



UNIPETROL, a.s. Management report 2017

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Introduction¹

In 2017, Unipetrol Group's revenues reached CZK 122.5 bn, an increase by almost 40% since 2016. This result stemmed in particular from high sales volumes of petrochemical products which increased by 86% to 2 million tonnes during the year following the restoration of full production capacity and the increase in crude oil prices. The steam cracker utilisation stood at 82%. Refining products sales volume was also on the rise, recording a growth of 9% and reaching 6.8 million tonnes during in 2017.

Unipetrol average refining model margin increased by 43% to a healthy 4.4 USD/bbl in 2017 from 3.1 USD/bbl recorded in 2016. The combined petrochemical model margin was on average at the level of 786 EUR/t. Margins experienced an upsurge at the beginning of the year and dipped slightly during the last quarter of 2017. It was triggered by the OPEC's deal on crude oil production cuts driving the crude oil price over 60 USD/bbl. The Brent-Ural differential was at an average level of 1.4 USD/bbl.

The operating profit increased to CZK 14.8 bn based on EBITDA LIFO in 2017, breaking the record high results of 2016 by almost CZK 2.8 bn. The results achieved were due to stable operations of both refineries as well as very good results of the retail segment. Looking at each segment separately, the downstream segment reported EBITDA LIFO of CZK 13.4 bn; the best result ever recorded; driven by an increase in both, refinery and petrochemical sales volume. The retail segment recorded also the best historical results and achieved an operating profit of CZK 1.4 bn in terms of EBITDA LIFO. The higher fuel sales, including the increased share of the premium fuels with higher added value, in combination with the implementation of business strategy and marketing support with the improved competitiveness of the market environment, expansion of Stop Cafe concept and favourable macroeconomic factors were the main factors behind this very good result. Benzina continued with the petrol stations takeover on the basis of an agreement signed with OMV. By the end of 2017, 56 out of 63 petrol stations had been integrated into Benzina network. This project is expected to continue into 2018 as further seven stations are yet to be incorporated.

The Group's net profit reached CZK 8.7 bn in 2017, which represents increase by CZK 0.7 bn in comparison to year 2016. Looking at the cash flow, the operating cash flow increased to CZK 11.8 bn, driven by the increase in production and sales as well as the insurance compensation received. Unipetrol Group kept its financial gearing ratio at the negative level of (-) 4.6%, corresponding to the net cash position at the level of CZK 2.2 bn at the end of 2017. Maintaining stable financial situation allowed the company to execute a dividend payment of CZK 1.5 bn to its shareholders, which was approved at the General Meeting in June 2017.

Looking at production, there were few factors influencing the production units utilisation in 2017, which was adversely affected by the preventive steam cracker shutdown in February and July, the planned shutdown of the hydrocracker unit due to catalyst replacement in November and the unplanned shutdown of the partial oxidation unit (POX unit) in Chempark Záluží, Litvínov, in December. As a consequence of this incident the POX unit and ammonia unit were shut down, crude oil processing in Litvínov and Kralupy refineries, as well as petrochemical production of steam cracker unit in Chempark Záluží, Litvínov, were reduced. Both refineries were fully functional by the first week of January 2018. However despite this, Unipetrol increased the volume of processed crude oil by 46% to 7.9 million tons during the year, representing the best production results ever. Production units reached a 90% utilisation for the year, an increase of 28% from the 62% utilisation recorded in 2016.

Total CAPEX reached CZK 7.5 bn out of which approximately CZK 6.4 bn was allocated to the downstream segment. The highest investment was made into the construction of the new PE3 unit, which continued during 2017 with the expected launch of production towards the end of 2018. At the end of December 2017, the project reached 79% of completeness. Other key ongoing investment projects were T700 power station revamp and a newly approved POX revitalisation program. The biggest investment project commenced in 2017 was the construction of the new boiler house for the steam cracker unit, in Litvínov. There were also investment contributions on behalf of Spolana Neratovice with the strategic company revitalisation, as approved, where biggest projects relating to ammonium sulphate granulation line, PVC production and utilities availability. In the logistics area there was the successful delivery of two new locomotives, Vectron and Bizon. Significant part of the total CAPEX focused on promoting the operational reliability, safety and environment protection. The retail segment absorbed CZK 0.9 bn, mostly relating to OMV petrol stations takeover. The remaining part was dedicated to the corporate functions. In 2017 there was no major turnaround of production facilities.

In December 2017, UNIPETROL, a.s. was notified by its majority shareholder, PKN ORLEN S.A., of its intent to announce a voluntary public offer to purchase Unipetrol shares. The voluntary Unipetrol shares buy-out offer was made by PKN Orlen at CZK 380 per share, on 28 December 2017, with the offer period ended 30 January 2018. On February 6, 2018, PKN ORLEN S.A. announced that the number of Unipetrol shares subscribed for the sale in response to the announcement of the offer represents 31.05% of the Unipetrol share capital. Upon settlement of the purchase of these

¹Sources of macro indicators: HDP – Bloomberg/OECD; Crude oil and refinery products – PLATTS; Petchem - ICIS

shares, the shareholding of PKN ORLEN S.A. in Unipetrol exceeded 90% of Unipetrol's share capital and 90% votes at the General Meeting of Unipetrol. The final settlement date was 23 February 2018.

