Directors' Report
on the operations of the Grupa Azoty Group
for H1 2018
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1. General information on the Grupa Azoty Group

1.1. Organisation and structure

The Grupa Azoty Group is one of Central Europe's major chemical groups with a strong presence on the market of mineral fertilizers, engineering plastics, OXO products, and other chemicals. Grupa Azoty has brought together companies with different traditions and complementary business profiles, seeking to leverage their potential to deliver a common strategy. This has led to the creation of Poland's largest chemical group and a major industry player in Europe. Thanks to its carefully designed structure, the Group offers a diverse product mix, ranging from nitrogen and compound fertilizers, engineering plastics, to OXO products and melamine.

As at June 30th 2018, the Grupa Azoty Group (the “Group”) comprised: Grupa Azoty S.A. (the Parent) and nine direct subsidiaries.

Parent
Grupa Azoty S.A. is the Parent of the Group. Its principal business activities include manufacturing, trading in and service activities related to nitrogen fertilizers, engineering plastics and intermediates. The Company operates its own research facilities. It concentrates both on research into new products and technologies, and on advancing existing products. The Company's registered office is located at ul. Eugeniusza Kwiatkowskiego 8, Tarnów, Poland. Since April 22nd 2013, the Company has been trading under the name Grupa Azoty Spółka Akcyjna (“Grupa Azoty S.A.”).

Parent's subsidiaries
Grupa Azoty Zakłady Azotowe Puławy S.A.
The company's registered office is located in Puławy. Since April 4th 2013, it has been trading under the name Grupa Azoty Zakłady Azotowe Puławy Spółka Akcyjna (“Grupa Azoty PUŁAWY”).
Grupa Azoty PUŁAWY specialises in the manufacturing of nitrogen fertilizers and is one of the largest melamine manufacturers in the world.

Grupa Azoty Zakłady Azotowe Kędzierzyn Spółka Akcyjna
The company's registered office is located in Kędzierzyn-Koźle. Since January 11th 2013, it has been trading under the name Grupa Azoty Zakłady Azotowe Kędzierzyn Spółka Akcyjna (“Grupa Azoty KĘDZIERZYN”).
The company's two business pillars are nitrogen fertilizers and OXO products (OXO alcohols and plasticisers).

Grupa Azoty Zakłady Chemiczne Police Spółka Akcyjna
The company's registered office is located in Police. Since June 3rd 2013, it has been trading under the name Grupa Azoty Zakłady Chemiczne Police Spółka Akcyjna (“Grupa Azoty POLICE”).
Grupa Azoty Police is a major manufacturer of compound and nitrogen fertilizers, as well as titanium white.

Grupa Azoty ATT Polymers GmbH
The company's registered office is located in Guben, Germany. Since July 10th 2013, it has been trading under the name Grupa Azoty ATT Polymers GmbH.
It manufactures polyamide 6 (PA6).

Grupa Azoty Polskie Konsorcjum Chemiczne Spółka z ograniczoną odpowiedzialnością
The company's registered office is located in Tarnów. Since February 28th 2013, it has been trading under the name Grupa Azoty Polskie Konsorcjum Chemiczne Spółka z ograniczoną odpowiedzialnością (abbreviated to Grupa Azoty Polskie Konsorcjum Chemiczne Sp. z o.o. or Grupa Azoty PKCh Sp. z o.o.).
Grupa Azoty PKCh provides comprehensive design services encompassing complete design support for investment projects in the chemical industry – from study and concept works to process and construction design and working plans for services during the construction, commissioning and operation of process units.
Grupa Azoty Koltar Sp. z ograniczoną odpowiedzialnością
The company’s registered office is located in Tarnów. Since March 6th 2013, it has been trading under the name Grupa Azoty Koltar Sp. z ograniczoną odpowiedzialnością (abbreviated to Grupa Azoty Koltar Sp. z o.o.).
Grupa Azoty KOLTAR provides railway transport services nationwide. It is one of the few organisations in Poland to hold licences required to perform comprehensive repairs of rail car chassis and tank cars used in the transport of dangerous materials (according to RID).

Grupa Azoty Kopalnie i Zakłady Chemiczne Siarki Siarkopol Spółka Akcyjna
The company’s registered office is located in Grzybów. Since February 11th 2014, it has been trading under the name Grupa Azoty Kopalnie i Zakłady Chemiczne Siarki Siarkopol Spółka Akcyjna (“Grupa Azoty SIARKOPOL”).
Grupa Azoty SIARKOPOL is Poland’s largest producer of liquid sulfur.

Grupa Azoty Folie Sp. z ograniczoną odpowiedzialnością
The company’s registered office is located in Tarnów.
Its principal business is research and development in technical science.

Grupa Azoty Compounding Sp. z ograniczoną odpowiedzialnością
The company’s registered office is located in Tarnów. Its business model is based on a portfolio of specialised engineering plastics manufactured through the compounding of plastics, with the use of innovative technological solutions.

Parent’s equity interests in the subsidiaries as at June 30th 2018
(in relevant currency)

<table>
<thead>
<tr>
<th>Company</th>
<th>Registered office/address</th>
<th>Share capital</th>
<th>% of shares held directly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grupa Azoty ATT Polymers GmbH</td>
<td>Forster Straße 72 03172 Guben, Germany</td>
<td>EUR 9,000,000</td>
<td>100.00</td>
</tr>
<tr>
<td>Grupa Azoty Compounding Sp. z o.o.</td>
<td>ul. Chemiczna 118 33-101 Tarnów</td>
<td>PLN 6,000,000</td>
<td>100.00</td>
</tr>
<tr>
<td>Grupa Azoty Folie Sp. z o.o.</td>
<td>ul. Chemiczna 118 33-101 Tarnów</td>
<td>PLN 5,500,000</td>
<td>100.00</td>
</tr>
<tr>
<td>Grupa Azoty KOLTAR Sp. z o.o.</td>
<td>ul. Kwiatkowskiego 8 33-101 Tarnów</td>
<td>PLN 32,760,000</td>
<td>100.00</td>
</tr>
<tr>
<td>Grupa Azoty SIARKOPOL</td>
<td>Grzybów, 28-200 Staszów</td>
<td>PLN 55,000,000</td>
<td>99.33</td>
</tr>
<tr>
<td>Grupa Azoty PULAWY</td>
<td>al. Tysiąclecia Państwa Polskiego 13 24-110 Puławy</td>
<td>PLN 191,150,000</td>
<td>95.98</td>
</tr>
<tr>
<td>Grupa Azoty KĘDZIERZYN</td>
<td>ul. Mostowa 30 A skr. poczt. 163 47-220 Kędzierzyn-Koźle</td>
<td>PLN 285,064,300</td>
<td>93.48</td>
</tr>
<tr>
<td>Grupa Azoty POLICE</td>
<td>ul. Kuźnicka 1 72-010 Police</td>
<td>PLN 750,000,000</td>
<td>66.00</td>
</tr>
<tr>
<td>Grupa Azoty PKCh Sp. z o.o.</td>
<td>ul. Kwiatkowskiego 7 33-101 Tarnów</td>
<td>PLN 85,630,550</td>
<td>63.27</td>
</tr>
</tbody>
</table>
The Parent and its subsidiaries as at June 30th 2018

Grupa Azoty
ATT Polymers GmbH
100%

Grupa Azoty POLICE
66%

Grupa Azoty PŁAWY
95.98%

Grupa Azoty SIARKOPOL
99.33%

The Parent
Grupa Azoty „Compounding” Sp. z o.o.
100%
Grupa Azoty „Folie” Sp. z o.o.
100%
Grupa Azoty KOLTAR Sp. z o.o.
100%
Grupa Azoty PKCh Sp. z o.o.
63.27%

Source: Company data.
1.2. Business segments

The Group is the largest chemical group in Poland and a significant player in Central Europe. It offers mineral fertilizers and B2B products, including engineering plastics, OXO products and melamine.

The Group's business is divided into the following segments:
- Agro Fertilizers,
- Plastics,
- Chemicals,
- Energy,
- Other Activities.

Agro Fertilizers

Mineral fertilizers are the key area of the Group's business. The Agro Fertilizers segment manufactures nitrogen and compound fertilizers, as well as ammonia and other nitrogen-based intermediate products.

The segment's manufacturing activities are conducted by the companies in Tarnów (Parent), Puławy, Kędzierzyn, Police, Gdańsk, and Chorzów. The Group is Poland's largest and European Union's second largest manufacturer of mineral fertilizers.

Plastics

The segment's key products are engineering plastics (polyamide 6 (PA6) and modified plastics) and auxiliary products, such as caprolactam and other chemicals.

They are manufactured by three companies – in Tarnów, Puławy, and Guben (Germany). The Group is the leading manufacturer of polyamide 6 in Poland and the third largest producer of PA6 in the European Union.

Chemicals

The Chemicals segment is an important part of the Group's business, comprising OXO alcohols, plasticizers, melamine, technical grade urea, titanium white, sulfur, AdBlue®, and other products.

They are manufactured in Kędzierzyn, Puławy, Police, and Grzybów. The Group is a major manufacturer of melamine globally and the third largest in the European Union. As regards OXO products, the Group is the only manufacturer of OXO alcohols in Poland, ranking fifth in the European Union; it is also Poland’s largest and EU’s fifth largest manufacturer of plasticizers and the only producer of titanium white in Poland.

Energy

Electricity and heat produced by the Energy segment are sold locally, to customers in the immediate vicinity of the Group's plants.

The segment’s key customers are companies of the Group. Outside the Group, the segment's products are sold on the electricity and hot water markets to local customers. The Group companies operate their own electricity and energy carrier distribution networks.

Other Activities

The Other Activities segment comprises services that support the Group’s operations. As in the case of the Energy segment, most of the segment’s activities are intended to support the Group. Outside the Group, the segment mainly provides maintenance (automation, design, repair, etc.) and logistics services (road transport, rail transport, ports) and manufactures catalysts. The segment is also involved in various operations in such areas as environmental protection, administration, research, and infrastructure management.
1.3. Overview of key products

AGRO FERTILIZERS

The Group classifies mineral fertilizers as nitrogen (single-component) fertilizers and compound fertilizers, the latter including at least two of the following key components: nitrogen (N), phosphorus (P) or potassium (K).

Nitrogen fertilizers
Nitrogen fertilizers are substances or mixtures of substances where nitrogen is the primary plant nutrient. The Group’s product range includes a number of nitrogen fertilizers: urea, nitrate fertilizers (including ammonium nitrate, calcium ammonium nitrate, UAN), nitrogen-sulfur fertilizers (made as a result of mixing fertilizers in the manufacturing process: ammonium sulfate nitrate, solid and liquid mixtures of urea and ammonium sulfate, and ammonium sulfate). Natural gas is the key feedstock for nitrogen fertilizers production.

Urea - a nitrogen fertilizer containing 46% nitrogen; it is produced in Pulawy (PULREA®), Police (moczni.pl®), and Kędzierzyn. Urea is a universal fertilizer - it can be used for all crops at various growth stages, both in the granular form and as a solution. Outside agriculture, urea is used for technical purposes, mainly for manufacturing of adhesive resins, which find application in the chipboard industry. Urea may also be further processed into urea-ammonium nitrate solution (UAN – RSM®), a liquid fertilizer, or into melamine.

Nitrate fertilizers
- Ammonium nitrate is a nitrogen fertilizer which is easily dissolved in water, containing between 30% and 34% nitrogen. The Group offers this product in a wide variety of granule forms and sizes, such as mechanically granulated ZAKsan®, with excellent sowing properties; the PULAN® beaded ammonium nitrate, and ‘30 makro’ ammonium nitrate.
- Calcium ammonium nitrate (CAN) is a nitrogen fertilizer with a nitrogen content of up to 28%. It is a universal fertilizer, suitable for all types of soil, well soluble and easily absorbed by crops. The Group markets CAN in a number of granule varieties; the offering includes the granulated Salmag® fertilizers (including varieties with a sulfur or boron content), and bead fertilizers such as Saletrzak 27 (CAN 27) standard and Saletrzak 27 with boron.
- Urea-ammonium nitrate solution (UAN – RSM®) is a liquid nitrogen fertilizer coming in three varieties: with 32%, 30% and 28% nitrogen content. Thanks to its form, UAN – RSM® is easily absorbed by plants. It is also produced with an admixture of sulfur, as UAN-RSM®S.

Nitrogen-sulfur fertilizers
These fertilizers improve sulfur content in the soil, enhance arable crops’ ability to absorb nitrogen, and thus increase the quality and volume of crops.
- PULGRAN®S - urea-ammonium sulfate, is a nitrogen fertilizer with sulfur in the form of white hemispherical pastilles, obtained by blending urea and ammonium sulfate. It is manufactured in two varieties with various contents: 37% nitrogen/21% sulfur and 33% nitrogen/31% sulfur.
- Saletrosan®, or ammonium sulfate nitrate, is a nitrogen fertilizer with sulfur, obtained by blending ammonium nitrate and ammonium sulfate. Saletrosan® 26 contains 26% nitrogen and 13% sulfur. The fertilizer is also marketed under the trade name Saletrosan® 30, with different proportions of nitrogen and sulfur (30% and 6%).
- Polifoska® 21 is a nitrogen fertilizer with sulfur; it is an ammonium sulfate-urea mix, containing 21% nitrogen and 33% sulfur.
- AS 21 (ammonium sulfate) is a simple nitrogen fertilizer with sulfur, containing 21% nitrogen and 24% sulfur. It is a by-product in the manufacture of caprolactam and in flue gas desulphurisation processes. The Group manufactures a wide range of ammonium sulfate in various granule forms and sizes: selection, macro, standard, and crystalline.
- PULASKA® is a liquid nitrogen fertilizer with sulfur, obtained by blending urea and ammonium sulfate, and has a 20% nitrogen and a 6% sulfur content.

Compound fertilizers (NPK, NP)
NPK and NP compound fertilizers are universal fertilizers which, depending on composition, can be applied to various types of crops and soil. Aside from the primary components - nitrogen (N),
phosphorous (P) and potassium (K), these fertilizers contain secondary nutrients such as magnesium, sulfur or calcium, and may contain microelements such as boron or zinc.

Compound fertilizers may be used to provide nutrients to all types of arable crops. The Group's current offering includes more than 40 grades of compound fertilizers, which are marketed under the following trade names: Polifoska®, Polidap®, Polimag® Superfosfat, Amofoska®, etc. The Group also offers dedicated fertilizers, custom-made to satisfy customers' specific requirements.

Ammonia – feedstock for the manufacture of fertilizers, produced in a process of direct synthesis of nitrogen and hydrogen. Ammonia is the basic intermediate product used to manufacture nitrogen fertilizers and compound fertilizers. It is also used in the chemical industry, e.g. for the manufacturing of caprolactam or polymers, or as a cooling agent. Natural gas is the key feedstock for the production of ammonia.

PLASTICS

Engineering plastics

Engineering plastics exhibit high thermal resistance and good mechanical properties. The wide range of the plastics' beneficial properties makes them a product of choice for many industries, including automotive, construction, electrical engineering, household appliances, and the food and textile industries.

The Group manufactures polyamide 6 (PA6) and modified plastics (with admixtures affecting the physical and chemical properties of the final plastics) based on polyamide 6 and other engineering plastics (POM, PP, PBT, PA6.6). It also offers modified plastics, custom-made to meet the requirements of individual customers.

Polyamide 6 (PA6) is a high-quality thermoplastic in granular form used for injection processing. It is the leading product among engineering plastics. The Group's very popular brands in this segment are Tarnamid® and Alphalon®.

Caprolactam

Caprolactam is an organic chemical compound and an intermediate product used for the manufacture of polyamide 6 (PA6). It is produced mainly from benzene and phenol. Synthesis of caprolactam yields ammonium sulfate as a by-product.

CHEMICALS

OXO products

OXO alcohols

The Group makes the following OXO alcohols: 2-ethylhexanol (2-EH) and butanols (n-butanol, isobutanol). The key product in this group is 2-EH.

2-ethylhexanol (2-EH) is used in the manufacture of plasticizers, paints and varnishes as well as in the textile industry and oil refining processes. It can also be applied as a solvent for vegetable oils, animal fats, resins, waxes and petrochemicals.

Plasticizers

The Group manufactures the DEHT/DOTP plasticizer. It is used in the chemical industry to increase the plasticity of materials, mainly PVC, and as an additive to paints and varnishes. The Group’s DEHT/DOTP is marketed under the Oxoviflex® brand. It is used in plastics processing as a non-phthalic plasticizer as well as in the manufacture of paints and varnishes. It is also widely applied for the production of floor tiles and wall cladding as well as toys for children.

Sulfur

The product offered by Grupa Azoty is mined sulfur. Sulfur is mainly used to produce sulfuric acid, which is widely used in the chemical industry, for instance to produce DAP, a two-component fertilizer. The product is offered in various forms. For the Group's own needs, sulfur is also purchased from other suppliers who obtain it as a by-product from flue gas desulfurisation or crude oil refining.

Melamine
It is a non-toxic, non-flammable product in the form of a white powder, used for the production of synthetic resins, thermosetting plastics, adhesives, paints, varnishes (including furnace varnishes), auxiliary materials for the textile industry, fire retardants, and other.

