ‘Fuels, Energy, Production’ category in the 12th edition of the Socially Responsible Companies Ranking. In the overall ranking, the Company came sixth. Grupa LOTOS features in the prestigious ranking table for the eleventh time, assessing them for the quality of their Corporate Social Responsibility management. It facilitates a reliable assessment of a company’s progress in tackling sustainable development challenges and is also a valuable educational tool. The assessment criteria included the sustainable development policy, positive impact management, responsible conduct of business, relations with external and internal stakeholders, responsible relations with local communities, quality of working life, social development and environmental impact.

Last year, LOTOS was also awarded the CSR Silver 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

The Foundation’s mission encompasses a wide range of social activities that make a positive contribution to the social and natural environments. The LOTOS Foundation works towards implementing the socially beneficial goals specified in Article 9 of the LOTOS Foundation’s Articles of Association, falling in the following areas:

1. Health protection and promotion
2. Environmental protection, animal protection, and protection of natural heritage, with particular focus on conservation of the environment and natural values of the Baltic Sea
3. Science and education, development of technology and innovation
4. Promotion of physical culture and sport, with particular focus on physical development of children and young people
5. Culture and arts, including support for initiatives aimed at protecting cultural heritage, with particular focus on cultural initiatives of value to the Baltic Sea region
6. Order and safety, with particular focus on public and road traffic safety
7. Social welfare, especially fostering equal opportunities among children, youth, people with disabilities and underprivileged, with particular focus on employees of the LOTOS Group and their families
8. Charitable activities
9. Corporate social responsibility and sustainable development
10. Sightseeing and leisure activities for children and youth
11. Promotion and organisation of volunteer work
12. Social and economic initiatives at local level, including promotion of inter-sector cooperation and development of entrepreneurship
13. Preservation of national heritage and tradition, strengthening of national, civic and cultural awareness
14. Activities supporting the development of local communities
15. Support of rescue services and protection of people
16. Assistance to victims of catastrophes, natural disasters, military conflicts and wars in Poland and abroad
17. Securing technical facilities, devices and items of historical value connected with the oil and gas industry
18. Dissemination and promotion of history of the oil and gas industry
19. Creation of information- and experience-sharing platforms for individuals and institutions interested in the protection of apparatus, equipment and documents of the oil and gas industry
20. Care for the cultural heritage, support of culture, protection of Poland’s historical objects related to the oil and gas industry, especially in the Province of Gdańsk.

In 2018, the LOTOS Foundation received 1,033 requests for donations. Following reviews, 130 donations were granted in 2018. The donations granted in 2018 were consistent with the objectives provided for in LOTOS Foundation’s Articles of Association, that is:

1. Organisation, financial and non-financial (material, organisational and technical) support of projects, events and initiatives consistent with the Foundation’s goals specified in Article 9;
2. Provision of financial support to public health institutions for purchase of medical equipment used in their activities, as well as research and development projects conducted at medical centres, with particular focus on first medical aid, oncology, cardiology and treatment of burns;
3. Provision of financial support in case of natural disasters and other emergencies, purchase of medical life-saving or assistive equipment, and co-financing of costly emergency treatment or rehabilitation, with particular focus on the needs of LOTOS Group employees and their families;
4. Support for initiatives for development of science and education, including initiatives for equal education opportunities and promotion of talented children and young people, as well as granting scholarships, with particular focus on chemistry, automatics, mechanical engineering, computer science and environmental protection;

5. Provision of funding to purchase teaching aids and equipment, develop infrastructure and implement investment projects furthering the goals set out in Article 9;

6. Organisation of and financial and non-financial (material, organisational and technical) support for training courses, seminars, conferences and grant contests consistent with the Foundation’s goals specified in Article 9;

7. Publishing activity and establishment of awards;

8. Initiation and support of research projects aimed at delivering knowledge relevant for the implementation of the goals set out in Article 9;

9. Raising of funds for the Foundation’s activities;

10. Cooperation with self-government and government authorities and with non-governmental organisations in Poland and abroad within the scope of the Foundation’s goals specified in these Articles of Association;

11. Undertaking or support of activities to acquire exhibits, equipment, devices, items and documents of historical value for the oil and gas industry;

12. Support for activities aimed at promoting the history of oil and gas industry technologies and protecting the technological heritage of the industry.

### 11.2.2. CSR due diligence procedures

In each of these areas, the Company works with reputable and proven social partners, in keeping with its core competences 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 formulated by well-established Polish and international NGOs, industry associations, and government authorities, 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 2018, Grupa LOTOS took measures to address the challenges defined in the 17 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 2018, 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. The 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.

2018 saw the publication of the LOTOS Group’s Integrated Annual Report for 2017. 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 2018, the Company widely consulted its key internal and external stakeholder groups and carried out a thorough investigation of external sources. This allowed it to select material GRI aspects to be disclosed in the final report.