Key financial and non-financial data

Key financial data

in CZK million	2016	2017
Revenues	87,813	122,478
Gross profit	4,587	12,226
EBITDA LIFO ^{1,2}	12,037	14,817
EBITDA ¹	11,928	14,954
EBIT LIFO ^{1,3}	10,006	11,908
EBIT ¹	9,897	12,045
Downstream segment		
EBITDA LIFO	11,135	13,488
EBITDA	11,026	13,625
EBIT LIFO	9,473	11,005
EBIT	9,364	11,142
Retail segment		
EBITDA LIFO	957	1,393
EBITDA	957	1,393
EBIT LIFO	639	1,041
EBIT	639	1,041
Corporate functions		
EBITDA	(55)	(64)
EBIT	(106)	(138)
Net finance income / costs	131	(1,421)
Profit/loss before tax	10,028	10,624
Tax expense	(2,053)	(1,965)
Net profit	7,975	8,659
Earnings per share (CZK)	43.98	47.75
Operating cash flow	7,996	11,791
Free cash flow ¹	(1,793)	1,052
CAPEX ¹	10,788	7,541
Net working capital ¹	6,916	8,682
Net debt / net cash ¹	(2,757)	(2,233)
Net debt / (equity – hedging reserve) ¹	(6.6%)	(4.6%)
Net debt / EBITDA ¹	(0.3)	(0.2)

¹ See definitions on the page 27-28

² EBITDA LIFO = Downstream segment EBITDA LIFO + Retail segment EBITDA LIFO + Corporate functions EBITDA

³ EBIT LIFO = Downstream segment EBIT LIFO + Retail segment EBIT LIFO + Corporate functions EBIT

External environment²

	2016	2017
Brent crude price, USD/bbl	44	54
Brent-Ural differential, USD/bbl	2.5	1.4
Unipetrol model refining margin, USD/bbl ¹	3.1	4.4
Unipetrol model petrochemical olefin margin, EUR/t ²	338	387
Unipetrol model petrochemical polyolefin margin, EUR/t ³	505	399
Unipetrol model combined petrochemical margin, EUR/t ⁴	842	786

¹ Unipetrol model refining margin = revenues from products sold (96% Products = Gasoline 17%, Naphtha 20%, JET 2%, Diesel 40%, Sulphur Fuel Oils 9%, LPG 3%, Other feedstock 5%) minus costs (100% input = Brent Dated); products prices according to quotations

² Unipetrol model petrochemical olefin margin = revenues from products sold (100% Products = 40% Ethylene + 20% Propylene + 20% Benzene + 20% Naphtha) minus costs (100% Naphtha); products prices according to quotations

³ Unipetrol model petrochemical polyolefin margin = revenues from products sold (100% Products = 60% HDPE + 40% Polypropylene) minus costs (100% input = 60% Ethylene + 40% Propylene); products prices according to quotations

⁴ Unipetrol model combined petrochemical margin = Unipetrol model petrochemical olefin margin + Unipetrol model petrochemical polyolefin margin

Key operating data (in thousand tons)

	2016	2017
Crude oil throughput	5,422	7,894
Refining utilisation ratio ¹	62%	90%
Refining segment sales volumes, including retail segment (Benzina network)	6,280	6,830
Petrochemical segment sales volumes	1,069	1,992

¹ Conversion capacity of Unipetrol' s refineries = Conversion capacity till 1Q2015 was 5.9 mt/y after completion of acquisition of Shell's 16.335% stake in Česká rafinérská, corresponding to Unipetrol's total stake of 67.555% (Česká rafinérská – Kralupy 2.166 mt/y, Česká rafinérská – Litvínov 3.710 mt/y). In 2Q2015 conversion capacity increased to 7.8 mt/y driven by operation of Eni's 32.445% stake in Česká rafinérská from May. From 3Q2015, conversion capacity is 100% of Česká rafinérská, i.e. 8.7 mt/y (Česká rafinérská – Kralupy 3.206 mt/y, Česká rafinérská – Litvínov 5.492 mt/y).

²Sources of macro indicators: HDP – Bloomberg/OECD; Crude oil and refinery products – PLATTS; Petchem - ICIS

Downstream segment

External environment

Refining business

External environment of the refining business³

	2016	2017
Brent crude price, USD/bbl	44	54
Brent-Ural differential, USD/bbl	2.5	1.4
Unipetrol model refining margin, USD/bbl ¹	3.1	4.4

¹ Unipetrol model refining margin = revenues from products sold (96% Products = Gasoline 17%, Naphtha 20%, JET 2%, Diesel 40%, Sulphur Fuel Oils 9%, LPG 3%, Other feedstock 5%) minus costs (100% input = Brent Dated); products prices according to quotations

Crude oil, gasoline and diesel prices

The oil price in 2017 was affected by the following key factors:

- continued compliance with key oil producers' agreement on production limitation (Russia, OPEC and SA, Venezuela in particular)
- slate mining revival in the US
- renewed oil production in Nigeria, Libya in the second quarter
- shutdown of oil drilling in the Gulf of Mexico and shutdown of processing capacity as a consequence of Hurricane Harvey in the third quarter
- strong and growth of world demand exceeding expectations at the level of 98.4 mil. bbl/day
- balancing the supply and demand chain

These factors had a significant impact on the financial market sentiment, which pushed the price of oil to 45 USD/bbl in the second quarter, from the initial price level of 50-55 USD/bbl at the beginning of the year. For the first time since 2013, there was a worldwide decline in oil stocks and the prices increased by 20 USD/bbl in the second half of the year to 66 USD/bbl at the end of the year. 2017, with an average oil price of 54.2 USD/bbl, was the third year in a row with a relatively low and volatile oil price, and - after four years - the first year when global oil stocks fell by 400,000 bbl/day.