**SOURCES OF STRATEGIC RAW MATERIALS**

For the most part, the Group procures its raw materials, merchandise and services on the domestic and EU markets. Certain raw materials (phosphate rock, slag, potassium chloride) are purchased from non-EU suppliers. Raw materials supplied by the Group companies, i.e. ammonia and to some extent sulfur, account for a significant share of the total raw materials procured by the Group.

**Ammonia**

The procurement strategy is based primarily on the optimisation of intragroup supplies. Intragroup supplies are executed on market terms. The Group is the largest ammonia manufacturer in Poland and CEE, and operates several ammonia units. It is also one of the largest consumers of ammonia in the region.

Having satisfied its own needs, the Group sells a surplus on the market. The Group’s ability to effectively secure ammonia supplies largely depends on conditions prevailing on the fertilizer market and in the natural gas sector.

**Benzene**

Benzene is mainly delivered under one-year contracts, with supplementary purchases made on the spot market. Benzene is sourced chiefly from domestic and CEE suppliers. The benzene market is largely driven by the situation on the crude oil market and the demand-supply balance on global markets, particularly the level of demand for benzene outside Europe.

**Electricity**

The Group purchases electricity from major Polish suppliers trading with large accounts. Following a number of tenders for 2018, the Group companies signed electricity supply contracts under their existing framework agreements. Thanks to the joint procurement strategy for electricity supplies, they secured competitive prices and favourable terms of the contracts. Given the volatility of the electricity market and its changing legal framework, the Group’s policy was to purchase electricity under forward contracts concluded for various periods and on the SPOT market, including on the Polish Power Exchange.

**Phenol**

The procurement strategy is based primarily on supplies from the domestic and the EU markets, with deliveries from outside Europe covering deficit. The Group secures phenol supplies for its own needs under long-term contracts concluded directly with Europe’s largest producers.

**Phosphate rock**

Phosphate rock is purchased under term contracts, chiefly from North African producers, given the mineral’s abundance in the region and the well-developed local sea logistics infrastructure. The situation on the phosphorite market is to a large extent driven by the situation in the fertilizers sector. The Group has in place a joint phosphate rock purchase programme for Grupa Azoty POLICE and GZNF Fosfory Sp. z o.o.

**Natural gas**

High-methane gas and gas from local sources was supplied by PGNiG S.A. under long-term contracts. Any additionally required volumes were bought by the Group at the Polish Power Exchange.
Propylene
The bulk of the Group's purchases of propylene are made under annual contracts, with supplementary purchases made on the spot market. To a large extent, propylene prices are driven by oil prices. The Group pursues a diversified procurement strategy, based chiefly on supplies from the EU and countries east of Poland. Supplies from the latter largely reduce the overall cost of propylene procurement.

Sulfur
The Group is the largest producer and consumer of liquid sulfur on the domestic market and in the region. Its sulfur procurement strategy is based on optimising intragroup supplies (from Grupa Azoty SIARKPOL) and on supplies from the petrochemical sector. This approach gives the Group considerable procurement flexibility, and significantly reduces the risk of supply shortages. The Group also has the largest logistics facilities in Poland, which is a source of additional competitive advantage. With a centralised sulfur procurement strategy in place (a joint purchase programme for the entire Group), the Group is able to aggregate the supply volumes and reduce the cost of this raw material.

Potassium chloride
With substantial natural resources and competitive commercial terms, producers from Russia and Belarus are the primary suppliers of potassium chloride. The Group's procurement strategy is chiefly based on quarterly framework agreements. with supplementary deliveries sourced from Western Europe. The Group pursues a centralised procurement strategy by making joint purchases for Grupa Azoty POLIC and GZNF Fosfory Sp. z o.o.

Coal
The Group purchases coal mainly on the domestic market. Purchasing large volumes of coal of the required quality from geographically remote markets is not economically viable given the high transport costs and price formulae (ARA).
On the domestic market, prices of pulverised coal used in power generation are not directly linked to ARA rates, which only serve as pricing benchmarks for Polish coal producers.
Since 2018, the Group companies follow a strategy of purchasing coal under multi-year contracts with a guaranteed price change range. Such long-term contracts cover over 80% of the Group's needs for coal supplies.

2. Financial position of the Group

2.1. Assessment of factors and one-off events having a material impact on the Group’s operations and financial performance

Loss of control of African Investment Group S.A., a subsidiary of Grupa Azoty POLICE
Following the execution of a termination agreement with DGG Eco Sp. z o.o. along with annexes, shares in African Investment Group S.A., acquired under an agreement between DGG ECO Sp. z o.o. and Grupa Azoty POLICE, were returned on May 30th 2018. Thus, on May 30th 2018, Grupa Azoty POLICE lost control of its subsidiary African Investment Group S.A. and, indirectly, of AFRIG Trade SARL.
Following the loss of control over African Investment Group S.A., as of May 30th 2018 African Investment Group S.A.’s net assets of PLN 137,250 thousand, adjusted for cancelled receivables of Grupa Azoty POLICE (PLN 51,942 thousand), together with the reduced income tax expense following the cancellation of receivables which in the previous years were taxable income (PLN 9,869 thousand), adjusted for loan liabilities assumed by Grupa Azoty POLICE (PLN 86,734 thousand) and negative non-controlling interests (PLN 88,647 thousand), were excluded from the Group’s consolidated statement of financial position, with effects recognised in the consolidated profit/(loss) for current period, in the amount attributable to the Group. In addition, the settlement of the effect of deconsolidation includes the fair value of receivables from DGG Eco for the return of AFRIG shares (PLN 11,160 thousand).
For a full description of the events and consequences of the loss of control, see Section 2 of the interim condensed consolidated financial statements for the six months ended June 30th 2018.

Impairment loss recognised by Zakłady Azotowe Chorzów S.A., subsidiary of Grupa Azoty PULAWY
On August 8th 2018, the Management Board of Zakłady Azotowe Chorzów S.A. passed a resolution to recognise a PLN 6,771 thousand impairment loss on the fat processing unit. In accordance with IAS 36, the Management Board identified indications that the recoverable amount of this unit may have decreased below its carrying amount as at June 30th 2018. The fat processing unit continues to operate below its full processing capacity. The limitation of the company’s ability to generate cash inflows from the sale of stearine and other oleochemicals results from lower than planned prices and sales volumes in the first half of 2018 and lower forecasts for the coming years.

The effect on consolidated EBIT of the Group, amounting to PLN (6,771 thousand), was recognised in the Group’s consolidated financial statements for the first half of 2018.

It was another impairment loss recognised on the fat processing unit of Zakłady Azotowe Chorzów S.A.

For a full description of the events and consequences of the impairment loss, see Section 2 and Note 9 of the interim condensed consolidated financial statements for the six months ended June 30th 2018.

Exchange rates

Factors and events with a bearing on the Group’s financial performance in H1 2018 included the raised outlook for Poland’s sovereign rating by S&P (given the strong GDP growth rate), falling unemployment and increasing household incomes, as well as good state of public finances. Concurrently, there were increasingly more signs that the economic upswing in the eurozone had passed. Moreover, the US started to pursue a more protectionist policy, which further aggravated the trade disputes between the US, China, and Europe.

In the first quarter of 2018, positive fundamental data from the Polish market translated into the strengthening of the złoty against the US dollar and the euro, while in the second quarter of 2018 negative global factors prevailed, resulting in the reversal of the medium-term appreciation of the Polish currency and its significant depreciation against the US dollar and the euro (with a simultaneous weakening of the euro against the US dollar).

In H1 2018, the złoty lost approximately 4.6% against the euro and about 7.5% against the US dollar compared with December 31st 2017. The average PLN/EUR exchange rate was approximately 0.6% lower in H1 2018 and approximately 3.4% lower than the average for H2 2017.

The Polish currency lost more against the US dollar and less against the euro (the currency in which most of the Group’s currency exposures are denominated). All in all, these developments had a fairly positive impact on the Group’s results in the reporting period.

The Group reduces the risk resulting from its net currency exposure by using selected instruments and taking measures to hedge against the currency risk based on the current and planned currency exposure. In the reporting period, the main hedging tools used by the Group included natural hedging; factoring and discounting of receivables denominated in foreign currencies; and currency forwards entered into on a rolling basis to cover up to 80% of the remaining currency exposure with time horizons of less than 6 months, and up to 50% of the remaining currency exposure with time horizons between 6 and 12 months.

In H1 2018, the Group’s hedging tools were EUR and USD forward swaps, executed in the period of depreciation of the Polish złoty to supplement forward hedges for the sale of EUR and USD, reflecting its planned net exposure in both currencies.

The Group’s result on hedging transactions executed in the first six months of 2018 was PLN 1,457 thousand. The result on revaluation of hedging instruments was negative at PLN (7,395) thousand.

In H1 2018, the Group’s total result on hedging transactions and revaluation of hedging instruments was negative at PLN (5,938) thousand.

On the unhedged net currency exposure, the Group reported a net gain on realised and unrealised foreign-exchange differences of PLN 34,057 thousand.

In H1 2018, the Group’s total result on foreign exchange differences and currency derivative transactions (including remeasurement as at the end of the reporting period) was a net loss of PLN 39,995 thousand.

Prices of CO₂ emission allowances

In H1 2018, a significant increase was recorded in the prices of CO₂ emission allowances, after a two-year period of low EUA prices attributable to the European industry’s higher productivity driving up emissions and simultaneous adoption of the EU ETS reform in the fourth trading period (according to an agreement between the European Parliament and the Council).

Thanks to its policy of rolling reduction of a deficit in CO₂ emission allowances through spot and forward transactions with a three-year time horizon, the Group did not have to purchase any
allowances during the period of increased prices and after the final settlement of 2017 emissions. The upward trend is expected to at least significantly slow down.

2.2. Market overview

AGRO FERTILIZERS

Economic conditions in agriculture

The weather conditions and prices of agricultural produce translated into deteriorated economic conditions in agriculture. The condition of grain crops in Poland in the first half of 2018 deteriorated significantly due to very bad weather at the end of February and beginning of March, excessive soil moisture in April, and the agricultural drought in May and June. According to Stratégie grains estimates, grain production in Poland in the 2018/19 season is expected to reach 28.87m tonnes, down by about 4.8% on 2017/2018. In the entire European Union, grain yields of 290.7m tonnes are expected in the 2018/2019 season, which represents a 2.6% decrease year on year.

Prices of wheat, corn and oilseed rape

Compared with H1 2017, the prices of wheat, corn and oilseed rape fell in H1 2018 (see the table below).

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017</th>
<th>Average H1 2018</th>
<th>%</th>
<th>6-2018</th>
<th>MIN 2018</th>
<th>MAX 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PLN/t</td>
<td>PLN/t</td>
<td></td>
<td>PLN/t</td>
<td>PLN/t</td>
<td>PLN/t</td>
</tr>
<tr>
<td>Consumable wheat</td>
<td>699</td>
<td>682</td>
<td>-2↓</td>
<td>693</td>
<td>674</td>
<td>693</td>
</tr>
<tr>
<td>Corn</td>
<td>668</td>
<td>650</td>
<td>-3↓</td>
<td>687</td>
<td>621</td>
<td>687</td>
</tr>
<tr>
<td>Rapeseed</td>
<td>1,834</td>
<td>1,536</td>
<td>-16↓</td>
<td>1,511</td>
<td>1,500</td>
<td>1,597</td>
</tr>
</tbody>
</table>

Source: Ministry of Agriculture and Rural Development.

Nitrogen fertilizers

The demand for nitrogen fertilizers (nitrate fertilizers and urea) in Poland in Q2 2018 was in line with current requirements, which was definitely attributable to the weather conditions prevailing in that period. In the EU, demand rebounded sharply in the second quarter of 2018 despite the previous slowdown. Given the relatively good availability of nitrogen fertilizers on the market, the vast majority of agricultural producers put off their purchases of fertilizers until a later time (just before their application) anticipating lower prices.
Due to the observed slowdown and a passive stance adopted by the agricultural sector, prices of nitrate fertilizers remained relatively stable in the first quarter of 2018. On most markets, falling prices were not observed until the second quarter of the reporting period. Market-wise, the price policies for Q3 announced by key EU producers at the end of May and beginning of June, providing for regular price rises in the upcoming months, were the main drivers of the rapid increase in demand observed in Western Europe, with purchases made for the purposes of future fertilizer application. Year-on-year, the prices of CAN and AN went down 4% and 2%, respectively.

The average urea prices in H1 2018 were 5% higher than in the same period of the previous year. After price hikes in Q1 2018, a slow-down was observed on global markets at the beginning of Q2, which translated into price declines. Availability constraints in the second quarter of the year pushed urea prices up. Export volumes from China and demand from India will continue to drive urea prices in the near term.

The situation on the ammonia market in H1 2018 was volatile. The oversupply of ammonia, observed at the beginning of 2018, drove its prices down. The prices started to rise in the second quarter due to availability constraints on global markets, but the price growth did not affect the average price of the product in the period. Year on year, the prices of ammonia declined 10%. However, the maintenance shutdowns scheduled for Q3 may contribute to a growth in ammonia prices.
The table below presents the average global prices of nitrogen fertilizers in H1 2018 relative to H1 2017.

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017</th>
<th>Average H1 2018</th>
<th>y/y Δ</th>
<th>6-2018</th>
<th>MIN 2018</th>
<th>MAX 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EUR/t</td>
<td>EUR/t</td>
<td>%</td>
<td>EUR/t</td>
<td>EUR/t</td>
<td>EUR/t</td>
</tr>
<tr>
<td>CAN 27% Germany CIF inland (bulk)</td>
<td>190</td>
<td>182</td>
<td>-4↓</td>
<td>173</td>
<td>161</td>
<td>196</td>
</tr>
<tr>
<td>AN 33.5% France, delivered (bulk)</td>
<td>270</td>
<td>266</td>
<td>-2↓</td>
<td>247</td>
<td>247</td>
<td>281</td>
</tr>
<tr>
<td>Ammonia (FOB Yuzhny)</td>
<td>286</td>
<td>257</td>
<td>-10↓</td>
<td>243</td>
<td>220</td>
<td>323</td>
</tr>
<tr>
<td>Urea (FOB Baltic)</td>
<td>215</td>
<td>225</td>
<td>5</td>
<td>241</td>
<td>215</td>
<td>241</td>
</tr>
<tr>
<td>AS (Black Sea FOB white)</td>
<td>125</td>
<td>128</td>
<td>2</td>
<td>118</td>
<td>115</td>
<td>138</td>
</tr>
</tbody>
</table>

Source: ICIS, Argus FMB, Profercy.

Market of compound fertilizers

In Q1 2018, there was no increase in demand for phosphate fertilizers. Many farmers still had large stocks of fertilizers for the first round of application which, due to the weather conditions, took place as late as at the end of March. Early April saw the start of intense farming activity: sowing of grain, maize, oilseed rape, application of fertilizers and crop protection chemicals. Despite delayed fertilizer application, the crops grew well as the weather was good in that period. As in previous years, distributors offered farmers Polish products as well as NPK fertilizers imported from Norway, Finland, Russia and Belarus. Until mid-May farmers were optimistic about the condition of their crops. However, due to the lack of rainfall and high temperatures observed from the second half of May, they faced the risk of drought and potential losses of even as much as 40% of their crops. Farmers’ purchasing power was low during the season because of delays in direct payments of EU funds and low prices of agricultural produce. The effects of drought may further aggravate the situation. In Europe, low incomes in agriculture significantly reduced farmers’ purchasing power. The first half of 2018 saw continued weak demand and the prices of basic NPK fertilizers remained relatively unchanged, with a slight increase in March and late June. Russian manufacturers placed their output mainly on the home market, and also sold their products to South American and Indian customers. A market upturn was seen only in April, mainly in Western Europe. DAP prices were on the rise in January and February, to go down at the end of March and rebound slightly in May. The price of DAP at the end of H1 2018 was almost 12% higher than at the beginning of January 2018. Price movements followed a similar pattern in the previous year, when the difference approximated 10%. DAP prices in the reporting period were driven by both seasonal increases in demand for the product as well as production constraints experienced by some manufacturers and delayed supplies from some of them. Demand for DAP was highest in South America and Asia, where the number of transactions was the largest. In Europe, demand for DAP came mainly from Romania, Slovakia, Bulgaria and Serbia.
Prices of compound fertilizers (NPK, DAP), potassium chloride and phosphate rock

In the first half of 2018, on international markets, the average prices of compound fertilizers and raw materials used in their production increased relative to the first half of 2017, as shown in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017</th>
<th>Average H1 2018</th>
<th>y/y</th>
<th>6-2018</th>
<th>MIN 2018</th>
<th>MAX 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USD/t</td>
<td>USD/t</td>
<td>%</td>
<td>USD/t</td>
<td>USD/t</td>
<td>USD/t</td>
</tr>
<tr>
<td>DAP (FOB Baltic)</td>
<td>336</td>
<td>393</td>
<td>17</td>
<td>405</td>
<td>373</td>
<td>405</td>
</tr>
<tr>
<td>NPK 3x16 (FOB Baltic)</td>
<td>237</td>
<td>257</td>
<td>8</td>
<td>261</td>
<td>253</td>
<td>261</td>
</tr>
<tr>
<td>Potassium chloride (FOB Baltic spot)</td>
<td>224</td>
<td>246</td>
<td>10</td>
<td>243</td>
<td>241</td>
<td>249</td>
</tr>
<tr>
<td>Phosphate rock (FOB North Africa)</td>
<td>94</td>
<td>97</td>
<td>4</td>
<td>100</td>
<td>96</td>
<td>100</td>
</tr>
</tbody>
</table>

In H1 2018, the average prices of phosphate rock went up ca. 4% year on year. Growing prices of raw materials used in the production of phosphate fertilizers were attributable to higher prices on the market of phosphate fertilizers, mainly DAP, but also to problems related to production integration in the phosphate industry in India, closing down of phosphate rock mines in China, and continued efforts to launch production in Tunisia. In H1 2018, new phosphoric acid plants were launched in North Africa and in the Middle East, which is evidence of further product integration aimed at processing phosphorite on site to produce phosphoric acid and phosphoric fertilizers.