The process of defining the contents of this year’s report was based on three stages recommended by the GRI G4 standard: identification, prioritisation and validation. In addition, preparation of individual parts of the content was based on the four principles defined by the standard: Materiality, Stakeholder Inclusiveness, Sustainability Context and Completeness.

The report is available at → www.raportroczny.lotos.pl.

As part of CSR reporting, in partnership with the Responsible Business Forum, 11 best CSR practices of LOTOS were published in the 16th edition of the ‘Responsible Business in Poland: Best Practices’ report prepared by the Responsible Business Forum. The publication provides the most comprehensive review of socially responsible business activities in Poland. LOTOS’ long-term practices discussed in RBF’s report included: ‘Support for Beginners,’ ‘Headed for the Baltic,’ ‘LOTOS Running Team,’ ‘Talent with LOTOS,’ ‘LOTOS Safety Belt Champions,’ ‘Football Future with LOTOS,’ and ‘In Search for the Champion’s Successors.’

Grupa LOTOS’ environmental initiatives were discussed in another publication by Responsible Business Forum, namely ‘17 challenges facing Poland – 17 answers. What can companies in Poland do to further the implementation of Sustainable Development Goals?’

Also last year, Grupa LOTOS was a partner of the Responsible Business Week conference, during which LOTOS experts spoke about managing reputational risk and issues related to building a safety culture at a company.

Ethical Conduct Programme

The → Code of Ethics in place at 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.

11.3. Environmental policy – impact on the value chain

11.3.1. 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 CO₂/CWT) among European refineries.

For an overview and performance indicators of the environmental policy pursued by the Company and the Group, see Section 8.3 Environmental protection (p. 142).

11.3.3 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. At Grupa LOTOS, 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 Grupa LOTOS, it is required to sign appropriate clauses concerning compliance of their operations with applicable environmental laws and regulations. During the contract performance, the contractor is audited 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. Grupa LOTOS is committed to ensuring that environmental protection is one of the key values behind all our business decisions, plans, and activities. This means that it operates process units in full compliance with the most stringent environmental requirements and plans 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. Grupa LOTOS is committed to designing and operating its 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, Grupa LOTOS attaches great weight to raising the environmental awareness of its workforce through internal communication highlighting individual, corporate, regional and global aspects of environmental protection.

11.4. Respect for human rights – impact on the value chain

11.4.1. Description and performance indicators of the human rights policy in place at Grupa LOTOS and the LOTOS 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.

11.4.2 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.

11.5. Anti-corruption policy – impact on the value chain

11.5.1. 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
In 2018, 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.

### 11.5.2 Anti-corruption due diligence procedures

The **Misconduct Risk Management Programme**, achieved through:

- Educating on risk identification (preventive measures)
  - Conducting training on misconduct prevention at the subsidiaries of Grupa LOTOS S.A. under the Misconduct Risk Management Programme
  - Providing new hires with information on the Misconduct Prevention Policy and employee responsibility during onboarding training sessions
- 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.

The **LOTOS Group Misconduct Prevention Policy**, which

- Articulates the Management Board’s ZERO TOLERANCE FOR MISCONDUCT APPROACH
- Defines the process for dealing with reports of suspected misconduct
- Specifies the suspected misconduct reporting channels: telephone, email, internet and intranet report forms, and traditional mail.

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.

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 The **Ethics Officer**, responsible for promoting the values and principles set out in the Code of Ethics.

The **CSR (corporate social responsibility) clauses** to be incorporated in RFPs and contracts (including the anti-corruption clause).

Operations of the **Misconduct Risk Management Team** within the Internal Audit Office

- Operations of the **Trade Partner Assessment Department** within the Safety and Internal Control Office
Requiring the **subsidaries 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

- Operations of the **Compliance Department** within the Corporate Affairs Division

**Other actions taken in 2018 under the misconduct prevention policy:**
- Establishment of the Internal Control Department within Grupa LOTOS S.A.
- Implementation of the Directive concerning the LOTOS Group’s Gift Giving and Receiving Policy – February 14th 2018
- Update of the LOTOS Group Misconduct Prevention Policy
- In connection with the organisation’s growing maturity with regard to misconduct prevention, another stage of management of the enterprise risk related to material misconduct, that is assigning process owners to material misconduct risks, has been commenced.

**11.6. Human resources management and diversity policy – effect on the value chain**

Diversity, cooperation and openness are the values which form an integral part of Grupa LOTOS’s business activities, as well as the hiring and promotion policy. We pursue the principles of diversity management and a policy of equal treatment taking into account respect for diversified, multi-cultural society and with particular focus on equal treatment irrespective of gender, age, disability, health, race, nationality, ethnic origin, religion, religious denomination, irreligousness, political beliefs, trade union membership, gender identity, family status, lifestyle etc. The diversity policy pursued by Grupa LOTOS is designed to leverage the potential of the Group workforce, their diverse skills, experience and talents in the atmosphere of mutual respect and cooperation (using the experience of employees aged 50+ in induction training new employees, or for shadowing and mentoring in production), as well as to minimise the risk of loss of valuable employees.