The refining margin was positively influenced by strong demand throughout the year. At the end of August, Hurricane Harvey caused shutdown of up to 25% of US production capacity, resulting in a significant production gap which, consequently, generated high margins at the end of the summer. Refining margins, as measured by the Rotterdam National Refinery Upgrade (NRU), reached 7.6 USD/bbl an increase of 1.5 USD/bbl, compared to 2016. 2017's refining margin was at its third highest since the 2009 financial crisis. Capacity utilisation rested on high levels worldwide.

The annual average gasoline crack spread (i.e. the price quotation difference between gasoline and Brent crude oil) reached the level of 147 USD/ton, an increase of 11 USD/ton since 2016 when it reached its lowest value in the last six years. The seasonal development of the gasoline production margin was significantly affected by the impact of Hurricane Harvey and generally strong demand.

In 2017, the crack spread of diesel to Brent dtd was also higher compared to 2016, when it was pushed to 12 year lows, caused by the weak demand caused by El-Nino. The annual average diesel production margin was 83 USD/ton, i.e. a 17 USD/ton increase to 2016.

The European refineries utilisation rate was high as a result of the strong demand worldwide and the impact of Hurricane Harvey. The refining capacity utilisation was higher than in 2016 when it amounted to 82%. Even though 2017 was the third good year in a row; the structural weakness of the European refinery sector persists.

³Sources of macro indicators: HDP – Bloomberg/OECD; Crude oil and refinery products – PLATTS; Petchem - ICIS

Refinery margins

A comparison of the development of the Unipetrol and NRU model refinery margins reveals Unipetrol's limited ability to benefit from higher prices of gasoline over oil. On one hand, this is due to a very competitive environment on the domestic fuel market and, on the other hand, it results from the integration of refinery assets with petrochemistry and the production of ammonia. The low oil price and the weak CZK against USD raised Unipetrol's margin in Czech crowns.

Unipetrol's model refining margin reached the average level of 4.4 USD per barrel in 2017, an increase of 43% since 2016 reported level of 3.1 USD per barrel. The average price differential between Brent crude oil and Russian Ural crude oil, the Brent-Ural differential, amounted to 1.4 USD per barrel.

Petrochemical business

External environment of the petrochemical business⁴

	2016	2017
Unipetrol model petrochemical olefin margin, EUR/t ¹	338	387
Unipetrol model petrochemical polyolefin margin, EUR/t ²	505	399
Unipetrol model combined petrochemical margin, EUR/t ³	842	876

¹ Unipetrol model petrochemical olefin margin = revenues from products sold (100% Products = 40% Ethylene + 20% Propylene + 20% Benzene + 20% Naphtha) minus costs (100% Naphtha); products prices according to quotations

² Unipetrol model petrochemical polyolefin margin = revenues from products sold (100% Products = 60% HDPE + 40% Polypropylene) minus costs (100% input = 60% Ethylene + 40% Propylene); products prices according to quotations

³ Unipetrol model combined petrochemical margin = Unipetrol model petrochemical olefin margin + Unipetrol model petrochemical polyolefin margin

Olefins and chemicals

2017 has been a strong year for petrochemical producers. Even though the price of raw material increased during 2017, the overall profitability of petrochemical operations in Europe was not affected. Cracker margins were higher this year compared to 2016, due to higher ethylene and propylene prices, to an even larger extent of heavier co-products, including butadiene and benzene.

Benzene

Benzene margins relative to its feedstock naphtha stayed at consistently high levels throughout the year. Benzene's premium average against naphtha was above 400 USD/ton this year compared to previous two years' average where the premium was 50% lower. This was due to a decline in European imports, robust downstream demand and delayed benzene start-up projects in Asia.

Greater exports of benzene from Europe during the fourth quarter of 2016, combined with a series of production difficulties in Europe in first quarter of 2017 set the European market up for a strong start in 2017. Europe had to rely on its own supply for the largest parts of the year, as workable benzene arbitrages into Europe were shut from early second quarter of 2017. The US benzene market was affected by Hurricane Harvey and became fairly tight. These events supported exports from Western Europe and pushed prices even higher towards the end of the year. Although almost two million tons of new benzene capacity was expected to come on stream in Asia only a third of the initially scheduled amount is anticipated.

Ethylene

Ethylene market in Europe was supported by low oil prices, healthy cracker margins and huge demand during 2017 however benefits could disappear in 2018 due to higher oil prices and start-ups of new crackers in the United States.

Thanks to a robust demand, last year seemed tighter on the supply side. European producers operational reliability was challenged and delayed spring maintenances kept demand and supply balance very tight up to the third quarter of the year.

Contract ethylene margins based on naphtha went higher by nearly 20% on average last year and spot margins based on naphtha increased by over 30%. European ethylene margins touched their highest levels thanks to a rise in contract ethylene prices and an increase in spot ethylene values.