The rising prices of potassium chloride at the end of 2017 and beginning of 2018 were mainly caused by lower output from the key manufacturers. The average prices of potassium chloride went up ca. 10% (FOB Baltic spot) on the corresponding period of the previous year. Potassium chloride prices were largely affected by the unresolved negotiations with Chinese importers concerning prices for 2018, uncertainty on the Indian market brought about by the late announcement of subsidies for potassium chloride purchases, as well as the cooling of the Brazilian market caused by truckers’ strike, which significantly reduced the number of buy and sale transactions.

Several major developments took place in the first half of 2018 on the global potassium chloride market that will have a bearing on its future. The key ones include completion of the merger between one of the world’s leading potassium chloride manufacturers and the largest distributor of agricultural chemicals in North America, as well as the start-up of new potash mines. Having reached full production capacity (planned for 2022), the new mines will supply more than 8m tonnes of sylvite. The additional production capacities will not lead to a reshuffling among the main manufacturers. However, they may lead to intensified competition between them and thus increase the pressure from customers when negotiating more favourable contract terms in the future.
PLASTICS
Polyamide 6 chain

Prices of PA6, caprolactam, benzene and phenol

![Graph showing Prices of PA6, caprolactam, benzene and phenol]

Source: TECNON, ICIS.

In H1 2018, the market situation for the entire segment continued to be shaped by supply and demand forces and, to a lesser extent, by volatility in crude oil prices.

During the first six months of 2018, the prices on the polyamide 6 market were stable despite the lack of implementation of profitability improvement plans on the part of manufacturers, constrained by structural oversupply. Throughout the reporting period, the prices of PA6 remained at the level seen in December 2017 despite attempts made by manufacturers to pass the growing costs of raw materials onto consumers. The prices of European polyamide 6 (DDP, WE) went up 2% on H1 2017. The European polyamide 6 market remained stable, with good demand and balanced supply. The demand, supported periodically by difficulties on the PA 6.6 supply market (production issues), translated into a growing demand for polyamide 6, mainly from the automotive sector.
The table below presents average half-year prices of polyamide 6, caprolactam and raw materials used in their production relative to Q1 2017.

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017</th>
<th>Average H1 2018</th>
<th>y/y 6-2018</th>
<th>MIN 2018</th>
<th>MAX 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EUR/t</td>
<td>EUR/t</td>
<td>%</td>
<td>EUR/t</td>
<td>EUR/t</td>
</tr>
<tr>
<td>Benzene (FOB, NWE)</td>
<td>821</td>
<td>739</td>
<td>-10(\downarrow)</td>
<td>764</td>
<td>702</td>
</tr>
<tr>
<td>Phenol (FD, NWE)</td>
<td>1,426</td>
<td>1,351</td>
<td>-5(\downarrow)</td>
<td>1,369</td>
<td>1,314</td>
</tr>
<tr>
<td>Caprolactam (Liq., DDP, WE)</td>
<td>2,115</td>
<td>2,140</td>
<td>1</td>
<td>2,150</td>
<td>2,123</td>
</tr>
<tr>
<td>Polyamide 6 (PA 6) (DDP, WE)</td>
<td>2,169</td>
<td>2,205</td>
<td>2</td>
<td>2,205</td>
<td>2,205</td>
</tr>
<tr>
<td></td>
<td>USD/t</td>
<td>USD/t</td>
<td>%</td>
<td>USD/t</td>
<td>USD/t</td>
</tr>
<tr>
<td>Caprolactam (CFR, NE Asia)</td>
<td>1,923</td>
<td>2,098</td>
<td>9</td>
<td>2,063</td>
<td>2,041</td>
</tr>
<tr>
<td></td>
<td>USD/bbl</td>
<td>USD/bbl</td>
<td>%</td>
<td>USD/bbl</td>
<td>USD/bbl</td>
</tr>
<tr>
<td>Crude oil (BRENT)</td>
<td>52.1</td>
<td>70.9</td>
<td>36</td>
<td>75.7</td>
<td>65.7</td>
</tr>
</tbody>
</table>

Source: ICIS, Tecnon, Rzeczpospolita.

The 36% year-on-year increase in oil prices affected the prices of petrochemical commodities in the reporting period. However, due to significantly higher average prices of these commodities in H1 2017, the average prices of benzene and phenol were lower by, respectively, 10% and 5%. In the first half of 2018, the prices of caprolactam in Asia (CFR, NE Asia) reached EUR 2,098/tonne and were 9% higher year on year. Caprolactam prices in Europe (DDP, WE) rose by as little as 1% in the period, to EUR 2,140/tonne.

The overall structure of demand for PA6 is expected to change, reflecting mainly the growing role of engineering plastics, plastic film and flexible packaging. As a consequence, the automotive industry will be the main and key consumer of polyamide-based engineering plastics.

At the beginning of Q3 2018, crude oil prices are expected to increase slightly, and from the middle of the quarter the prices should gradually fall, chiefly on the back of steadily growing production by the OPEC countries once they lift the existing production cuts. However, it should be borne in mind that falling prices of crude oil result in lower profitability of non-conventional oil production (mainly in the US) and reduced supply of oil produced from such sources, which may slow down the expected price declines. No constraints on the availability of crude oil are expected in Q3 2018.

**CHEMICALS**

**OXO product chain**

**Propylene**

The upward trend in the price of crude oil on global markets in the first half of 2018 triggered a gradual increase in propylene prices. The prices of propylene, particularly in Q2 2018, were also driven up by a significant supply-demand imbalance caused by scheduled maintenance shutdowns and emergency stoppages at some propylene producers. Year on year, the average price of propylene was 11% higher. The Group purchased the contracted volumes of propylene, and made supplementary purchases on the spot market to reduce the average price of this raw material. According to forecasts, Q3 2018 should see a further moderate growth in propylene prices. The price growth will be limited by the relaunch of crackers following the completion of maintenance shutdowns and gradual improvement in propylene availability on the market.

Propylene prices should peak at around EUR 1,045/tonne at the end of Q3 2018.

**Prices of 2-EH, DOTP and propylene**
The sharp increase in the price of crude oil pushed up the price of raw materials, which in turn translated into higher prices of OXO products. Unlike in the corresponding period of 2017, the product market remained balanced at the beginning of 2018. Unfortunately, the end of H1 2018 saw supply constraints due to scheduled and unscheduled maintenance shutdowns at production units in Europe, the US, and China. The continued growing demand across all processing segments, such as plasticizers, acrylates, glycol ethers and acetates, supported spot prices, which during the reporting period continued an upward trend. However, the price growth in Q2 2018 was not as strong as the year before, mainly due to undersupply on this market caused by technical failures and downtime at key production plants in Europe.

It is expected that in Q3 2018 the supply of OXO alcohols and plasticisers in Europe will suffer as a result of scheduled maintenance shutdowns at several manufacturers in the region. Nevertheless, the market will be then experiencing peak demand and may gradually cool down.

The DOTP market is expected to grow and gain in importance globally. In response to the growing demand, Grupa Azoty will increase its DOTP production capacities in H2 2018, delivering to the European market an additional 15 thousand tonnes per year.

Sulfur

In the first half of 2018, the global sulfur market was rather inert due to lower demand for phosphate fertilizers. This was particularly true for the Chinese market, which waited for negotiations with Indian phosphorus fertilizer customers to be resolved.

Additionally, the production plant of a leading sulphuric acid manufacturer was closed down in India for environmental reasons, which led to increased price volatility, as reflected in particular by a significant increase in sulphuric acid prices on the local market.
Prices of sulfur

Source: FERTECON.

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017</th>
<th>Average H1 2018</th>
<th>y/y 6-2018</th>
<th>MIN 2018</th>
<th>MAX 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USD/t</td>
<td>USD/t</td>
<td>%</td>
<td>USD/t</td>
<td>USD/t</td>
</tr>
<tr>
<td>Sulfur (Delivered Benelux refinery)</td>
<td>95</td>
<td>113</td>
<td>20</td>
<td>116</td>
<td>112</td>
</tr>
<tr>
<td>Sulfur (Vancouver spot FOB)</td>
<td>84</td>
<td>129</td>
<td>52</td>
<td>131</td>
<td>120</td>
</tr>
</tbody>
</table>

The prices of refined sulfur in Western Europe have been growing since Q4 2017. In H1 2018, the average price of refined sulfur increased by approximately 20% (Benelux delivered) year on year. The price increase on the European market was attributable to low stock levels, shutdowns of some refineries and natural gas desulfurization units, as well as attempts by European manufacturers to sell sulfur in other, more promising regions of the world.

Pigment chain

In H1 2018, most global markets saw an increase in the prices of titanium white. In Europe, its average price rose by ca. 28%, and sequentially by 1.8%, year on year. Ever since 2016, titanium white prices have continued on an upward trend driven by a global shortage of the product, and reached their historical peak in the first six months of 2018. In Q2 2018, demand on the European market began to balance supply as a result of increased imports of titanium white from China, supported by favourable exchange rates and very weak demand on the local Chinese market. The slightly weaker-than-expected demand for titanium white in the reporting period was correlated with the slowdown in the largest EU economies and uncertainty related to global trade and customs wars. In addition, the relaunch of approximately 20% of production capacities of the titanium white production plant in Pori, Finland, improved the availability of pigment in the printing inks segment. The oversaturation of the market with constantly growing prices and improved availability of the product may result in a change of market trends, gradually reducing the prices of titanium white. Depending on how much these factors materialise, the prices of titanium white may start to decline in the second half of the year.
Prices of titanium white, ilmenite and titanium slag

The decline in China’s production volume of titanium-containing minerals in 2016–2018 caused by environmental inspections made by the state authorities led to increased imports of those minerals to China and triggered global price increases. In H1 2018, global markets continued to suffer from undersupply of titanium slag used in the manufacture of sulfate titanium white. On the representative Chinese market, in H1 2018 the prices of ilmenite and titanium slag containing 74%–76% of titanium fell, respectively, 18% and 1.2% year on year.

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017</th>
<th>Average H1 2018</th>
<th>y/y</th>
<th>6-2018</th>
<th>MIN 2018</th>
<th>MAX 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EUR/t</td>
<td>EUR/t</td>
<td>%</td>
<td>EUR/t</td>
<td>EUR/t</td>
<td>EUR/t</td>
</tr>
<tr>
<td>Titanium white FD NWE</td>
<td>2,302</td>
<td>2,940</td>
<td>28</td>
<td>2,975</td>
<td>2,875</td>
<td>2,975</td>
</tr>
<tr>
<td>Ilmenite Ex Works China</td>
<td>251</td>
<td>205</td>
<td>-18</td>
<td>186</td>
<td>186</td>
<td>223</td>
</tr>
<tr>
<td>Titanium slag ex Works China</td>
<td>711</td>
<td>703</td>
<td>-1</td>
<td>699</td>
<td>651</td>
<td>735</td>
</tr>
</tbody>
</table>

Source: ICIS, CCM.

Over the long term, the prices of ilmenite will depend on its availability on the global market. At present, there are no new investment projects related to ilmenite mines, and the continuing difficult situation on the Chinese market may result in production stoppage in that region. If materialised, those issues may lead to a shortage of this raw material in the future and increase its prices. Chinese titanium slag producers whose units are shut down (due to, e.g. high electricity prices) are not planning to resume production yet in anticipation of price increases. The world’s largest titanium slag producer is not planning to relaunch in the near future the production lines shut down in 2015, either. For this reason, global markets are experiencing limited supply of slag used in the manufacture of sulfate titanium white. Should this situation persist, it may gradually inflate the prices of titanium slag.

**Melamine**

The first half of 2018 saw a drop in melamine supply in China as a result of unit maintenance works as well as air pollution and limited availability of natural gas as a raw material for production in the winter months. In the US, the demand for melamine rose on the back of strong growth in the construction industry. Import offers from outside the European Union (Qatar, Russia and China) were placed on the European market. Average contract prices in Europe in the first half of 2018 rose by 5% (+11% y/y).
In the third quarter of 2018, new melamine production capacities may come on stream in the Chinese market (100 thousand tonnes/year), and the monsoon season, falling between July and September, may result in a decrease in melamine production in some of the world’s installations. However, the second half of 2018 is generally expected to see melamine prices stabilise or decrease as global supply improves.

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Average</th>
<th>y/y</th>
<th>6-2018</th>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H1 2017</td>
<td>H1 2018</td>
<td></td>
<td>EUR/t</td>
<td>EUR/t</td>
<td>EUR/t</td>
</tr>
<tr>
<td>Melamine</td>
<td>1,467</td>
<td>1,633</td>
<td>11</td>
<td>1,655</td>
<td>1,600</td>
<td>1,655</td>
</tr>
</tbody>
</table>

Source: ICIS, Global Bleaching Chemicals.

ENERGY

Natural gas

Prices of natural gas

At the beginning of the year, gas prices fell from EUR 19.5 to EUR 17.5/MWh in mid-February and were below last year’s levels. Two waves of frosty weather that swept over Europe at the end of February and in mid March led to record prices of gas on commodity exchanges (EUR 60/MWh) and depletion of gas stocks. At the end of March, the prices began to fall back, ending the quarter at around EUR 18.5/MWh.

During April and May 2018, gas prices increased steadily. The fundamental drivers of these increases were low gas stocks and rising prices of other energy carriers, i.e. crude oil and coal. Oil prices were rising, spurred by concerns about the supply of commodities. Initially, the causes of concerns were the tension around Syria and falling production in Venezuela, and later - the US decision to withdraw
from the nuclear agreement with Iran and re-impose the sanctions on that country. On the other hand, the exceptionally cold end of winter and the hot start of spring in Asia boosted the demand for coal. The coal market was characterised by limited supply, with prices having grown by a quarter in the period, to USD 100 per tonne.

Since June 2018, gas prices have been moving in a side trend. The price oscillates around EUR 22/MWh and is determined by the high price of coal (and CO2 emission allowances), an alternative fuel in the power mix.

*Excluding transmission.

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017</th>
<th>Average H1 2018</th>
<th>y/y 6-2018</th>
<th>MIN 2018</th>
<th>MAX 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EUR/MWh</td>
<td>EUR/MWh</td>
<td>%</td>
<td>EUR/MWh</td>
<td>EUR/MWh</td>
</tr>
<tr>
<td>TTF DA*</td>
<td>17.1</td>
<td>21.0</td>
<td>23</td>
<td>21.9</td>
<td>18.7</td>
</tr>
<tr>
<td>GPL DA*</td>
<td>17.1</td>
<td>20.8</td>
<td>22</td>
<td>22.0</td>
<td>18.5</td>
</tr>
<tr>
<td>PPX*</td>
<td>18.5</td>
<td>22.3</td>
<td>21</td>
<td>23.3</td>
<td>20.1</td>
</tr>
</tbody>
</table>

Source: PGNiG tariff, ICIS.

According to the latest forecasts, the developments seen early this year will affect prices throughout the rest of the year. Prices are expected to remain at the current level until the end of the first quarter of next year and only then start to fall. A lot will also depend on changes in the oil and coal markets. Until there is a noticeable oversupply of gas on the European market, these changes will set the directions for change as well as the upper price limit.

**Electricity**

![Electricity (IRDN) - PLN/MWh](chart)

IRDN – average price weighted by the volume of all transactions on a trading day, calculated after the delivery date for the entire day.

Source: The Polish Power Exchange.

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017</th>
<th>Average H1 2018</th>
<th>y/y 6-2018</th>
<th>MIN 2018</th>
<th>MAX 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PLN/MWh</td>
<td>PLN/MWh</td>
<td>%</td>
<td>PLN/MWh</td>
<td>PLN/MWh</td>
</tr>
<tr>
<td>Electricity</td>
<td>152.05</td>
<td>201.36</td>
<td>32.4</td>
<td>233.97</td>
<td>104.78</td>
</tr>
</tbody>
</table>

Source: The Polish Power Exchange.