When selecting the key managers, Grupa LOTOS strives to ensure versatility and diversity, especially with respect to gender, education, age and professional experience. The decisive criteria are high qualifications and expertise necessary to perform a given function.

The Company implements the principles of equal treatment and diversity management at the workplace, especially in the area of recruitment (we are a member of the Coalition for Friendly Recruitment), access to training and promotion, remuneration, work-life balance (as confirmed by the Top-Quality HR certificate issued by the Polish Human Resources Management Association (PSZK)), protection against mobbing and discrimination (during the induction training for newly hired employees and generally available e-learning training).

**11.6.1 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. 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’.
- Staff development and training: ‘Employee Training and Development’ and ‘Periodic Employee Evaluation System (PEES)’.

The 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.
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.

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).

**Creation of organisational culture improving 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 maintain good relations and 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 the case of Grupa LOTOS, such competencies include the ability to cooperate, commitment, and openness to change. All employees should possess these competencies, regardless of their role or position.

What do the key competencies mean?

**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 appropriate conditions for effective development and practical application of the knowledge and skills required of all employees throughout their employment. Training and development activities are carried out in the execution of the organisation's vision, strategic goals and related development initiatives for 2017–2022. The initiatives are aimed, among others, at enhancing staff competencies to adapt them to the requirements of strategy implementation, identifying talented personnel at the organisation and boosting their strengths, disseminating expert knowledge, and increasing commitment and job satisfaction.

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.

‘Good Start for Beginners’ onboarding programme

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 Grupa LOTOS 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 training specialists who directly share their knowledge with less experienced employees 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 team members 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.

Grupa LOTOS creates special opportunities for professional development of its employees, including through the LOTOS Group joining the ‘Implementation PhD Theses’ initiative of the Ministry of Science and Higher Education, designed to strengthen the collaboration between science and business. Implementation PhD Thesis projects are carried out in a dual system. A PhD student, who prepares a research plan (a concept/idea) designed to solve a specific problem of the employer, is assisted both by the scientific and the business organisation. The main idea behind the programme is to combine professional and scientific spheres through the execution by employees of implementation-oriented PhD theses, expected to give measurable effects in the form of improved effectiveness of the organisation’s operations. The implementation of PhD research results will help to optimise a given area of the organisation’s activity.

The LOTOS Group seeks to create the best conditions for professional development of its employees, which involves learning and updating knowledge necessary to efficiently 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, the findings of employee satisfaction and engagement surveys, employee development plans for particular units, and the organisation’s development needs are also taken into account. To respond to the challenges arising from changes within and around 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 are helpful in developing a culture of knowledge sharing. Grupa LOTOS has started to build a Knowledge Management System within the organisation, based on an e-learning platform. The system is designed to create favourable conditions for knowledge diffusion and wider knowledge sharing within the organisation, as well as to increase employee involvement (employees’ active participation in content development and intensive communication with the employees concerning their development needs). It is a response to the expectations of the growing proportion of our employees aged 25–35 who prefer to use modern IT tools.

**Number of training days per employee in 2018:**

- at the LOTOS Group – 2.5
- at GRUPA LOTOS S.A. – 3.2

**Recruitment:**

Grupa LOTOS’s recruitment processes take 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 on our website → www.kariera.lotos.pl, maintaining employer profile on LinkedIn, Facebook and Pracuj.pl, communicating information in the media, cooperating with the academic community, giving presentations at the University of Gdańsk and the Gdańsk University of Technology as well as at junior high schools, and by organising meetings on the Company’s premises, participating in job fairs and similar initiatives we recruit candidates from outside the Group to add new qualifications necessary for the organisation to accomplish its tasks. The 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. ‘Standards of the Recruitment and Selection Process at the LOTOS Group’ been have implemented, containing guidelines for recruitment specialists and for managers requesting staff recruitment.

With a view to retaining the most valuable talent and reduce recruitment costs, the reasons for employee departures are reviewed systematically 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 2018, Grupa LOTOS was 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.
11.7. 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 presented in Section 7.2 Risk categories in the LOTOS Group, p. 121. 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. A 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.

Signatures of Grupa LOTOS S.A. Management Board members

This Report has been authorised for issue.

President of the Management Board

Mateusz Aleksander Bonca

Vice President of the Management Board,
Chief Investment and Innovation Officer

Patryk Demski
Directors’ Report on the operations of Grupa LOTOS S.A. and the LOTOS Group in 2018

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

Jarosław Kawula

Vice President of the Management Board,
Chief Financial Officer

Robert Sobków

Vice President of the Management Board,
Corporate Affairs

Jarosław Wittstock