⁴Sources of macro indicators: HDP – Bloomberg/OECD; Crude oil and refinery products – PLATTS; Petchem - ICIS

Propylene

Propylene market for 2017 showed imbalances in supply and demand. The combination of turnarounds, along with planned and unplanned refinery outages, reduced propylene availability especially, in the first half of year. The tight market reacted by pushing the sentiment for spot prices dramatically up. Contract prices roller-coasted during the year, in line with feedstock.

Unipetrol's model olefin margin reached 387 EUR per ton in 2017, which represents an increase of 15% y/y since 2016 reported 338 EUR per ton.

Polyolefins

European polyolefin producers enjoyed robust margins in 2017, despite the significant growth in Brent crude oil prices. In 2016, the oil price averaged at nearly 45 USD/bbl, while this year the crude quotation went up by ten dollar per barrel. Due to the oil price increase naphtha prices were also on a rise. Nevertheless, in recent months a stronger euro/dollar exchange rate mitigated an increase in euro-denominated naphtha prices. After 2015, with a number of issues at polymers sites across Europe that caused a prolonged product shortage and a price surge, the attitude of major buyers in Europe permanently changed. During year 2016 and 2017, buyers continued to pay a strong attention to inventory management, seasonal demand peaks and started to evaluate the implications of short-term price movements. Improved economic conditions in euro zone and growing economic confidence supported the consumption of polypropylene that went up by 3% year on year, while consumption of high density PE increased by 2% year on year. Demand was unexpectedly strong in HDPE pipe sector this year and didn't decrease significantly even in winter, when volumes often fall down as HDPE pipe is used mainly in the construction sector. HDPE injection and film applications were lagging. Even in 2017 Europe remained a net importer of HDPE grade. HDPE injection spot prices kept slipping throughout the year. Their low-end levels were moving even below ethylene contract prices. Due to this fact sellers preferred to sell volumes to regions with a potential of a better net return. Asia was found to be the region of a very strong market. HDPE contract prices remained relatively firm throughout the year. During 2017, the demand for polypropylene was stronger than for polyethylene. One of the main importers to the European market was South Korea that benefited from a zero percent import duty into Europe, whilst a 6.5% duty was applied to most of Asian and Gulf countries. Polypropylene prices followed movements in the propylene contract pricing and the spread remained fairly steady in 2017. New capacities in the PP sector came up on stream mainly in China and India. In the long term, investments into polypropylene look limited around the world therefore PP supply in Europe will remain balanced to tight. New suppliers will continue to see Asia as their preferred destination to sell, while European price remains unattractive in global terms.

Unipetrol's model polyolefin margin reached 399 EUR/t in 2017, which represents a decrease of 21% since 2016, when the model margin reached 505 EUR/t. Unipetrol's model combined petrochemical margin (olefins plus polyolefins) decreased by 7% during 2017, from its 2016 level of 842 EUR/t.

Crude oil purchases

As in the previous years, crude oil was supplied to Unipetrol in 2017 in cooperation with the majority owner, PKN ORLEN on the basis of the long-term contracts from 2006. The contracts secure supplies of Russian Export Blend Crude Oil (REBCO) delivered via Druzhba pipeline as well as seaborne crude oil delivered via TAL-IKL pipeline.

The REBCO via the Druzhba, being the main feedstock for the Litvínov refinery, is secured based on the two long term contracts for deliveries from the resources of Russian suppliers ROSNEFT and TATNEFT. In total, 4.04 mil tons of REBCO were purchased via Druzhba pipeline in 2017.

The Kralupy nad Vltavou refinery with its FCC technology is supplied mainly by seaborne sweet crude oil Azeri Light from Azerbaijan. On a regular basis, Azeri Light crude oil was blended in the optimal ratio with CPC Blend crude oil from Kazakhstan. In order to achieve an additional economic value, CPC Blend was also blended with the REBCO crude oil and supplied to Litvínov refinery.

In 2017 a cargo of Arabian Light crude oil and a cargo of Ural crude oil were purchased for security of supply and diversification purposes. Moreover, 2 opportunistic cargoes of Zarzaitine crude oil were purchased for Kralupy nad Vltavou refinery in order to achieve better yields and thus to improve refinery margins.

Moravian crudes from local suppliers MND and LAMA Trade remain the complementary source for Kralupy refinery. Approximately 1.3% of crude oil was supplied from the local Czech resources in 2017.

Crude oil purchases in 2017 (in thousand tons)

REBCO-Druzhba	4,040	50.9%
Seaborne low-sulphur crude oil supplies for Kralupy and Litvínov refineries	3,595	45.3%
Seaborne high-sulphur crude oil supplies for Litvínov refineries	199	2.5%
Moravian crude oil	103	1.3%
Total	7,937	100.00%

Production

Crude oil throughput and refining utilisation ratio

	2016	2017
Crude oil throughput (in thousand tons)	5,422	7,894
Refining utilisation ratio ¹	62%	90%

¹ Conversion capacity of Unipetrol' s refineries = Conversion capacity till 1Q2015 was 5.9 mt/y after completion of acquisition of Shell's 16.335% stake in Česká rafinérská, corresponding to Unipetrol' s total stake of 67.555% (Česká rafinérská – Kralupy 2.166 mt/y, Česká rafinérská – Litvínov 3.710 mt/y). In 2Q2015 conversion capacity increased to 7.8 mt/y driven by operation of Eni's 32.445% stake in Česká rafinérská, in May. From 3Q2015 conversion capacity is 100% of Česká rafinérská, i.e. 8.7 mt/y (Česká rafinérská – Kralupy 3.206 mt/y, Česká rafinérská – Litvínov 5.492 mt/y).