In the first half of 2018, average electricity prices went up by over 30% year on year and 15% quarter on quarter. The Polish market is largely affected by climate regulations and the need to continue upgrading generation capacities (expenditure on new capacities), maintain the operating capacity reserve (effect on production costs), and implement the capacity market.
Electricity prices will be driven by the following factors:
- Ongoing restructuring of the coal sector companies with the participation of power sector companies,
- Continuing high prices of gas,
- Increasingly widespread use of energy efficient solutions leading to reduced electricity consumption,
- Persistently high prices of coal on global and domestic markets,
- Continuing high prices of CO2 emission units.

### Coal

#### Prices of hard coal

<table>
<thead>
<tr>
<th></th>
<th>Average H1 2017 USD/t</th>
<th>Average H1 2018 USD/t</th>
<th>y/y %</th>
<th>6-2018 USD/t</th>
<th>MIN 2018 USD/t</th>
<th>MAX 2018 USD/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>78.70</td>
<td>89.58</td>
<td>13.8</td>
<td>95.88</td>
<td>79.07</td>
<td>97.69</td>
</tr>
</tbody>
</table>

Source: ARA prices.

Year on year, coal prices grew was almost 14%, and the average price reached USD 90 per tonne. In the second quarter of 2018, coal prices remained on par with those reported in the first quarter. The position of the global coal market, as well as that of other commodity markets, remains strong due to the increased demand for this raw material, coming largely from the Asia Pacific region. Prices of coal in Poland followed the global trends. Coal was no longer in oversupply on the Polish market as a result of the ongoing restructuring of the mining industry (lower coal production and closure of unprofitable mines). In 2018, Poland’s consolidated coal mining sector is expected to maintain current price levels. Analysts do not expect a return to low prices and estimate that in 2018 coal prices will increase by approximately 6%, with the equilibrium price at USD 90/tonne.
2.3. Key financial and economic data

2.3.1. Consolidated financial information

In the first half of 2018, the Group earned a positive EBITDA of PLN 528,940 thousand and net profit of PLN 124,473 thousand.

Year on year, EBITDA decreased by PLN 185,226 thousand and net profit fell by PLN 253,198 thousand.

Consolidated data

<table>
<thead>
<tr>
<th>Item</th>
<th>H1 2018</th>
<th>H1 2017</th>
<th>change</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>4,877,029</td>
<td>4,869,691</td>
<td>7,338</td>
<td>0.2</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>(3,969,147)</td>
<td>(3,704,601)</td>
<td>(264,546)</td>
<td>7.1</td>
</tr>
<tr>
<td>Gross profit</td>
<td>907,882</td>
<td>1,165,090</td>
<td>(257,208)</td>
<td>(22.1)</td>
</tr>
<tr>
<td>Selling and distribution expenses</td>
<td>(310,160)</td>
<td>(338,005)</td>
<td>27,845</td>
<td>(8.2)</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>(382,405)</td>
<td>(344,088)</td>
<td>(38,317)</td>
<td>11.1</td>
</tr>
<tr>
<td>Profit on sales</td>
<td>215,317</td>
<td>482,997</td>
<td>(267,680)</td>
<td>(55.4)</td>
</tr>
<tr>
<td>Net other expenses</td>
<td>18,862</td>
<td>(40,935)</td>
<td>22,073</td>
<td>(53.9)</td>
</tr>
<tr>
<td>Operating profit</td>
<td>196,455</td>
<td>442,062</td>
<td>(245,607)</td>
<td>(55.6)</td>
</tr>
<tr>
<td>Net finance income/(costs)</td>
<td>(35,982)</td>
<td>(7,297)</td>
<td>(28,685)</td>
<td>393.1</td>
</tr>
<tr>
<td>Share of profit of equity-accounted</td>
<td>7,191</td>
<td>8,605</td>
<td>(1,414)</td>
<td>(16.4)</td>
</tr>
<tr>
<td>investees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit before tax</td>
<td>167,664</td>
<td>443,370</td>
<td>(275,706)</td>
<td>(62.2)</td>
</tr>
<tr>
<td>Income tax</td>
<td>(43,191)</td>
<td>(65,699)</td>
<td>22,508</td>
<td>(34.3)</td>
</tr>
<tr>
<td>Net profit</td>
<td>124,473</td>
<td>377,671</td>
<td>(253,198)</td>
<td>(67.0)</td>
</tr>
<tr>
<td>EBIT</td>
<td>196,455</td>
<td>442,062</td>
<td>(245,607)</td>
<td>(55.6)</td>
</tr>
<tr>
<td>Depreciation and amortisation</td>
<td>332,485</td>
<td>272,104</td>
<td>60,381</td>
<td>22.2</td>
</tr>
<tr>
<td>EBITDA</td>
<td>528,940</td>
<td>714,166</td>
<td>(185,226)</td>
<td>(25.9)</td>
</tr>
</tbody>
</table>

Source: Company data.

With revenue up 0.2% year on year and cost of sales higher by 7.1%, the Group reported gross profit of PLN 907,882 thousand. Gross profit in H1 2018 decreased by PLN 257,208 thousand relative to H1 2017.

Gross profit net of selling and distribution expenses and administrative expenses (profit on sales) was PLN 215,317 thousand, down 55.4% year on year.

In H1 2018, the balance of other income and other expenses was negative, at PLN (18,862) thousand, which had a negative effect on EBIT, reducing it to PLN 196,455 thousand.
2.3.2. Segment results

EBIT by segment

<table>
<thead>
<tr>
<th></th>
<th>Agro Fertilizers</th>
<th>Plastics</th>
<th>Chemicals</th>
<th>Energy</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>External revenue</td>
<td>2,316,928</td>
<td>831,251</td>
<td>1,514,250</td>
<td>140,669</td>
<td>73,931</td>
</tr>
<tr>
<td>Profit/(loss) on sales</td>
<td>4,682</td>
<td>90,824</td>
<td>160,208</td>
<td>(3,357)</td>
<td>(37,040)</td>
</tr>
<tr>
<td>EBIT</td>
<td>(4,135)</td>
<td>91,369</td>
<td>160,974</td>
<td>(3,136)</td>
<td>(48,617)</td>
</tr>
</tbody>
</table>

Source: Company data.

The Group’s profit on sales of products in the first half of 2018 was determined primarily by the market situation in the Agro Fertilizers segment. Revenue in the Agro Fertilizers segment was down 5.6% year on year. In the other segments, revenue increased.

Revenue by segment

Source: Company data.

H1 2018

- Agro Fertilizers: 31.1%
- Plastics: 17.0%
- Chemicals: 47.5%
- Energy: 2.9%
- Other Activities: 1.5%
Interim report of Grupa Azoty for H1 2018
Directors’ Report on the operations of the Grupa Azoty Group in H1 2018
(all amounts in PLN '000 unless indicated otherwise)

Source: Company data.

The shares of individual segments in total revenue changed compared with H1 2017: the contribution from the Plastics, Chemicals and Energy segments grew (by 1.7 pp, 3.4 pp, and 0.5 pp, respectively), while the share of Agro Fertilizers fell (by 6.6 pp). The share of the Other Activities segment remained virtually unchanged.

**Agro Fertilizers**
In H1 2018, revenue in the Agro Fertilizers segment was PLN 2,316,928 thousand and accounted for 47.5% of the Group's total revenue. Relative to H1 2017, the segment’s revenue fell 5.6%, and its share in the Group’s total revenue decreased.
The Agro Fertilizers segment reported a profit on sales. The segment’s EBIT was negative.
Sales on the domestic market accounted for approximately 72.8% of the segment’s revenue.

**Plastics**
Revenue in the Plastics segment was PLN 831,251 thousand and accounted for 17.0% of the Group’s total revenue in H1 2018. The segment’s revenue grew year on year. The segment reported a profit on sales and positive EBIT of PLN 91,369 thousand.
More than 89.0% of the segment’s revenue was derived from sales on foreign markets.

**Chemicals**
In H1 2018, revenue in the Chemicals segment amounted to PLN 1,514,250 thousand, having risen 3.3% year on year. The segment’s revenue accounted for 31.1% of the Group’s total revenue. The segment reported a profit on sales and positive EBIT of PLN 160,974 thousand.
Sales on foreign markets accounted for approximately 62.4% of the Chemicals segment’s revenue.

**Energy**
In the first half of 2018, revenue in the Energy segment was PLN 140,669 thousand and accounted for approximately 2.9% of the Group’s total revenue. The segment’s revenue grew 0.5% year on year. The segment’s EBIT was negative.

**Other Activities**
In Q1 2018, revenue of the Other Activities segment was PLN 73,931 thousand and accounted for approximately 1.5% of the Group’s total revenue. The segment’s EBIT was negative.
### 2.3.3. Structure of operating expenses

In H1 2018, operating expenses reached PLN 4,632,700 thousand, having increased by PLN 197,780 thousand year on year. Depreciation and amortisation charges, raw materials and consumables used, salaries and wages, including overheads, as well as taxes and charges also rose.

#### Operating expenses by nature of expense

<table>
<thead>
<tr>
<th></th>
<th>H1 2018</th>
<th>H1 2017</th>
<th>change</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation and amortisation</td>
<td>331,358</td>
<td>270,763</td>
<td>60,595</td>
<td>22.4</td>
</tr>
<tr>
<td>Raw materials and consumables used</td>
<td>2,906,061</td>
<td>2,767,155</td>
<td>138,906</td>
<td>5.0</td>
</tr>
<tr>
<td>Services</td>
<td>445,179</td>
<td>480,920</td>
<td>(35,741)</td>
<td>(7.4)</td>
</tr>
<tr>
<td>Salaries and wages, including overheads, and other benefits</td>
<td>724,024</td>
<td>672,914</td>
<td>51,110</td>
<td>7.6</td>
</tr>
<tr>
<td>Taxes and charges</td>
<td>169,444</td>
<td>159,524</td>
<td>9,920</td>
<td>6.2</td>
</tr>
<tr>
<td>Other expenses</td>
<td>56,634</td>
<td>83,644</td>
<td>(27,010)</td>
<td>(32.3)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,632,700</td>
<td>4,434,920</td>
<td>197,780</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Source: Company data.

#### Other operating expenses

In the first half of 2018, operating expenses other than cost of raw materials and consumables used accounted for 37.3% of total operating expenses, up from 37.6% in the corresponding period of 2017.

#### Structure of other operating expenses [%]

<table>
<thead>
<tr>
<th></th>
<th>H1 2018</th>
<th>H1 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation and amortisation</td>
<td>7.2</td>
<td>6.1</td>
</tr>
<tr>
<td>Services</td>
<td>9.6</td>
<td>10.8</td>
</tr>
<tr>
<td>Salaries and wages, including overheads, and other benefits</td>
<td>15.6</td>
<td>15.2</td>
</tr>
<tr>
<td>Taxes and charges</td>
<td>3.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Other expenses</td>
<td>1.2</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>37.3</td>
<td>37.6</td>
</tr>
</tbody>
</table>

Source: Company data.

### 2.3.4. Structure of assets, equity and liabilities

In H1 2018, the Group’s assets rose to PLN 11,953,447 thousand, by PLN 819,247 thousand relative to the end of H1 2017. As at June 30th 2018, non-current assets were PLN 8,145,189 thousand, and current assets were PLN 3,808,258 thousand.

In Q1 2018, the most significant year-on-year changes in assets included:

- a 5.4% increase in property, plant and equipment,
- a 64.8% increase in cash and cash equivalents,
- a 19.7% increase in trade and other receivables,
- a 10.1% increase in inventories,
- a 21.6% decrease in the value of equity-accounted investees,
- a 19.2% decrease in intangible assets.
Structure of assets

<table>
<thead>
<tr>
<th>Item</th>
<th>H1 2018</th>
<th>H1 2017</th>
<th>change</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-current assets, including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>8,145,189</td>
<td>7,861,091</td>
<td>284,098</td>
<td>3.6</td>
</tr>
<tr>
<td>Perpetual usufruct of land</td>
<td>6,925,761</td>
<td>6,569,369</td>
<td>356,392</td>
<td>5.4</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>471,692</td>
<td>482,176</td>
<td>(10,484)</td>
<td>(2.2)</td>
</tr>
<tr>
<td>Other receivables</td>
<td>375,203</td>
<td>464,280</td>
<td>(89,077)</td>
<td>(19.2)</td>
</tr>
<tr>
<td>Equity-accounted investees</td>
<td>139,516</td>
<td>92,685</td>
<td>46,831</td>
<td>50.5</td>
</tr>
<tr>
<td>Total non-current assets</td>
<td>11,953,447</td>
<td>11,134,200</td>
<td>819,247</td>
<td>7.4</td>
</tr>
<tr>
<td>Current assets, including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade and other receivables</td>
<td>2,380,258</td>
<td>3,273,109</td>
<td>535,149</td>
<td>16.3</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>1,391,937</td>
<td>1,162,592</td>
<td>229,345</td>
<td>19.7</td>
</tr>
<tr>
<td>Inventories</td>
<td>1,088,796</td>
<td>660,718</td>
<td>428,078</td>
<td>64.8</td>
</tr>
<tr>
<td>Property rights</td>
<td>1,048,788</td>
<td>952,899</td>
<td>428,078</td>
<td>44.3</td>
</tr>
<tr>
<td>Total current assets</td>
<td>3,808,258</td>
<td>2,273,109</td>
<td>535,149</td>
<td>16.3</td>
</tr>
<tr>
<td>Total assets</td>
<td>11,953,447</td>
<td>11,134,200</td>
<td>819,247</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Source: Company data.

Year on year, the most significant changes in equity and liabilities in the reporting period included:
- a 35.6% increase in current trade and other payables,
- an increase in short- and long-term grants,
- a 7.6% decrease in non-current deferred tax liabilities,
- an increase in short- and long-term provisions,
- a 29.8% increase in current liabilities under borrowings.

Structure of equity and liabilities

<table>
<thead>
<tr>
<th>Item</th>
<th>H1 2018</th>
<th>H1 2017</th>
<th>change</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>7,439,049</td>
<td>7,329,156</td>
<td>109,893</td>
<td>1.5</td>
</tr>
<tr>
<td>Non-current liabilities, including:</td>
<td>2,360,660</td>
<td>2,208,902</td>
<td>151,758</td>
<td>6.9</td>
</tr>
<tr>
<td>Borrowings</td>
<td>1,529,586</td>
<td>1,468,971</td>
<td>60,615</td>
<td>4.1</td>
</tr>
<tr>
<td>Employee benefit obligations</td>
<td>357,233</td>
<td>323,050</td>
<td>34,183</td>
<td>10.6</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>177,087</td>
<td>191,662</td>
<td>(14,575)</td>
<td>(7.6)</td>
</tr>
<tr>
<td>Provisions</td>
<td>134,107</td>
<td>111,496</td>
<td>22,611</td>
<td>20.3</td>
</tr>
<tr>
<td>Government grants received</td>
<td>123,392</td>
<td>76,310</td>
<td>47,082</td>
<td>61.7</td>
</tr>
<tr>
<td>Total non-current liabilities</td>
<td>2,153,738</td>
<td>1,596,142</td>
<td>557,596</td>
<td>34.9</td>
</tr>
<tr>
<td>Current liabilities, including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade and other payables</td>
<td>1,826,932</td>
<td>1,347,722</td>
<td>479,210</td>
<td>35.6</td>
</tr>
<tr>
<td>Borrowings</td>
<td>115,470</td>
<td>88,991</td>
<td>26,479</td>
<td>29.8</td>
</tr>
<tr>
<td>Government grants received</td>
<td>71,642</td>
<td>47,172</td>
<td>24,470</td>
<td>51.9</td>
</tr>
<tr>
<td>Other financial liabilities</td>
<td>62,568</td>
<td>36,414</td>
<td>26,154</td>
<td>71.8</td>
</tr>
<tr>
<td>Provisions</td>
<td>26,582</td>
<td>21,496</td>
<td>5,086</td>
<td>23.7</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>11,953,447</td>
<td>11,134,200</td>
<td>819,247</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Source: Company data.
### 2.3.5. Financial ratios

#### Profitability ratios

<table>
<thead>
<tr>
<th></th>
<th>H1 2018</th>
<th>H1 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross profit margin</td>
<td>18.6%</td>
<td>23.9%</td>
</tr>
<tr>
<td>EBIT margin</td>
<td>4.0%</td>
<td>9.1%</td>
</tr>
<tr>
<td>EBITDA margin</td>
<td>10.8%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Net profit margin</td>
<td>2.6%</td>
<td>7.8%</td>
</tr>
<tr>
<td>ROA</td>
<td>1.0%</td>
<td>3.4%</td>
</tr>
<tr>
<td>ROCE</td>
<td>2.0%</td>
<td>4.6%</td>
</tr>
<tr>
<td>ROE</td>
<td>1.7%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Return on non-current assets</td>
<td>1.5%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Source: Company data.

**Ratio formulas:**
- Gross profit margin = gross profit (loss) / revenue (statement of comprehensive income by function)
- EBIT margin = EBIT / revenue
- EBITDA margin = EBITDA / net revenue
- Net profit margin = net profit (loss) / revenue
- Return on assets (ROA) = net profit (loss) / total assets
- Return on capital employed (ROCE) = EBIT / TALCL, that is EBIT / total assets less current liabilities
- Return on equity (ROE) = net profit (loss) / equity
- Return on non-current assets = net profit (loss) / non-current assets

#### Liquidity ratios

<table>
<thead>
<tr>
<th></th>
<th>H1 2018</th>
<th>H1 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current ratio</td>
<td>1.8</td>
<td>2.1</td>
</tr>
<tr>
<td>Quick ratio</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Cash ratio</td>
<td>0.5</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Source: Company data.