In 2017, Litvínov and Kralupy refineries processed 7.9 million tons of crude oil which is a 45% increase from 5.4 million tons processed in 2016.

Utilisation of both refineries generally remained at a very high level until the end of the year, when planned Litvínov maintenance shutdowns took place. The average refineries utilisation was as high as 94% for the first ten months of 2017. Maintenance shutdown in the Litvínov refinery decreased the utilisation to final 90% for the year 2017.

Semi-regenerative reformer catalyst regeneration and gasoil hydrotreater catalyst exchange took place in Kralupy refinery, in April 2017. Refinery was successfully kept running except for the aforementioned units. The planned Litvínov visbreaker unit cleaning in August 2017 did not influence significantly the crude oil processing and refinery production.

In November 2017, planned maintenance shutdowns in Litvínov affected the visbreaker unit, gasoil hydrodesulphurisation units and the hydrocracker. The rest of the refinery, as well as the steam cracker unit in the petrochemical part, continued in successful operation, minimising any negative impact of the maintenance shutdown.

The last month of the year was influenced by the POX unit fire which caused that Litvínov refinery reduced its utilisation for the rest of December due to unavailability of hydrogen for hydrotreating and hydrocracking processes.

Generally, 2017 was a year with a very high utilisation of both refineries.

Paramo, a subsidiary, developed production of lubricants, processed oils and bitumens both, for the Czech and European Markets, in 2017. The main site for production of base oils and lubricants is the Kolín plant. Production of lubricants relies on raw materials delivered by UNIPETROL RPA for further processing and blending to the final production of the motor oils of all performance categories, gear oils, hydraulic and other industrial oils. Production of process oils for the rubber industry and production of special industry oils and liquids was concentrated at the Pardubice plant.

Paramo operation concerning bitumen and bitumen products is situated in the Pardubice plant, delivering a wide range of industrial bitumen products for construction purposes and special pavement grade bitumen products. Paramo introduced and started marketing Polymer Modified Bitumens in 2017. Feedstock for asphalt re-processing is provided by UNIPETROL RPA. Paramo has been also providing storage and dispatch services for fuels distribution by UNIPETROL RPA and the Administration of State Material Reserves – Czech Republic (ASMR).

Spolana is the only producer of polyvinylchloride and caprolactam in the Czech Republic. The company operates two production units – PVC production unit and Caprolactam production unit. The main products of the PVC unit are polyvinylchloride and sodium hydroxide. The Caprolactam unit produces caprolactam, ammonium sulphate and sulphuric acid. In November 2017, Spolana terminated its amalgam electrolysis facility producing chlorine and caustic soda, and continued PVC production using externally sourced semi-finished products. In December 2017, Spolana completed construction of a new production line that allows for the introduction of a new product, SPOLSAN G, a granulated agricultural fertiliser.

Market position and sales

Refining business

Market development

Based on the latest data available, the Czech diesel consumption continued to grow and petrol consumption remained stable, in 2017.

Sales volumes of refining products, including retail segment (Benzina petrol station network)

thousand tons	2016	2017
Total refining sales volumes, including retail segment	6,280	6,829
Diesel, including retail segment	3,494	3,849
Gasoline, including retail segment	1,476	1,650
JET	121	179
LPG	196	150
Fuel oils	133	180
Naphtha	220	21
Bitumen	329	512
Lubricants	33	34
Rest of refining products	278	254

Motor fuels sales

The revised wholesale strategy was introduced as planned, starting from January 2017. The following areas are pillars of a new approach to the fuels wholesale:

- Streamlined sales concentrated in defined geographical areas and high priority for Czech supply
- Strong Unipetrol Group integration combined with synergies within Orlen Group
- Expansion of customer portfolio through revised customer offer
- Introduction of new pricing model in the Czech Republic

Domestic sale of fuels expanded, although it was affected to a certain degree by preventive shut-downs in refineries during the year. This indicates the potential for further strengthening of Unipetrol position in the Czech Republic, when the availability of supply from production is stabilised as expected. Export went to plan with additional volumes allocated to Poland during the high refinery margins periods in order to maximise financial results. Fuel wholesale in affiliate markets Slovakia and Hungary, was performed through Unipetrol's subsidiaries, which allowed for margin improvement and volume optimisation at reasonable level.

Other refining product sales

Other refinery product sales were performed according to refineries production mode in order to optimise the financial results. High sales of asphalts and flexibility of LPG contracts allowed for additional production optimisation during the peak sales months.

Paramo market position and sales

Paramo's has the largest market share in the Czech Republic exceeding 35% in oils and bitumen products sales. More than 60% of Paramo's production is exported, mainly base and process oils.

The marketing support focused predominantly on finished oils. Increased sales of premium oils incl. MOGUL EXTREME motor oils are the flagship of the company. They meet the highest demands of the most modern engines performance.

Oils from the MOGUL PROFESSIONAL line are designed for car service stations. The special product series MOGUL MOTO has been developed for two-stroke and four-stroke engines of modern motorcycles. Motor oils for trucks are represented by the MOGUL DIESEL series which meets the strict emission limits, EURO IV to VI. They guarantee very long service intervals. Paramo also offers a comprehensive oil series MOGUL ALFA for garden equipment.

The bitumen (pavement, building-insulating) production was delivered to the market through ORLEN Asfalt Česká republika which is the exclusive distributor of such products.

Paramo continues to deliver processed oils to the Continental Group which extended cooperation through 2017, and few others in the rubber industry. The cooperation continued with additives producers and also new foreign customers for sale of wide range of the base oils Group I, II and III.

Finished oils and greases were exported into more than 20 countries. The main export markets are Germany and Slovakia. Paramo has developed its strong position in Balkan countries, also has also increased its sales in the Eastern European markets.

The company managed to keep its position of the main lubricant supplier to Czech companies such as České dráhy and Dopravní podnik hl. m. Prahy. Paramo is also the supplier of the Czech Republic Army.

The company is present in the Mountfield service network; supplies the AutoKelly network with the Starline brand and produce oils for Czech Zetor.

Petrochemical business

The petrochemical segment saw an increase in sales of all products over the year. This was in correspondence with the full restoration of the steam cracker in October 2016 as well as increased demand for plastics. Total sales volumes reached the level of 1,992 kt, an increase of 86% from December 2016. In terms of sales volume, the majority of products grew by at least 100%.

Sales volumes of petrochemical products

Thousand tons	2016	2017
Total petrochemical sales volumes	1,069	1,992
Ethylene	45	140
Benzene	36	182
Propylene	6	28
Ammonia	188	180
C4 fraction	16	81
Butadiene	44	57
Polyethylene	104	270
Polypropylene	141	280
Rest of petrochemical products	489	774

Olefins and chemicals

The sale of steam cracker unit products and ammonia is the core business line of the Monomers and Chemicals Business Unit. The most important products of the steam cracker unit include ethylene, propylene, C4 fractions, and benzene. In 2017, manufacturing and sales of these products returned to levels seen before 2015. This was thanks to the steam cracker returning to a full operation in the fourth quarter of 2016 after more than a year-long outage. The domestic market continued to be the main market for steam cracker products. Monomers, C4 fractions, and benzene were either processed in downstream production at Unipetrol RPA or transported through the existing product-pipeline network to strategic customers (Spolana, Butadien Kralupy, Synthos). Compared to the previous period, the volume of monomers sold to Western European markets has increased. These sales helped optimise stock levels and enabled the steam cracker to operate at high-capacity mode. Steam cracker by-products were directed mainly to the domestic and Central and Western Europe markets.

Ammonia production sales rested at similar levels to previous years. The territorial division of sales did not change thanks to the existence of a long-term contract in place with the largest domestic fertiliser manufacturer. As in previous years, the clear majority of ammonia produced by UNIPETROL RPA remained in the domestic market.

Post year end 2016, Ammonia prices continued to grow. Due to manufacturing problems, planned and unplanned outages, and limited availability of natural gas in some territories, prices kept rising until the end of the first quarter. The transport problems in Ukraine, limited availability of Russian and Ukrainian ammonia and reduced supply from Algeria supported the European price increases. This stage was followed by a market settlement after which a surplus of product became visible. The low level of demand was the main reason for the significant price reductions lasting until August, when European prices reached the lowest level since mid-2009, followed by a steady rise until year end 2017. The level of demand grew and a number of significant production capacities were shut down. To support prices in this period, high prices of urea also helped, and integrated producers preferred the production of ammonia to direct sales of ammonia.

The sale of highly conductive carbon black Chezacarb AC also remains at the forefront of the Company's interests. Chezacarb AC is used mainly to modify the electroconductive properties of plastics, rubber, and paint. It also finds use in the environment as a sorbent. Compared to the previous year, the volume of carbon black sales rose yet again, almost reaching the threshold of 2,300 tons. The volume of sales has been gradually edging closer to values seen before the 2014 crisis, the main reason being increased demand, especially from Asia. In addition to the growing market in China, stable demand from Korea and Japan remained. Higher volumes were also exported to US and Western European markets.

Polyolefins

UNIPETROL RPA is the exclusive producer of polyolefins on the domestic market and 7th biggest player on European market. The company operates assets with a production capacity of 320 thousand tons of high-density polyethylene (HDPE) per year and 300 thousand tons of polypropylene (PP) per year.

The 2015 - 2016 period was influenced by the steam cracker accident when force majeure was announced. Fortunately the production got back on stream and was successfully operated in 2017. Unipetrol regained its 5% share on HDPE production market and 3% share on PP production market in Europe. After start-up of new HDPE unit at the end of 2018 Unipetrol will increase its polyethylene capacity to 470 kt and strengthen its position with almost 7% of the total European capacity.

Unipetrol is the leading supplier of polyolefins on the Czech market. The company covers over half of domestic HDPE consumption and 30% of domestic PP demand. Unipetrol's product portfolio also aims at neighbouring countries such as Germany, Slovakia, Austria, Hungary etc., where it has achieved significant market shares.

The macroeconomic environment changed slightly during 2017. In the second half of the year crude oil prices were consistently growing, slowly exceeding the levels of 60 USD/bbl. Prices of oil-related products were rising in parallel to crude oil, including naphtha which is still a key feedstock for the petrochemical industry in Europe. Nevertheless polyolefins producers in Europe, including Unipetrol, could enjoy stable margins throughout the year.