**Ratio formulas:**
- Current ratio = current assets / current liabilities
- Quick ratio = (current assets - inventories - current prepayments and accrued income) / current liabilities
- Cash ratio = (cash + other financial assets) / current liabilities

#### Changes in net working capital

![Changes in net working capital chart](chart-url)
Operational efficiency ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>H1 2018</th>
<th>H1 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory turnover</td>
<td>48</td>
<td>46</td>
</tr>
<tr>
<td>Average collection period</td>
<td>51</td>
<td>43</td>
</tr>
<tr>
<td>Average payment period</td>
<td>83</td>
<td>66</td>
</tr>
<tr>
<td>Cash conversion cycle</td>
<td>16</td>
<td>24</td>
</tr>
</tbody>
</table>

Debt ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>H1 2018</th>
<th>H1 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total debt ratio</td>
<td>37.8%</td>
<td>34.2%</td>
</tr>
<tr>
<td>Long-term debt ratio</td>
<td>19.7%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Short-term debt ratio</td>
<td>18.0%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Equity-to-debt ratio</td>
<td>164.8%</td>
<td>192.6%</td>
</tr>
<tr>
<td>Interest cover ratio</td>
<td>806.2%</td>
<td>2,525.4%</td>
</tr>
</tbody>
</table>

Financial liquidity

The Parent and key Group companies are fully solvent, with good credit standing. The Group is able to pay its liabilities as they fall due and to hold and generate free operating cash flows to further support payment of such liabilities in a timely manner. The liquidity management policy operated by the Group consists in maintaining surplus cash and available credit facilities as well as limits under the intragroup financing agreement (one purpose of which is to ensure effective distribution of funds) and ensuring that their level is safe and adequate to the scale of the Group’s business.

Borrowings

In H1 2018, the Group paid all of its borrowing-related liabilities when due, and there was no threat to its ability to continue servicing its debt. Grupa Azoty has available credit limits of approximately PLN 2,908m (as at June 30th 2018) under corporate loans extended on the basis of long-term credit facility agreements concluded with a bank consortium, the EIB and the EBRD.

The Group also has access to umbrella overdraft limits in the form of an overdraft facility connected with physical cash pooling and under a multi-purpose credit facility, which may be used by the Parent at times of increased demand for funding from the Group companies. The Grupa Azoty Group also has access to bilateral overdraft limits and multi-purpose facilities available to the Group companies. The amount of limits under overdraft and multi-purpose credit facilities available to the Group as at June 30th 2018 was PLN 499m.

In total, as at June 30th 2018 the Group had access to credit limits under the agreements referred to above of approximately PLN 3,407m (December 31st 2017: PLN 1,188m).
After the reporting date, the Group increased the value of available credit limits by PLN 500m following the execution of a new long-term credit facility agreement with the EBRD on July 26th 2018. The Group’s financial standing is sound, and there are no material threats or risks of its deterioration in the future. The Group complies with the uniform covenants of its credit facility agreements which enable it to significantly increase financial debt if needed.

2.6. Type and amounts of one-off items affecting the assets, equity and liabilities, capital, net profit/loss or cash flows

One-off items which materially affected assets, equity and liabilities, capital, net profit/loss or cash flows were the impairment losses recognised, described in detail in Section 2.1. Save for the above, there were no other one-off items which would materially impact the Group’s assets, equity and liabilities, capital, net profit/loss or cash flows.

2.7. Key investment projects

The main items of the Group’s capital expenditure in H1 2018 amounted to PLN 444,697 thousand (including amounts spent on components, major overhaul work and improvements).

Structure of capital expenditure:

- **Growth capex**
  - PLN 291,359 thousand

- **Maintenance capex**
  - PLN 68,938 thousand

- **Mandatory investments**
  - PLN 22,936 thousand

- **Purchase of finished goods**
  - PLN 14,569 thousand

- **Other (components, major overhaul work, other)**
  - PLN 46,895 thousand
Structure of the Group’s capital expenditure in H1 2018

Source: Company data.

The Group’s capital expenditure in H1 2018:

- Parent PLN 89,438 thousand
- Grupa Azoty PUŁAWY Group PLN 196,918 thousand
- Grupa Azoty POLICE Group PLN 72,969 thousand
- Grupa Azoty KEDZIERZYN Group PLN 46,259 thousand
- Grupa Azoty ATT Polymers GmbH PLN 27,696 thousand
- Grupa Azoty SIARKOPOL PLN 6,739 thousand
- Grupa Azoty KOLTAR Sp. z o.o. PLN 2,475 thousand
- Grupa Azoty PKCh Sp. z o.o. PLN 2,203 thousand

*) Translated at the EUR/PLN exchange rate quoted by the National Bank of Poland for June 29th 2018: EUR 1 = PLN 4.3616 (table No. 251/A/NBP/2018).

Key investment projects implemented by the Group

<table>
<thead>
<tr>
<th>Project name</th>
<th>Project budget</th>
<th>Expenditure incurred</th>
<th>Expenditure incurred in H1 2018</th>
<th>Project purpose</th>
<th>Scheduled completion date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Technology and Development Centre</td>
<td>74,100</td>
<td>28,388</td>
<td>22,561</td>
<td>Construction of R&amp;D centre for Grupa Azoty S.A.</td>
<td>2018</td>
</tr>
<tr>
<td><strong>Grupa Azoty PUŁAWY</strong></td>
<td></td>
<td></td>
<td></td>
<td>To raise the efficiency of nitric acid production and improve of the economics of production of nitric acid-based fertilizers</td>
<td>2024</td>
</tr>
<tr>
<td>Upgrade of the existing and construction of new nitric acid units, and facilities for neutralisation and production of new fertilizers based on nitric acid</td>
<td>695,000</td>
<td>24,033</td>
<td>17,136</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility for production of granulated fertilizers based on ammonium nitrate</td>
<td>385,000</td>
<td>216,907</td>
<td>79,578</td>
<td>To improve the quality of fertilizers by applying modern mechanical granulation</td>
<td>2020</td>
</tr>
<tr>
<td>Replacement of the TG-2 turbine generator set</td>
<td>99,000</td>
<td>69,527</td>
<td>9,392</td>
<td>To increase the efficiency of electricity and heat cogeneration by replacing the TG-2 30 MWe pass-out and condensing turbine with a new</td>
<td>2018</td>
</tr>
</tbody>
</table>
### Project Name and Expenditure

<table>
<thead>
<tr>
<th>Project name</th>
<th>Project budget</th>
<th>Expenditure incurred</th>
<th>Expenditure incurred in H1 2018</th>
<th>Project purpose</th>
<th>Scheduled completion date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade of steam generator OP-215 to reduce NOx emissions</td>
<td>93,000</td>
<td>628</td>
<td>50</td>
<td>To reconstruct and bring the steam generator into compliance with new NOx emission standards</td>
<td>2020</td>
</tr>
<tr>
<td>Exhaust gas treatment unit and upgrade of the EC II CHP plant</td>
<td>290,885</td>
<td>252,408</td>
<td>13,114</td>
<td>To bring the operation of the CHP plant’s units in line with the requirements of Directive 2010/75/EU</td>
<td>Project completed</td>
</tr>
<tr>
<td>Change of phosphoric acid production method (DA-HF technology)</td>
<td>73,700</td>
<td>53,764</td>
<td>13,360</td>
<td>To raise the efficiency of phosphoric acid production and improve the acid’s quality</td>
<td>2018</td>
</tr>
<tr>
<td>Upgrade of synthesis gas compression unit supplying ammonia plant</td>
<td>180,000</td>
<td>15,351</td>
<td>15,084</td>
<td>To rebuild the capacity of synthesis gas compression for the ammonia plant through the installation of a new compressor</td>
<td>2020</td>
</tr>
<tr>
<td>Propane Dehydrogenation (PDH) unit with related infrastructure, and polypropylene (PP) production unit</td>
<td>5,276,829</td>
<td>139,468</td>
<td>28,644</td>
<td>Construction of a propylene dehydrogenation plant (PDH) and a polypropylene production plant with associated infrastructure, including the expansion of the Police Sea Port to include a propane and ethylene handling and storage terminal</td>
<td>2022</td>
</tr>
</tbody>
</table>

### 2.8. Factors which will affect the Group’s performance over at least the next reporting period

**Exchange rates**

The persistence of positive fundamental factors in the Polish economy, such as the strong GDP growth, lower unemployment, higher household incomes and the good situation of public finances, together with the signs of abatement in trade disputes between the US and the European Union and China, warrant the expectation that in the second half of 2018 the domestic currency may appreciate again in relation to the US dollar and the euro.

At the same time, global factors related to the passing of the economic upswing in the euro zone or the renewed intensification of protectionism in the US economic policy may lead to a periodic increase in risk aversion and, as a result, a renewed strengthening of the US dollar against the euro and the złoty.

The previous and expected movements in the USD/PLN and EUR/PLN exchange rates should not prevent the Group from achieving the foreign currency exposure results it has planned for the second half of 2018. Considering that the earlier corrective weakening of the domestic currency against the euro and US dollar in the second quarter of 2018 offset the previous appreciation of the złoty, the second half of the year may see a return to medium-term equilibrium levels.

**Interest rates in Poland**

Domestic interest rates remained stable throughout H1 2018 and, in line with the Governor of the National Bank of Poland’s earlier announcements, should remain unchanged until 2019. Thus, the main reference rate applicable to the credit facilities contracted by the Group (1M WIBOR) should remain flat at about 1.7%. This will help stabilise the Group’s borrowing costs at a relatively low level reinforcing its debt service capacity, also if the Group decides to increase debt to finance its investing activities, as planned.

Given that the eurozone has already seen the peak of its economic growth and that the rise in inflation is limited, the European Central Bank continues its quantitative easing programme and a policy of...
negative interest rates, which should remain at current levels at least until the end of 2018, considering that core inflation remains low following a long period of deflation.

On the other hand, in 2018 the FED will continue to gradually taper its accommodative monetary policy, in connection with the continued economic recovery in the US and concerns regarding increased inflationary pressures.

To conclude, any adverse changes to the current low interest rates on debt in currencies used by the Group to finance its activities (PLN and EUR) are unlikely before the end of 2018. Thus the risk of the Group’s financial condition or results of operations deteriorating on higher borrowing costs may be considered low.

A limited rise of the WIBOR and/or EURIBOR rates is unlikely before the end of 2019 if inflation escalates and the GDP continues to grow at the current rates. Relative to market rates, the relatively narrow spread between credit and deposit rates available to the Group is expected to continue.

Interest income earned on free cash under cash pooling and fixed-term deposits will partially offset the borrowing costs.

Regulatory area

- In the short and long terms, Germany is expected to further tighten its fertilization plans as part of the continued implementation of the Nitrates Directive in the current fertilizer season. In the market’s opinion, this may translate into a fall in Germany’s consumption of nitrogen fertilizers, especially urea, partly offset by higher consumption of smart fertilizers.

- Continued work on a new fertilizers regulation – the Trilogue (tripartite talks between the European Parliament, Council of the European Union and European Commission). In the first half of the year, reaching a common position on disputed issues proved impossible. On July 1st 2018, the Presidency of the Council of the European Union went from Bulgaria to Austria.

- Continued implementation of China’s pro-environmental policy translating into long-term restrictions on the utilisation of the chemical sector’s capacities, including fertilizer and caprolactam production capacities and, consequently, into improved supply-demand balance on global markets for the Group’s key products.

- Poland’s general programme of measures aimed at reducing the outflow of nitrogen, implemented in line with the Nitrates Directive, will be launched in July 2018. The programme will impose increased obligations, principally on breeders and large agricultural producers, to introduce measures aimed at limiting nitrogen outflow to waters (e.g. by improving the effectiveness of fertilizer application), as well as increased analytical and reporting obligations.

- Amendment to the Polish Fertilizers and Fertilization Act – the stage of public and interministerial consultations. The regulation is scheduled for adoption this year. The amendment aims to achieve the objectives set out in the national document concerning the directions for the construction of agricultural biogas plants for 2010-2020 and the provisions of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources, amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

- For the year 2020-2030, the NEC Directive sets new national emission reduction commitments for the six main pollutants: sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia, particulate matter (soot) and methane. Poland, like other EU countries, must submit its air pollution control programme, monitoring data, and air pollutant emission inventory and projections to the European Commission. Currently, at the ministerial and advisory level, work is under way to prepare draft laws and regulations implementing the Directive in Poland. The probable time for public consultations is the first half of 2019.

International trade policy

- The duty of up to EUR 47 per tonne imposed on ammonium nitrate imports from Russia has remained in force. Since August 2017, the European Commission has been reviewing the anti-dumping duties at the request of farmers’ associations in Western Europe and Akron. The procedural deadline for processing applications is November 2018.

- The anti-dumping duty of EUR 415 per tonne on imports of melamine from China (imposed by the European Commission on June 30th 2017 for a period of 5 years, i.e. until July 2nd 2022) and the minimum price of EUR 1,153 per tonne for three Chinese producers of melamine continue to apply.

- Ukraine has anti-dumping duties in force on nitrogen fertilisers from Russia. In March 2018,
Ukraine’s anti-dumping duties on ammonium nitrate imported from Russia were increased. The anti-dumping duty on ammonium nitrate was set at 29.25% for Dorogobuzh and at 42.96% for other Russian exporters. The previous anti-dumping duty was 31.84%. Anti-dumping duties on imports of nitrogen fertilisers, including ammonium nitrate from Russia, were imposed in 2014 and are to expire in 2019. The situation may be changed by a WTO ruling as Russia has lodged a complaint with the organization.

- Continued negotiations with the European Commission regarding the UK leaving the European Union (Brexit). A transitional period lasting until December 31st 2020 was adopted. Until then, there will be no change in the relations between the European Union and the United Kingdom, and vice versa. At the end of June 2018, the European Council looked at the state of negotiations on UK’s withdrawal from the European Union, and found satisfactory progress in the preparation of the agreement on withdrawal from the European Union. However, the Council also pointed out to a number of important aspects that still need to be addressed, such as speeding up work on the framework of future relations between the European Union and the United Kingdom.

- In May 2018, the United States withdrew from the nuclear agreement with Iran. This decision will lead to imposing sanctions on Iran, including the withdrawal of licences to export goods and services related to aviation, automotive industry, and trade in metals, aluminium, steel and coal to Iran. New sanctions will also be introduced: on oil trading and a ban on purchase of US dollars by Iran. The President of the United States of America has announced his readiness to negotiate a new agreement if Iran so wishes. The other signatories of the nuclear agreement, i.e. France, the United Kingdom and Germany, declared their intention to maintain the agreement.

- In connection with the European Union’s desire to conduct trade in a fair, equitable and transparent manner, for the first time in 20 years amendments to trade defence instruments were initiated. These efforts are aimed at protecting EU producers against losses and unfair competition. The trade defence instruments that received the most attention were anti-dumping instruments, with particular focus on the following activities:
  - abandoning the distinction between market-economy and non-market-economy countries;
  - taking social and environmental standards into account when determining dumping.
  The new methodology for calculating anti-dumping duties is valid for applications processed as of April 2018.

- Negotiations of the European Union’s trade agreements with the following third countries are currently being finalised: Japan, Mercosur (Argentina, Brazil, Paraguay, Uruguay), Mexico, Chile, Australia and New Zealand.

- In May this year, new standards were adopted for the negotiation and conclusion of trade agreements with third countries, according to which the Council of the European Union is to play a key role in this process. To this end, a negotiating mandate, which the Council of the European Union gives to the European Commission, was adopted. In addition to the mandate, the Council of the European Union determines the objectives, scope and possible timeframe for conducting the negotiations. On this basis, the Council of the European Union cooperates closely with the European Commission, which sends formal proposals to the Council of the European Union for approval after the conclusion of the negotiation process.

### 3. Risks and threats

**Market risks**

**Currency risk**
Risk of excessive finance costs, failure to achieve profit guidance or targets as a result of adverse exchange rate changes (taking into account the hedging programme).

The Group has positive exposure to the euro and the US dollar, which is hedged based on ongoing monitoring of movements in the euro and US dollar exchange rates. The Group Companies hedge their currency exposures using currency forwards and natural hedging. Since 2014, the Group has applied the Financial (Currency and Interest Rate) Risk Management Policy. Since 2015, a centralised financing model has also been in place, supporting a long-term hedge horizon by contracting a portion of long-term financing in the form of a euro-denominated facility. Starting from 2017, the Group has also reduced its euro-denominated net currency exposure as a result of increasing the extent of natural hedging by denominating and settling in this currency its gas supply contract with PGNiG S.A. The Group's Risk Committee analyses and sets consolidated targets for currency exposure of the Group and its leading companies, and recommends target levels and horizons of hedges, types of currency...
instruments, and exchange rates for hedge transactions. Hedging transactions are executed by those Group companies where the exposure actually occurs. The applied risk management methods enable the Group to limit the existing risk exposure by using selected hedging instruments and strategies, based on long-term and one-year currency exposure plans and their updates to account for quarterly operational plans and short-term projection of currency flows and currency expenditures, and based on the transactions already registered in the financial and accounting system. However, these methods do not eliminate that risk completely. In addition, currency risk may affect the domestic nitrate fertilizer market in the context of bilateral trade with other EU countries. Strong fluctuations in exchange rates may affect the Group’s business, financial condition or performance. In addition, the Group applies hedge accounting by matching specific foreign currency positions to be hedged with hedging instruments with a time horizon of more than one year.

Risk related to availability and efficiency of capital and other sources of funding
Risk related to the cost of raising financing or the cost of access to capital, which may slow down the Group’s growth.
One of the factors important for the successful development of the Group’s business is the implementation of strategic projects and availability of capital for such projects, as discussed in Operationalisation of the Strategy for 2014−2020. There is a risk that insufficient access to capital or other sources of funding, or availability of such capital or other sources of funding at excessive cost, might adversely affect prospects for the Group’s development and delivery of its strategy or that the Group might use the available capital in an inefficient manner and thus achieve returns that fall short of investors’ expectations. Under the consolidated financing model implemented in 2015, the Group executed a harmonised package of corporate financing agreements, thus enhancing its long-term security, based on uniform financing covenants agreed with banks, including a net debt to EBITDA ratio, which should not exceed 3.0x. The Group also intends to pursue major investment projects via SPVs and to secure their financing in the form of project finance (without recourse to the Group), which may lead to a significant increase of debt in the future and require optimising selected covenants of the existing corporate financing agreements.

Industry risks
Risk of higher fertilizer imports
The risk of periodically increasing volumes of fertilizers imported into Poland from other European Union countries and worsened economics as a result of squeezed product margins caused by the emergence of new market players and a significant volume of imported fertilizers. Consequently, there is a risk of failure to achieve targeted revenue from sales of fertilizers.
The key component of fertilizers production costs is the cost of natural gas, which translates directly into the price competitiveness of products offered by Group. Moreover, fertilizers production costs in the European Union are affected by an added regulatory burden, concerning in particular CO₂ emissions. Increasing supply of fertilizers produced with the use of cheap gas and the sector’s growing manufacturing capacities have led to intensified competition in the fertilizer market. In the face of these challenges, to strengthen its competitive advantages in the fertilizers segment, the Group takes numerous measures, including:
• Implementation of the Group’s updated distribution strategy,
• Implementation of projects designed to improve the efficiency of production processes,
• Searching for alternative sources of cheaper natural gas supply,
• Strengthening of the Group’s market position through acquisitions and placement of new products on the market,
• Taking active part in the process of consolidation of the chemical industry,
• Initiation of anti-dumping proceedings,
• Active participation in the work of Fertilizers Europe,
• Cooperation with universities and research institutes,
• Supporting agricultural producers by providing them with access to state-of-the-art fertilizing and production solutions.

Risk related to price and availability of natural gas
Risk related to prices and operational disruptions caused by a lower-than-expected or restricted supply of adequate volumes of natural gas of the right grade and quality required for production.
In its search for competitive sources of gas, the Group seeks to diversify both the geographical regions and suppliers of gas, providing details of its efforts in press releases and reports. Negotiations with alternative gas suppliers are conducted at the Group level, which allows the Group to leverage its
stronger bargaining position. The Group takes steps to satisfy its overall gas demand through a combination of a long-term contract with its strategic supplier (PGNiG), annual or shorter contracts with a number of other suppliers, and transactions on energy exchanges and the OTC market to meet its short-term demand. Currently, all of the gas purchased by the Group is priced based on exchange quoted prices. The gas interconnector and gas storage facility extension projects, currently being implemented in Poland, and the operation of the LNG terminal in Świnoujście have minimised the risk of disruptions in gas supply. The Group companies also focus on reducing their gas consumption costs by implementing projects designed to reduce gas consumption. Moreover, the European Parliament’s security of gas supply regulation of September 12th 2017 provides for a set of cross-border measures to deal with supply shortages, reducing the risk of supply disruptions.

Risk associated with new legal requirements relating to production processes, including environmental regulations

Risk associated with new legal requirements relating to production processes, including environmental regulations on GHG emissions or other forms of adverse environmental impact. Grupa Azoty continuously monitors all planned and implemented changes in the legal environment which could affect its operations. Investments necessary in the light of new regulations are included in the Group companies’ investment plans.

Greenhouse gas emissions are covered by legal regulations related to the European Union’s emissions trading scheme (EU ETS). The system is based on the allocation of free greenhouse gas emission allowances for emitting installations and, if free allowances are not sufficient, on the purchase thereof in an auction-based system. Each year, the number of allotted allowances decreases by several per cent. If actual CO₂ emissions are not covered by the free allowances, the Group may need to incur additional capital expenditure on projects designed to reduce its emissions of nitrous oxide and carbon dioxide. The volume of carbon dioxide emissions is related to the energy intensity of production processes. In order to mitigate this risk, the companies have been taking steps to reduce the energy intensity of their processes and thus greenhouse gas emissions. Implementation of the adopted Energy Policy has been confirmed with a certificate of the Energy Management System’s compliance with ISO 50001. When increasing production volumes or launching new installations covered by the EU ETS, the Companies apply to the Ministry of the Environment for allocation of additional greenhouse gas emission allowances from the reserve on an as-needed basis. The Group has in place a monitoring system for emissions covered by the EU ETS. It also performs ongoing balancing of greenhouse gas emissions. The Group monitors its actual emissions and the market prices of emission allowances, and takes appropriate steps in response to their fluctuations. The Group may be forced to incur higher-than-expected costs if there is a deficit in emission allowances at the end of the year and an increased demand for EUAs on the market.

The Group mitigates the risk of an adverse effect of EUA prices on the carbon market by averaging the price of emission units purchased on the spot market and by purchasing CO₂ emission allowances in financial derivatives with physical delivery in the future, in accordance with the purchase strategy in force from time to time. The Group effectively implements its strategy of rolling purchases of emission allowances, aimed at ensuring full coverage of any deficit of emission allowances that should be allocated for a given year and subsequently redeemed, at prices not higher than projected. The Group has appointed the EU ETS Management Committee, with representatives of all key Group companies. Its main role is to supervise a joint model for managing CO₂ emission allowances at the Group companies, in particular the CO₂ Emissions Trading Strategy and, subsequently, the implementation of the Emissions Trading Strategy binding on all Group companies.

The Group takes steps to ensure its compliance with the requirements of the IED Directive, which entered into force as of January 1st 2016 and defined new emission standards for the combustion of fuels in installations (Regulation of Minister of the Environment of November 4th 2014 on emission standards for certain units, fuel combustion sources, as well as waste incineration and co-incineration equipment). The new standards in particular apply to sulfur dioxide, NOx and particulate matter emission limits. The IED Directive and the Environmental Protection Law provide for postponing the effective date of the more restrictive emissions standards. One such mechanism is the Transitional National Plan (TNP). The fuel combustion facilities operated by the Group have also been submitted for inclusion in the TNP. The following investment projects have been undertaken to meet the above standards:

- Grupa Azoty KĘDZIERZYN Group - new coal-fired generating unit;
- The Parent - unit for magnesium-based wet flue gas desulfurisation;
- Grupa Azoty POLICE Group - flue gas desulfurisation unit.
When the projects are completed, the Group will achieve compliance with the emission requirements under the IED Directive and Polish regulations.


The Group is analysing the effects of introducing the BAT Conclusions under the IED on the scope of necessary power generation upgrade projects. Pursuant to the new regulations, the required modernisation work must be performed within four years from the effective date of the BAT Conclusions. Following the scheduled review of the regulations on the Best Available Techniques for the Manufacture of Large Volume Inorganic Chemicals: ammonia, acids & fertilisers, there is a risk of implementing stricter and broader requirements relating to the air pollution emissions standards. Similarly, there is a risk that new BATs will be defined for the installations for which so far no BATs have been specified. In order to meet the BAT requirements, the Group reviews any drafts of new laws and regulations on an ongoing basis and actively present their opinions on the proposed legislation. The Companies’ activities in this area include: reviewing the efficiency of applied technologies in relation to development trends in the competitive environment, planning and implementing projects designed to achieve the BAT/BREF level at production units, searching for new process solutions, in particular with a view to increasing efficiency and reducing energy intensity in relation to the applicable regulations and technology advancement, as well as developing and enhancing the product range with new fertilizers based on ingredients produced at existing units.

Risk of implementation/tightening of EU or local regulations which would restrict product application

The Group monitors and implements new requirements on an ongoing basis. The Group takes an active part in the work of registration consortia and European associations, and cooperates with Polish institutions to receive advance information on upcoming changes in the legislation. In each case the Group reviews the impact of new regulations on its operations and marketed products. Possible amendments tightening EU directives or regulations applicable to the Group’s key manufacturing and trading activities give rise to a potential risk that the use or application of the Group’s products by customers in the EU countries may be restricted.

The Group is currently identifying risks posed by the Draft of a new Fertilizer Regulation of the European Parliament and of the Council, intended to replace the existing Regulation (EC) No. 2003/2003 of the European Parliament and of the Council of September 13th 2013, relating to fertilizers. The new document is designed to implement the principles of the Circular Economy package. The proposal assumes an uninterrupted flow of goods on the single EU market, preceded by mandatory harmonisation of fertilizing products (CE marking). The European Commission’s proposal also covers the use of organic waste and bio-waste as raw materials to manufacture fertilizers, as well as recycling and reuse of valuable manufacturing components. The new rules will apply to all types of fertilizers to ensure the highest level of soil protection. The Regulation introduces strict limits for heavy metal contamination, including cadmium content in phosphate fertilizers. The European Commission assumes that this will reduce health and environmental risks. Moreover, this way the EU intends to reduce the dependence of the fertilizer industry on imports of phosphorus-bearing materials. The Group is actively participating in the work on the wording of this regulation. The Group appointed a dedicated expert team which actively participates in the legislative work. In cooperation with other members of the Alliance Europeenne des Engrais Phosphates AEEP, the Group maintains regular communication with key Members of the European Parliament and the Polish government’s representatives to the EU Council, and holds discussions with representatives of the European Commission which has proposed the new legislation. The Group’s activities are designed to include, in the new regulation, an 80 mg limit of cadmium per 1 kg of phosphorus pentoxide (P2O5).

On the one hand, this would enable the European Commission to achieve its pro-environmental objective and, on the other, the industry to adapt its operations to new limits and implement a new technology. At the same time, the Group engages in research and development work in partnership with research institutes to develop technologies for removal of heavy metals from fertilizer product streams. Work is under way to implement into Polish law the Directive of the European Parliament and of the Council on the reduction of national emissions of certain atmospheric pollutants and amending Directive 2003/35/EC (NEC Directive, COM(2013)92). The draft proposes that ammonia emissions be reduced. The agricultural sector can expect new requirements concerning ammonia emissions from different types of mineral fertilizers, primarily those based on ammonia (especially urea) rather than nitrate fertilizers. Additionally, the Group monitors other aspects of EU regulations, such as free trade agreements (DCFTA Ukraine, TTIP). The Parent also takes steps to ensure that the
entire manufacturing and distribution process meets the safety requirements applicable to trading in its products.

**Risk of deteriorated supply-demand balance**
The risk is associated with a supply-demand imbalance caused by limited consumption of products and/or their oversupply.

In the Agro Fertilizers segment, the Group identifies risks related to:
- Increased imports of nitrogen and compound fertilizers, produced based on cheaper raw materials, to Poland and the EU, and consequently persisting oversupply and aggressive pricing policies pursued by importers struggling to maintain their shares in the fertilizers market;
- Launch of significant new manufacturing capacities, particularly in the urea market (USA, Algeria, Russia) where oversupply periodically affects prices of other nitrogen fertilizers;
- Increase of production capacities of nitrate fertilizers in Hungary and stronger impact of this product on the market in southern Poland;
- Ban on trade in nitrate and CAN in Turkey, introduced for an indefinite period in response to terror attacks in the country – search for EU markets to sell products manufactured in or imported by Turkey;
- Mergers and acquisitions among chemical producers, which might enable them to exert stronger pressures on the EU fertilizers market;
- Competition growing stronger as new products are marketed and more effective technologies applied;
- Marketing structures being established in Poland by foreign-invested distribution companies, which results in sale of imported fertilizers;
- Marketing structures being established in Poland by fertilizer manufacturers from the East, which may lead to higher sales of imported fertilizers in a longer term.

In order to mitigate the identified risks and to strengthen and consolidate its leadership in the segment of fertilizer production and sale, the Group has been taking steps to optimise the production costs and broaden the portfolio of products and services offered. Measures taken by the Group to strengthen its competitive advantages in the fertilizers segment:
- Implementation of the Group’s updated distribution strategy,
- Implementation of projects designed to improve the efficiency of production processes,
- Strengthening of the Group’s position through acquisitions and placement of new products on the market,
- Taking active part in the process of consolidation of the chemical industry,
- Initiation of anti-dumping proceedings,
- Active participation in the work of Fertilizers Europe,
- Cooperation with universities and research institutes,
- Supporting agricultural producers by providing them with access to state-of-the-art fertilizing and production solutions.

In the Plastics segment, the Group identifies risks related to:
- Global oversupply of caprolactam and polyamide. Excess volumes from the Far East are shipped to Europe, as a result of which traditional export markets of EU manufacturers begin to shrink and prices decline to unsatisfactory levels.
- Mergers and acquisitions among chemical producers, which might enable them to exert stronger pressures on the EU market.

To minimise the effect of expected market trends, the Grupa Azoty Group has undertaken a number of initiatives to strengthen its competitive position, including:
- Construction of a new PA6 unit in Tarnów, with an annual production capacity of 80,000 tonnes, in order to fully balance the entire caprolactam production volume within the Group. Extension of the caprolactam - PA6 polyamide product chain is an additional benefit;
- The Parent is finalising the arrangements relating to the project to construct a new modified plastics facility in Tarnów, within the Kraków Special Economic Zone, that will help further expand the product chain (PA6 > PA6 compounds);
- Preparation of a long-term caprolactam manufacturing cost reduction programme;
- Leveraging the synergies between Tarnów’s and Pulawy’s units following the integration of the companies’ production capacities and sales potential;
• Responding to customer expectations by offering new products tailored to specific customer needs;
• Efforts to optimise the portfolio of raw material suppliers, with particular emphasis on direct partnerships with producers under long-term strategic contracts, and to develop an optimum procurement logistics model;
• Continuation of the policy to diversify sales of caprolactam and polyamide;
• Monitoring of the situation for any possible threats to be able to take necessary steps and mitigate adverse effects of such negative developments.

In the Chemicals segment, the Group has identified risks related to:
• Weaker demand for titanium white from paint and varnish manufacturers, higher quality requirements in the plastics and paper industries, significant increase in the production capacities of Chinese manufacturers, and plans to classify TiO₂ as a carcinogen;
• Higher supply of OXO alcohols on balanced European markets, driven by heavy inflows of cheaper alcohols, especially from the Russian market;
• Import of plasticizers to the balanced and highly competitive EU market, on which a wide range of plasticizers are available – the risk related to imports of non-phthalate plasticizers from the Korean and Turkish markets is particularly significant.

The Group takes defensive measures against the consequences of risks by:
• Adapting its product mix to the market requirements and needs, for instance by launching a unit producing Oxoviflex™, a non-phthalic plasticizer, and, as production capacities grow, by seeking new customers for this product; by ensuring high purity of OXO alcohols and identifying market niches – e.g. improving the DEHP plasticizer for medical applications or arranging deliveries tailored to the needs of end users (flexitanks for deep-sea freight of small volumes of products);
• Projects aimed at minimising production costs of each product,
• Active participation in public affairs marketing and trade associations.

Risk of major industrial accidents or technical failures disrupting the continuity of processes and operation of key production units
The risk of major industrial accidents defined in accordance with the Environmental Protection Law or technical failures disrupting the continuity of processes and operation of production units of key importance for the implementation of the enterprise's objects.
The Group has reliable safety systems and preventive measures in place at all organisational and technological levels, including occupational health and safety as well as protection against industrial accidents. Their relevance is assessed by external and internal inspection authorities, as well as accreditation/certification bodies.
Prevention of industrial accidents at the Group companies is achieved through a range of activities, including:
• Identification of hazards inherent in technological processes, storage and transport, and implementation of technical solutions and organisational measures to minimise the risk of an accident,
• Ongoing monitoring of operations of machinery and equipment and evaluation of their technical condition,
• Fitting of plants and units with safety and protection systems to minimise the risk of major accidents and environmental contamination, as well as risks to life and health,
• Implementation of new projects and upgrades based on technical and organisational solutions designed to ensure occupational health and safety (the Group’s facilities are compliant with the Best Available Techniques (BAT) reference documents, which are the source of the world's strictest safety requirements, including environmental regulations),
• Carrying out scheduled technical stoppages and maintenance shutdowns to ensure that the units are kept in a proper working order,
• Continuous improvement of the employees' qualifications through training courses, etc.
• Introduction of corporate rules at the Group on how to report industrial accidents and failures, as well as how to investigate them and take preventive measures to mitigate the risk of their recurrence in the future,
• Analysis and periodic update of technical and technological risks at Grupa Azoty,
• Implementation of an operational excellence programme,
• Implementation of the Product Stewardship standard, covering all stages of the fertilizer lifecycle, which has been confirmed by the issuing of a certificate.
The additional risk of consequences of industrial accidents is transferred to the insurer.