In 2017 Unipetrol entered the market with full production portfolio and standard production volumes after restoration of petrochemical production units in Litvínov in the last quarter of 2016. The 2017 market sales strategy proved to be successful upon implementation and the total polyolefins sales volume reached 550 kt which was the second best achievement in Unipetrol history. Unipetrol was able to resume sales to a majority of its lost customers and reach standard level of sales on the core markets (domestic, DACH region). Along with standard commercial activities, a business development program was also deployed resulting in an acquisition of new accounts in selected, high margin segments. Throughout 2017 construction of a new HDPE unit in Litvínov was progressing therefore commercial activities focused on definition of sales strategy in respect of the product portfolio, target market segments were launched as well.

Spolana market position and sales

Polyvinylchloride (registered under the trademark of Neralit) is produced and sold in four different modifications. It is used for products made of softened and unsoftened plastic mixtures. The final products are used in packaging and construction industry, production of customised goods, and others. Sodium hydroxide is used in numerous manufacturing processes – for example, production of paper, cellulose, artificial fibres, and within the food industry. Due to the significant transport expenses, this product is sold in the Czech Republic and its neighbouring countries.

Caprolactam forms a basic input material for the production of the polyamide 6 artificial fibre (PA6), which is used in the textile and plastic industries. In 2015, caprolactam market was influenced by a decreasing demand in China, a fact that had also impacted the European market. During 2016, the situation had gradually stabilised due to an increased demand from Asia, which also had a positive impact on Europe. This gradual demand improvement further continued in 2017.

Ammonium sulphate (registered under the trademark of Spolsan) is an industrial fertiliser created as a by-product during caprolactam production. It is used either independently or in fertiliser mixtures. Since December 2017, it is also being sold in a granulated form. While its sales are seasonal, it is relatively stable from a long-term perspective.

Expected development in 2018

Refining business

Research and development in refining technologies and products followed two main areas – the production of motor fuels and the processing of residual fractions.

The availability and exploitation of renewable sources in refining operations and motor fuels production will be a key factor for each refinery. The legislative regulation of greenhouse gas emissions and the level of renewables share in energetic materials are speeding-up the industrial innovations and new technologies applications. The previous and long-term research, technological and analytical support of UniCRE helped in realisation of industrial test-run focused on hydrogenation of used cooking oil in refinery Litvínov. The investigation of potential raw material sources from alternative materials and wastes for motor fuels production purposes also continued in 2017. Moreover, the innovation and development activities in motor fuel component desulphurisations, blending and additivition successfully continued in 2017.

In 2020 the stricter limit for sulphur content in marine fuels is expected therefore the conversion of residual fractions will become an important economical aspect for each refinery. The strategy in this area is focused on decreasing the share of heavy and residual products and their complex processing. The emphasis was put on further increasing the production of light products and alternative possibilities of residual fractions processing. Traditionally quite big proportion of activities targeted on the feedstock and quality of pavement bitumens. The modern rheological, instrumental and analytical methods were developed and further implemented in bitumen investigation.

In the area of projects with public support the project in cooperation with UCT Prague focused on the higher recycling of waste material from the reconstruction of roads was successfully finished.

Together with the research and development activities UniCRE specialists and experts in the area of refining business actively contributed to the educational program of UCT Prague both during laboratory work, and by consulting and supervising Bachelor and Master theses.

In the area of new generation of fuels attention was paid to the effective use of hydrogen in refinery-petrochemical complex and its possible use in traffic.

The strategy for the future development of Paramo will be still based on the following pillars:

- Lubricant oils production, increasing of premium and specialised industry oils sales supported by marketing activities
- Re-furbishing fuel terminal storage tanks to increase capacity for diesel and petrol distribution from Pardubice terminal
- Bitumen and bitumen products production and sales
- Diversifying of raw materials sources to assure independence of supply of production materials from one supplier

Petrochemical business

Olefins and chemicals

The OPEC agreement referring to crude oil production cut was extended to the end of 2018 including non-OPEC members such as Russia. This agreement will support a notable increase in crude prices which will carry over into ethylene feedstock, naphtha. The price of the main petrochemical feedstock, naphtha, is likely to be the biggest concern for European steam cracker producers in 2018. Nevertheless, according to the forecasts, softer petrochemicals demand might put Northwest European naphtha prices under pressure in 2018. That would be an opportunity of potential periodic arbitrage with Asia thanks to robust demand.

The forecast for individual olefin markets in Europe varies as year 2018 carries out different challenges to each of them.

European benzene market could come down to a more sustainable level, in the first quarter of year 2018, due to undergoing maintenance of at least three styrene plants. This will release more material in the market and reduce pricing pressure.

With respect to ethylene, cracker turnarounds are scheduled for 2018 in a smaller extent than in the previous year. That is to say, plant maintenance is not expected to add significantly to the tightness of the market. High levels of demand are expected. Due to this fact, ethylene market should maintain a reasonable balance.

Regarding propylene, the market is expected to be tighter in 2018. Demand will stay robust but propylene supply will continue to decline due to cracking lighter feedstocks such as ethane. Moreover, there will be also a stronger demand for its derivatives such as acrylonitrile (ACN), polypropylene (PP) and propylene oxide (PO).