Risk related to maintaining continuity of production and availability of ammonia at economically viable prices
To mitigate the risk and to strengthen and consolidate its leading position, the Group takes steps to:
- Diversify suppliers of natural gas and ammonia,
- Maintain ammonia stocks at optimum levels at the Group, to ensure continuity of supplies and production of ammonia and caprolactam,
- Prepare reduced-output scenarios based on break-even points for key products,
- Analyse on an ongoing basis maximum ammonia purchase prices to achieve product profitability,
- Analyse on an ongoing basis fixed and variable costs of production to determine the economic viability of purchasing ammonia outside the Group,
- Maintain the operational reliability of units by carrying out overhauls, upgrades and investments,
  in particular in areas covered in the technical risk analysis.

4. Other information

4.1. Other significant events

Execution of an agreement with a licence provider
On January 11th 2018, PDH Polska S.A. and WR. Grace & Co, executed an agreement on purchase of a polypropylene process technology licence and supply of polypropylene catalysts for the Police Polymers project. The agreement marks another important milestone in the implementation of Grupa Azoty’s largest investment project to date.
Police Polymers will be a manufacturing complex developed in the town of Police which is to comprise propylene and polypropylene units, a port with feedstock storage facilities, auxiliary facilities and logistics infrastructure. The company already holds technology licences key to the project: one for the Oleflex-UOP catalytic dehydrogenation technology and one for the Unipol-GRACE polypropylene process technology. In a parallel effort, PDH Polska S.A. is in the process of selecting a future general contractor under a lump-sum turn-key contract and of arranging financing for the project.

Execution of an agreement on cooperation in fertilizers trading
On February 12th 2018, the four key companies of the Group: the Parent, Grupa Azoty POLICE, Grupa Azoty PUŁAWY and Grupa Azoty KĘDZIERZYN, signed a cooperation agreement under which the Companies tighten their cooperation in, among others, fertilizer trading. Key objectives of the agreement are to deepen the working ties within the Group, allowing the companies to trade as a single business entity. This in turn will help them strengthen their relationships with clients. As a result of the agreement, the Group will follow a uniform trading strategy and policy, consolidating and coordinating its marketing activities under a common brand.
Headquartered in Puławy, the Corporate Agro Trade Department is part of the organisational structure of each company.

Submission of a non-binding initial offer to acquire shares in COMPO EXPERT Group companies
On February 16th 2018, the Parent submitted a non-binding initial offer to acquire 100% of shares in the COMPO EXPERT Group companies.
The COMPO EXPERT Group, headquartered in Germany, is the largest independent global producer of high added value speciality fertilizers for professional customers. Its owner is XIO Group of London, specialising in alternative investments on a global scale.
The COMPO EXPERT products would complement Grupa Azoty’s portfolio, bringing advanced solutions in speciality fertilizers.

Grupa Azoty KĘDZIERZYN focused on the production of non-phthalic plasticizers
Grupa Azoty KĘDZIERZYN is phasing out the production of phthalic plasticizers. Instead, the company has based its long-term policy on the development of non-phthalic plasticizer DEHT/DOTP (Oxoviflex®), of which it is the largest producer in Europe, as well as a range of speciality esters.
In the second half of 2018, Grupa Azoty KĘDZIERZYN will increase the Oxoviflex® capacity and in 2019 a unit producing speciality esters will be launched. The production of DEHP/DOP, medical DOP and DPHP will be discontinued, and these products will only be available while the stocks last.
The future of the OXO segment is in non-phthalic plasticizers and specialty esters. The increase in the Oxoviflex® (DEHT/DOTP) capacity is a consequence of the product policy designed to best meet the expectations of the market and customers, while the focus on specialty esters supports the company’s plan to extend the OXO alcohol processing chain. There has been a noticeable increase in demand for new non-phthalic plasticizers, whose share in the European market has been growing rapidly. The range of new plasticizers will find a variety of applications, not only in PVC processing, as some of them will also provide innovative solutions for other applications.

4.2. Significant agreements

The agreements are presented in chronological order.

In H1 2018 and as at the date of this Report for H1 2018, none of the Group companies defaulted on credit facilities or other borrowings or breached any material covenants under significant credit facility or other loan agreements.

Significant agreements

Annex to the long-term thermal coal supply agreement
On February 26th 2018, Grupa Azoty PULAWY signed an annex to the long-term agreement for thermal coal supply, executed by Grupa Azoty PULAWY and Lubelski Węgiel Bogdanka S.A. on January 8th 2009. The agreement provides for sale of thermal coal to Grupa Azoty PULAWY. In the annex:

- The term of the agreement was extended until December 31st 2022 (previously it was to expire on December 31st 2021),
- The volume of thermal coal to be supplied in 2022 was determined,
- The volumes for 2019-2021 were increased.

Following the signing of the annex, the estimated value of the agreement from its execution date to December 31st 2022 (net of possible increases, deviations and tolerance) will total PLN 1,340m (VAT exclusive), including approximately PLN 557m (VAT exclusive) for coal supplies in 2018-2022. The other terms of the agreement remained unchanged, not differing from standard terms used in contracts of this type.

Material agreements

Agreements and annexes to contracts of a financial nature

Parent’s facility agreements with the European Investment Bank
On January 25th 2018, the Parent and the European Investment Bank signed a EUR 145,000,000 term loan agreement for a period of ten years from the disbursement date to finance certain projects under the Group’s investment and R&D programmes.

The Parent and EIB also signed an annex to the PLN 550,000,000 loan agreement of May 28th 2015 in order to harmonise the material terms and conditions of the two agreements, which are subject to harmonisation under the Group’s other corporate financing agreements.

Annex to the Intragroup Financing Agreement
On January 25th 2018, the Parent signed Annex 1 to the Intragroup Financing Agreement of April 23rd 2015 with Grupa Azoty POLICE, Grupa Azoty KĘDZIERZYN and Grupa Azoty PULAWY. Pursuant to the Annex, the loan facility agreement concluded on January 25th 2018 between the Parent and the European Investment Bank, together with the guarantee agreement of January 25th 2018, is to be governed by the framework for the Key Companies’ provision of guarantees for corporate credit facility agreements, Grupa Azoty S.A.’s financing for the Key Companies and mutual settlements on this account between the companies.

On June 29th 2018, the parties signed Annex 2 to the Intragroup Financing Agreement of April 23rd 2015, under which the amount of financing was increased from PLN 0.5bn to PLN 1bn for each of the above-mentioned Key Companies.

Overdraft Facility Agreement signed by Agrochem Sp. z o.o.
Having obtained, on January 30th 2018, a PLN 10m limit under physical cash pooling, AGROCHEM Sp. z o.o. of Dobre Miasto decided not to extend for another period its overdraft facility agreement with Pekao S.A. valid until January 31st 2018 and repaid the debt outstanding as at January 31st 2018.
Annex to the Physical Cash Pooling Agreement
On February 12th 2018, the Parent, acting together with other Group companies, and PKO BP S.A. signed Annex 2 to the Physical Cash Pooling Agreement of September 20th 2016, as amended. The Annex included new Group companies in the Agreement.

Annex to the Overdraft Facility Agreement signed by Grupa Azoty KOLZAP Sp. z o.o.
On March 30th 2018, Grupa Azoty KOLZAP Sp. z o.o. and the Cooperative Bank of Nałęczów signed an Annex to the Overdraft Facility Agreement, for PLN 1.2m, with a one-year repayment term.

Annex to the Physical Cash Pooling Agreement and Overdraft Facility Agreement
On May 9th 2018, the Parent, acting together with other Group companies, and PKO BP S.A. signed Annex 3 to the Physical Cash Pooling Agreement of September 20th 2016, as amended, and Annex 14 to the Overdraft Facility Agreement of October 1st 2010. The Annexes update the provisions of the aforementioned agreements in connection with the acquisition of Agrochem Sp. z o.o. by Agrochem Puławy Sp. z o.o. and in connection with the change of the name of CTL CHEMKOL Sp. z o.o. to Grupa Azoty CHEMKOL Sp. z o.o.

Annex to Overdraft Facility Agreement
On June 29th 2018, the Parent and other companies of the Group executed with PKO BP S.A an annex to the PLN 310m Overdraft Facility Agreement of October 1st 2010. Under the annex, the overdraft availability date was extended from September 30th 2019 to September 30th 2022. The Overdraft Facility Agreement is connected with the physical cash pooling agreement signed with PKO BP on September 30th 2016.

As at the date of the annex to the Overdraft Facility Agreement, the sub-limits were as follows: up to PLN 96.2m for the Parent, up to PLN 110.5m for Grupa Azoty POLICE, up to PLN 21.7m for Grupa Azoty KĘDZIERZYN, and a total of PLN 81.6m for the other companies.

PKO BP S.A.’s claims under the Agreement are secured with sureties with an aggregate amount of PLN 372m, granted under a surety agreement made on June 29th 2018 between PKO BP S.A. and the Parent along with its subsidiaries (Grupa Azoty PULAWY, Grupa Azoty POLICE and Grupa Azoty KĘDZIERZYN) as surety providers. The share of each surety provider in the aggregate surety amount is one-third (1/3) of 120% of the facility amount, i.e. no more than PLN 124m. The surety agreement superseded the previous surety agreement securing the Bank’s claims under the Overdraft Agreement of September 20th 2016.

Annex to Multi-Purpose Credit Facility Agreement
On June 29th 2018, the Parent and the Group companies signed an Annex to the PLN 240m Multi-Purpose Credit Facility Agreement with PKO BP S.A. Under the annex, the availability date of the facility was extended from September 30th 2019 to September 30th 2022.

As at the Annex date, the sub-limits under the Agreement were as follows: up to PLN 30m for the Parent; up to PLN 62m for Grupa Azoty POLICE, up to PLN 79m for Grupa Azoty PULAWY, up to PLN 50m for Grupa Azoty KĘDZIERZYN, and up to PLN 19m for Grupa Azoty ATT Polymers.

PKO BP S.A.’s claims under the Agreement are secured with sureties with an aggregate amount of PLN 288m, granted under a surety agreement made on June 29th 2018 between PKO BP S.A. and the Parent along with its subsidiaries (Grupa Azoty PULAWY, Grupa Azoty POLICE and Grupa Azoty KĘDZIERZYN) acting as surety providers. The share of each surety provider in the aggregate surety amount is one-third (1/3) of 120% of the facility amount, i.e. up to a maximum of PLN 96m. The surety agreement superseded the previous surety agreement of September 20th 2016.

The Annexes to the agreements are part of a long-term financing package designed to finance general corporate needs and secure financing for the Group companies through the umbrella structure of limit allocation and actual intra-Group redistribution.

Agreement Amending and Restating the Revolving Credit Facility Agreement
On June 29th 2018, the Parent and PKO BP S.A., Bank Gospodarstwa Krajowego, Bank Zachodni WBK S.A., and ING Bank Śląski S.A. (the “Lenders”) signed an Agreement Amending and Restating the Revolving Credit Facility Agreement of April 23rd 2015 in order to increase the total amount available under the facility from PLN 1.5bn to PLN 3bn, including the refinancing of the existing Tranche A - revolving credit facility of PLN 1.5bn, and the granting of Tranche B - term facility of PLN 1.5bn, with the repayment period set as up to seven (7) years from the date of the amending agreement for both tranches of the facility.
The Lenders' claims under the Agreement are secured by the following security instruments, replacing the analogous instruments under the Agreement of April 23rd 2015:

- Sureties provided by each of the Key Subsidiaries (Grupa Azoty KĘDZIERZYN, Grupa Azoty POLICE and Grupa Azoty PUŁAWY) under the surety agreement concluded on June 29th 2018 between the Lenders and the Borrower and the Key Subsidiaries, up to an amount equal to 1/3 (one-third) of 120% of the increased amount of the Facility (i.e. up to PLN 1.2bn), in respect of the Borrower's liabilities arising under the Agreement and covered by the surety agreement;
- The Borrower's declarations of voluntary submission to enforcement under the Agreement, up to an amount equal to 120% of each Lender's commitment;
- A declaration of voluntary submission to enforcement made by each of the Key Subsidiaries under the sureties provided by them, up to an amount equal to 100% of each surety amount;
- Powers of attorney over the Borrower's bank accounts granted to the Security Agent, authorising the Security Agent to withdraw funds from those accounts to repay the Borrower's liabilities under the Agreement when they fall due.

The Agreement is part of a long-term financing package for the Group's general corporate needs, including the strategy and the investment programme. All material terms and conditions of these long-term financing agreements have been harmonised.

**Commercial contracts**

**Execution of bilateral coal supply contracts**

On March 1st 2018, the Parent and its subsidiaries: Grupa Azoty PUŁAWY, Grupa Azoty POLICE and Grupa Azoty KĘDZIERZYN (hereinafter jointly referred to as the Customers), signed bilateral coal supply contracts with Polska Grupa Górnicza S.A. (hereinafter referred to as the Seller). The subject matter of the contracts is the sale of thermal coal produced at the Seller’s mines and intended for consumption at the Customers in quantities specified in the respective contracts, based on uniform business terms for the Customers. The total estimated value of all the contracts is approximately PLN 212.5m (VAT exclusive) per annum.

The contracts were concluded for an indefinite term with effect as of January 1st 2018, and provide for annual delivery periods.

The contracts are considered material to the Parent given that Polska Grupa Górnicza S.A. is a strategic supplier of thermal coal to Grupa Azoty, and the contracts will satisfy a material portion of demand for such coal; in particular, they will cover total demand from Grupa Azoty POLICE and Grupa Azoty KĘDZIERZYN, as well as up to 70% of demand from Grupa Azoty S.A. They will also supplement up to about 15% of Grupa Azoty PUŁAWY's demand not covered by other contracts.

**Execution of contract for purchase of phosphate rock**

On April 9th 2018, Grupa Azoty POLICE entered into a contract for the purchase of Moroccan phosphate rock with Office Chérifien des Phosphates (OCP) of Casablanca, Morocco (the seller). The Contract was executed for a definite period from January 1st 2018 to December 31st 2020 and defines a specific schedule and other commercial terms of the deliveries. The value of the deliveries to be made under the Contract is estimated at approximately PLN 350m.

The other terms and conditions do not differ from standard terms used in contracts of this type. Information on execution of the Contract was classified as inside information by Grupa Azoty POLICE, because it refers to securing supplies of phosphate rock, the key raw material for production of compound fertilizers, in quantities sufficient to satisfy demand for that material for the next three years. OCP, being the world's largest exporter of phosphorites, guarantees timely delivery of phosphate rock of high and consistent quality.

**Insurance agreements**

**Consolidated Group Insurance Programme with TUW PZUW**

In February 2018, Towarzystwo Ubezpieczeń Wzajemnych PZUW issued policies for the period from March 1st 2018 to February 28th 2019, for the following types of insurance:

- all-risk property damage insurance (AR/PD),
- business interruption insurance with respect to AR/PD (BI),
- machinery breakdown insurance (MB),
- all-risk electronic equipment insurance (EEI).

The policies were issued under the Master Agreement for the Consolidated Property Insurance Programme, concluded for the period from March 1st 2017 to February 28th 2019 by the six Group
companies comprising the Mutual Insurance Union (Grupa Azoty Group Mutual Insurance Union), i.e. Grupa Azoty S.A., Grupa Azoty KĘDZIERZYN, Grupa Azoty POLICE, Grupa Azoty PUŁAWY, GZNF FOSFORY Sp. z o.o. and Grupa Azoty Siarkopol.

Subsequently, on June 27th 2018 TUW PZUW issued policies for the period from July 1st 2018 to June 30th 2019, for the following types of insurance:
- Business and property owner’s liability insurance (OC),
- Property in national and international transit insurance (CARGO).

The policies were issued for the aforementioned companies comprising the Group’s Mutual Insurance Union under Master Agreements made for a period of two years, from July 1st 2017 to June 30th 2019.
Trade credit insurance at Grupa Azoty PULAWY
On February 15th 2018, trade credit insurance policies were signed with Towarzystwo Ubezpieczeń Euler Hermes S.A. for the period from February 1st 2018 to January 31st 2019. The policies cover:

- receivables from domestic and export sales of caprolactam, melamine and other products due from customers buying caprolactam, melamine, PUC-C and alcohol foreshots, up to the amount of credit limits granted by TUEH (excluding transactions secured by bank guarantees and letters of credit). Expected turnover covered by the insurance is PLN 848m;
- Grupa Azoty PULAWY’s receivables from exports of fertilizers (ammonium nitrate PULAN, UAN, UAN+S, ammonium sulfate Pulsar, Pulaska®, Pulrea®, ammonium sulfate IOS, Pulgran® and Pulgran® S); sales of LIKAM and PULNOx® to CHP plants, power plants, cement plants, waste incineration plants, and wastewater treatment plants; NOXy sales and domestic sales of technical grade urea, sales of ammonia, hydrogen peroxide, carbon dioxide, hydrogen, nitric acid and Coolant/dry ice up to the amount of credit limits granted by TUEH (excluding transactions secured by bank guarantees and letters of credit). Expected turnover covered by the insurance is PLN 618m.

The aggregate maximum compensation under these policies in a given insurance year (maximum sum insured) calculated on a minimum premium basis is PLN 35.2m.

Agreements between the Grupa Azoty Group companies

Execution of framework agreement for ammonia supply
On February 6th 2018, the Parent signed a framework contract with Grupa Azoty POLICE for the supply of liquid ammonia.
Its conclusion is part of the companies’ production programmes for fertilizer lines and secures the supply of ammonia for the fertilizer production processes at Grupa Azoty S.A.
The contract was executed for an indefinite period starting on January 1st 2018 and defines a specific schedule and other commercial terms of the deliveries. The annual value of the contract is estimated at approximately PLN 113m (VAT exclusive).
The terms and conditions of the contract do not provide for additional contractual penalties. The other terms and conditions do not differ from standard terms used in agreements of this type.

Agreements concluded after the reporting date

Agreements and annexes to contracts of a financial nature

Package of long-term financing agreements
On July 26th 2018, the Parent and the European Bank for Reconstruction and Development signed a new long-term credit facility agreement and an annex to the long-term credit facility agreement of May 28th 2015 (the “First EBRD Agreement”).
The Parent concluded with the EBRD a new financing agreement for up to PLN 500m (the “Second EBRD Agreement”), and together with its Key Subsidiaries the Parent entered into a new guarantee agreement with the EBRD under which the Key Subsidiaries, acting as Guarantors, provided guarantees for the Parent’s liabilities under the Second EBRD Agreement, with each guarantee covering up to one-third (1/3) of 120% of the amount provided under the Second EBRD Agreement, i.e. up to PLN 200m.
The Second EBRD Agreement for up to PLN 500m was concluded for a period of up to ten years, with the loan to be repaid in instalments, starting within three years from the Second EBRD Agreement date.
Furthermore, the Company and the EBRD executed an annex to the First EBRD Agreement of May 28th 2015 for up to PLN 150m in order to harmonise the material terms and conditions of the First EBRD Agreement and the Second EBRD Agreement, thus marking the end of harmonisation of the agreements for corporate financing of the Group.
The agreements with the EBRD are an integral part of the long-term financing package intended for the financing of Grupa Azoty’s general corporate needs, including its strategy and investment programme.
4.3. Sureties for credit facilities or loans, guarantees issued

In H1 2018, the Group did not issue any guarantees with a significant aggregate value.

In H1 2018, the Group did not sign any annexes to its guarantees with a significant aggregate value.

Guarantees

Guarantees for credit facilities

Following the execution, on January 25th 2018, of a EUR 145,000 thousand long-term loan agreement between the Parent and the European Investment Bank, on the same date the Group's key subsidiaries, including Grupa Azoty PULAWY, Grupa Azoty POLICE and Grupa Azoty KĘDZIERZYN, entered into an agreement with EIB for the provision of a guarantee securing repayment of debt under the loan agreement.

Under the guarantee agreement, the key subsidiaries, acting as guarantors, provided guarantees covering the Parent's liabilities under the loan agreement, with each guarantee covering up to one-third (1/3) of 120% of the amount provided under loan agreement with EIB, i.e. up to EUR 58,000,000.

Following the execution, on July 26th 2018, of a new long-term credit facility agreement and an annex to the long-term credit facility agreement of May 28th 2015 (the “First EBRD Agreement”) between the Parent and the European Bank for Reconstruction and Development, the Parent and its Key Subsidiaries signed a new guarantee agreement with the EBRD. Under the agreement, the Key Subsidiaries provided guarantees for the Parent’s liabilities under the Second EBRD Agreement, with each guarantee covering up to one-third (1/3) of 120% of the loan amount provided under the Second EBRD Agreement, i.e. up to PLN 200m.

Sureties

Sureties to the Agreement Amending and Restating the Revolving Credit Facility Agreement
On June 29th 2018, the Parent and PKO BP S.A., Bank Gospodarstwa Krajowego, Bank Zachodni WBK S.A., and ING Bank Śląski S.A. signed an agreement amending and restating the revolving credit facility agreement of April 23rd 2015 in order to increase the total amount available under the facility from PLN 1.5bn to PLN 3bn.

The amount of surety granted by each of the guarantors was set at no more than PLN 1.2bn, i.e. up to PLN 3.6bn in aggregate. As of its date, the surety agreement superseded the previous surety agreement to the Revolving Credit Facility Agreement concluded for seven years from the date of signing the amending agreement.

Sureties under the Annex to the Overdraft Facility Agreement
On June 29th 2018, the Parent and the Group companies signed with PKO BP S.A. an annex to the PLN 310m Overdraft Facility Agreement of October 1st 2010.

The amount of surety granted by each of the guarantors was set at no more than PLN 124m, i.e. up to PLN 372m in aggregate. As of its date, the surety agreement superseded the previous surety agreement to the Overdraft Facility Agreement of September 20th 2016. The surety expires upon expiry of the security term, which ends upon repayment of debt under the Overdraft Facility Agreement.

Sureties to Multi-Purpose Credit Facility Agreement
On June 29th 2018, the Parent and its Group companies signed an annex to the PLN 240m Multi-Purpose Credit Facility Agreement with PKO BP S.A.

The amount of surety granted by each of the guarantors was set at no more than PLN 96m, i.e. up to PLN 288m in aggregate. As of its date, the surety agreement superseded the previous surety agreement to the Multi-Purpose Credit Facility Agreement of September 20th 2018. The surety expires upon expiry of the security term, which ends upon repayment of debt under the Multi-Purpose Credit Facility Agreement.
Intragroup loans

Loan agreement between Grupa Azoty KĘDZIERZYN and CTL Chemkol Sp. z o.o.
On January 17th 2018, Grupa Azoty KĘDZIERZYN concluded a loan agreement with CTL Chemkol Sp. z o.o., whereunder, on January 22nd 2018, Grupa Azoty KĘDZIERZYN granted the subsidiary a loan of PLN 2,000,000.

Intragroup financing agreement
Pursuant to the intragroup financing agreement of April 23rd 2015, as amended:
• On January 31st 2018, the Parent disbursed to Grupa Azoty KĘDZIERZYN a loan to finance the ‘Upgrade of the Biological Wastewater Treatment Plant at the Wastewater Treatment and Sewage System Division of the Infrastructure Unit’ project in an amount of PLN 4,447 thousand;
• On May 30th 2018, the Parent paid to Grupa Azoty POLICE PLN 40,000 thousand as the last tranche of the loan to cover the share capital of the subsidiary PDH Polska S.A. (the total amount of the loan is PLN 60,000 thousand);
• On July 30th 2018, the Parent granted Grupa Azoty KĘDZIERZYN a loan of PLN 14,500 thousand to finance the upgrade of the synthesis gas compression unit supplying the Ammonia Plant. The repayment date of the loan is March 31st 2025;
• On July 30th 2018, the Parent paid Grupa Azoty KĘDZIERZYN PLN 3,729 thousand as a tranche of a loan to refinance and finance the ‘Raw Gas Compressor (GGH)’ project, on the basis of Annex 1 signed on July 16th 2018 to the request for a loan dated June 12th 2017, approved on June 22nd 2017. The annex increases the loan amount from PLN 7,732 thousand to PLN 11,461 thousand and changes the loan repayment schedule so that it begins on September 30th 2019 and ends on March 31st 2025.

4.4. Shareholding structure

Number and par value of shares as at the issue date of this Report:
• 24,000,000 Series AA shares with a par value of PLN 5 per share,
• 15,116,421 Series B shares with a par value of PLN 5 per share,
• 24,999,023 Series C shares with a par value of PLN 5 per share,
• 35,080,040 Series D shares with a par value of PLN 5 per share.

The total number of Parent shares is 99,195,484 bearer shares (ISIN code PLZATRM00012).

Below are listed shareholders holding directly, or indirectly through subsidiaries, at least 5% of total voting rights at the General Meeting as at the date of this report, along with information on the number of shares held by such entities, their respective ownership interests, the number of voting rights held, and their share in total voting rights at the General Meeting.
Shareholding structure as at May 10th 2018 (issue date of the most recent financial report)

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<td>0.07</td>
<td>71,348</td>
<td>0.07</td>
</tr>
<tr>
<td>Rainbee Holdings Limited¹</td>
<td>9,820,352</td>
<td>9.90</td>
<td>9,820,352</td>
<td>9.90</td>
</tr>
<tr>
<td>Opansa Enterprises Limited¹</td>
<td>9,430,000</td>
<td>9.50</td>
<td>9,430,000</td>
<td>9.50</td>
</tr>
<tr>
<td>TFI PZU S.A.</td>
<td>8,530,189</td>
<td>8.60</td>
<td>8,530,189</td>
<td>8.60</td>
</tr>
<tr>
<td>European Bank for Reconstruction and Development</td>
<td>2,850,000</td>
<td>2.87</td>
<td>2,850,000</td>
<td>2.87</td>
</tr>
<tr>
<td>Other</td>
<td>25,875,763</td>
<td>26.10</td>
<td>25,875,763</td>
<td>26.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>99,195,484</strong></td>
<td><strong>100.00</strong></td>
<td><strong>99,195,484</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

¹ Direct subsidiary of Norica Holding S.à r.l.

In the period from May 10th 2018 to the issue date of this Report, the Parent was not officially notified of any changes in major holdings of its shares. The actual shareholding structure may differ from that presented if there were no events giving rise to a shareholder’s obligation to disclose a new shareholding or if, despite the occurrence of such events, a shareholder failed to provide relevant information.

4.5. Parent shares held by management and supervisory personnel

As at the end of the reporting period (June 30th 2018) and as at the date of this Report, no member of the Parent’s Management and Supervisory Boards held any shares in the Parent.

4.6. Composition of the management and supervisory bodies

Parent’s Management Board

Composition of the Management Board as at January 1st 2018:
- Wojciech Wardacki - President of the Management Board,
- Witold Szczypiński - Vice President of the Management Board,
- Tomasz Hinc - Vice President of the Management Board,
- Paweł Łapiński – Vice President of the Management Board,
- Grzegorz Kądzielawski - Vice President of the Management Board,
- Józef Rojek - Vice President of the Management Board,
- Artur Kopeć - Member of the Management Board.

Tomasz Hinc, Vice President of the Management Board, resigned from the Company’s Management Board, submitting a resignation letter to the Supervisory Board on March 4th 2018.

Therefore, as at March 5th 2018, the Parent’s Management Board was composed of:
- Wojciech Wardacki - President of the Management Board,
- Witold Szczypiński - Vice President of the Management Board,
- Paweł Łapiński – Vice President of the Management Board,
- Grzegorz Kądzielawski - Vice President of the Management Board,
- Józef Rojek - Vice President of the Management Board,
- Artur Kopeć - Member of the Management Board.

On May 17th 2018, the Supervisory Board adopted resolutions to appoint the Management Board of the Parent for a new, 11th term of office.

In addition, the Supervisory Board validated the election held between March 22nd and April 11th 2018 to elect an employee representative to the Company’s Management Board, and confirmed the
election of Artur Kopec as Member of the Management Board of the 11th term of office. The effective date of the relevant resolutions was May 17th 2018.

On June 28th 2018, i.e. the date of the Annual General Meeting, the mandate of Józef Rojek as Vice President of the Management Board of the 10th term of office expired.

Therefore, as at the date of this Report, the Management Board was composed of:

- Wojciech Wardacki - President of the Management Board,
- Witold Szczypiński - Vice President of the Management Board,
- Mariusz Grab - Vice President of the Management Board
- Paweł Łapiński – Vice President of the Management Board,
- Grzegorz Kądzielawski - Vice President of the Management Board,
- Artur Kopec - Member of the Management Board.

Powers and responsibilities of the Parent’s Management Board and Supervisory Board members

On June 28th 2018, the Company’s Management Board passed a resolution establishing the following division of responsibilities between the Management Board members:

- Wojciech Wardacki – President of the Management Board, responsible for overall supervision and management of the Group, as well as for the strategy and corporate governance, including exercise of majority shareholder power, human resources management, communication and corporate image (which also covers public relations and CSR),
- Witold Szczypiński - Vice President of the Management Board, Director General of the Parent, responsible for integration of production processes, the Agro Segment, the Plastics Segment, and the Organic Synthesis Segment,
- Mariusz Grab - Vice President of the Management Board, responsible for formulation and implementation of the procurement strategy, logistics, and raw material and product integration,
- Grzegorz Kądzielawski - Vice President the Management Board, responsible for development of infrastructure and R&D programmes,
- Paweł Łapiński - Vice President of the Management Board, responsible for finance, controlling, IT, investor relations, M&A, growth strategy, and oversight of investment projects,
- Artur Kopec - Member of the Management Board, responsible for production assets, plant safety, environmental protection, critical infrastructure, and social dialogue.

Division of responsibilities between the Management Board members as at June 28th 2018

The Supervisory Board

As a result of these changes, from December 7th 2017 to the date of this report, the composition of the Supervisory Board was as follows:
The Supervisory Board operates on the basis of:
- Commercial Companies Code of September 15th 2000 (Dz.U. No. 94, item 1037, as amended),
- Act of August 30th 1996 on Commercialisation and Certain Employee Rights,
- Accounting Act of September 29th 1994,
- Company’s Articles of Association,
- Rules of Procedure for the Company’s Supervisory Board.

Supervisory Board’s Audit Committee
To streamline its work and improve control of the Parent and the Group, on July 4th 2013 the Supervisory Board passed a resolution to appoint an Audit Committee.

Composition of the Audit Committee as at January 1st 2018:
- Ireneusz Purgacz - Chair,
- Piotr Czajkowski,
- Michał Gabryel,
- Tomasz Karusewicz.

In H1 2018, there were no changes in the composition of the Audit Committee.

After the reporting date, Piotr Czajkowski tendered his resignation as member of the Audit Committee, with effect from April 19th 2018. As at the date of this Report, the Audit Committee was composed of:
- Ireneusz Purgacz - Chair,
- Michał Gabryel,
- Tomasz Karusewicz.

Responsibilities of the Audit Committee
The Audit Committee operates pursuant to the Rules of Procedure for the Audit Committee, adopted by the Supervisory Board by way of a resolution of July 4th 2013. The main tasks of the Committee include:
- 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 audit,
- Monitoring of the independence of the auditor and the entity qualified to audit financial statements,
- Monitoring of the audit of full-year separate and consolidated financial statements,
- Monitoring of the work and reports of the independent auditor,
- Analysing selected economic events relevant to the Company’s operations.
- Monitoring of the work and reports of the independent auditor.

Other Supervisory Board’s committees
On February 1st 2018, the Supervisory Board resolved to establish a Strategy and Development Committee and a Nomination and Remuneration Committee.
As at the date of this Report, the Strategy and Development Committee was composed of:
• Robert Kapka - Chair,
• Piotr Czajkowski - Member,
• Tomasz Karusewicz - Member,
• Zbigniew Paprocki - Member.

As at the date of this Report, the Nomination and Remuneration Committee was composed of:
• Bartłomiej Litwińczuk - Chair,
• Piotr Czajkowski - Member,
• Monika Fill - Member,
• Roman Romaniszyn - Member.

5. Supplementary information

Management Board’s position on the achievement of forecasts
As no forecasts for 2018 were published, the position of the Parent’s Management Board concerning achievement of such forecasts is not presented.


The Management Board considered the information on consolidated results material, because the financial results generated in the second quarter of 2018 were significantly lower than in the corresponding periods of the three previous years and differed from market expectations. The deteriorated performance was mainly an effect of the following three factors: significantly higher prices of raw materials, decline in market prices, and unfavourable weather conditions leading to lower sales volumes.

Litigation
There are no material court, arbitration or administrative proceedings pending with respect to any of the Group companies that would concern liabilities or debt claims as referred to in the Regulation of the Minister of Finance of April 20th 2018 on current and periodic information (Dz.U. of 2018, item 757).

Parent’s branches
The Company does not operate non-local branches or establishments.

Shares, share issues
In H1 2018, the Parent did not issue, redeem or repay any debt or equity securities. The Company had spent the proceeds from Public Offerings by the end of 2013. The proceeds were used in line with the original issue objectives.

There are no agreements known to the Company which may cause future changes in the percentages of shares held by the existing shareholders and bondholders.

The Company does not operate any control system for employee share ownership plan.
This Directors’ Report on the operations of the Grupa Azoty Group in H1 2018 has 53 pages.

Signatures of members of the Management Board

………………………………
Wojciech Wardacki, PhD
President of the Management Board

………………………………
Witold Szczypiński
Vice President of the Management Board
Director General

………………………………
Mariusz Grab
Vice President of the Management Board

………………………………
Grzegorz Kądzielawski, PhD
Vice President of the Management Board

………………………………
Paweł Łapiński
Vice President of the Management Board

………………………………
Artur Kopeć
Member of the Management Board

Tarnów, August 27th 2018