Polyolefins

In 2018, price movements in polyethylene and polypropylene are expected to diverge significantly. In recent years, naphtha-based PE and PP have mostly moved in line with each other. This could change due to new ethane-based PE production, mainly from North America, although it is not clear yet when polyethylene imports from new North American (as well as Indian) capacities will start to add substantial volumes to Europe. In the first half of the year, low polyethylene prices in Europe will probably delay the arrival of imports but, later on, certain volumes will be inevitable. Fresh imports will disturb the balance of the European market and affect its pricing.

The prospect for polypropylene looks different. In 2018 and a few years to follow, the PP market should be characterised by a tighter supply situation. A limited number of new PP projects are expected around the world. In China, the amount of new capacities could affect an environmental push against pollution generated by burning coal as some of the Chinese projected PP plants are based on a coal-to-olefins process. In Europe, PP supply is likely to remain balanced to tight. Producers will increase their shares of output to cover healthy demand in Western Europe. Central and Eastern Europe will remain a net importer of PP and will consume more polypropylene produced in the region. This should fulfil producers' hopes to achieve significant margins in 2018.

Spolana

Spolana's future development is based on operation continuity and continuity of the existing production lines with gradual modernisation and modifications in accordance with the stipulated regulatory requirements. In 2017, the construction of a new production line was completed enabling the introduction of a new product. This product is a granulated agricultural fertiliser called SPOLSAN G. Towards the end of November 2017, the chlorine production (utilising mercury electrolysis) terminated in compliance with the applicable regulations. Polyvinylchloride production was preserved thanks to the purchasing and importing of the EDC intermediate product. In 2017, analyses of other potential PVC production possibilities continued – the plans involve a future construction of a membrane electrolysis facility. The preparation stage of the construction of a new electricity production facility began in early 2017. A new natural gas energy block should be launched in 2019.

The company continues to cooperate with its neighbouring communities in the process of building flood barriers. The company adopts stabilisation measures in the area of employment and recruitment process. Its training programs will be promoted. Sharing of professional experiences will be encouraged and best available procedures enforced. Spolana will also continue in the process of its integration into Unipetrol Group, linked to its acquisition in 2016.

Retail segment

Market position and sales

Market position

UNIPETROL RPA, s.r.o. - BENZINA, registered branch, operated the largest network of petrol stations in the Czech Republic in 2017. As of 31 December 2017, the network comprised 401 stations with a wide range of fuels with additives; a selected segment of offers in the range of VERVA premium fuels, innovative EFECTA fuels introduced in the first half of the year and a wide selection of other goods, refreshments and services. The renovation of petrol stations and the unification thereof under the Benzina and Benzina Express brands continued in 2017.

Compared to 2016, Benzina's market share increased from 17.6% to 20.5% in 2017 (company's estimates based on the data from the Czech Statistical Office as of October 2017).

External environment

There were some macroeconomical and technical factors impacting the fuel consumption in the Czech Republic throughout the year. Macroeconomical elements included the rise in HDP, low level of unemployment and also in connection with these issues, the increased performance of a number of oil-intensive sectors, as well as the increase in households spending which was also reflected in a modest recovery of demand for petrol in 2017.

The stable increase in diesel consumption had a positive impact on economic recovery and GDP growth. Due to the industrial production growth, the transport performance was also on a rise. Likewise, we saw an increase in long-distance truck transportation. The increase in diesel consumption was positively influenced by the continued import of predominantly diesel versions of second-hand cars.

Alternative fuel consumption, particularly CNG and LPG continued to grow, based on the tax benefits while the rise of other alternative fuels, such as electricity, LNG or hydrogen, was marginal.

The list of the aforementioned factors had an impact on the development of domestic fuel demand in 2017. Relative to 2016, there was an increase in gasoline (5%) and diesel (7%) consumption. So far, all other tax-friendly alternatives determined by higher increases in fossil fuel consumption.

As of December 31, 2017, there were 7,020 petrol stations in the Czech Republic, 2,408 of which privately held stations were (672 limited access stations and 3,940 public stations).

Fuel sales

Benzina's key business is the sale of fuels and other goods and services at petrol stations. The sales structure confirmed the long-term trend of a higher proportion of diesel fuel, which continued in 2017.

Structure of petrol stations fuel sales

	2016	2017
Gasoline	36%	36%
Diesel	64%	64%

Compared to 2016, diesel sales in the Benzina network recorded a growth of 21% in 2017. The range of diesel fuels contributing to the growth included both the standard EFECTA DIESEL (+18.4%) and the premium VERVA diesel (+30.6%).

Relative to 2016, the total sales of the range of gasoline fuels recorded a growth of 21.5% in 2017. The main contributor was still EFECTA 95, which accounted for 90.8% of the gasoline sold and showed a year-on-year increase of 19.6%. The sales of the high-octane VERVA 100 gasoline increased on a year-on-year basis by 43.1%. Since its introduction in 2006, its share of the gasoline sold had grown and in 2017 achieved 9.2% of the total gasoline sales.

As part of nation-wide monitoring of the quality of the fuel sold at public petrol stations carried out by the Czech Trade Inspection Authority and publication of the results by the CTIA, there was only one slight discrepancy in the case of diesel attributed to the whole of the Benzina network. All the premium fuels checked were found to be compliant.

The higher sales of fuel at filling stations in 2017, including the increased share of premium fuels with higher added value combined with the decrease in the prices of all types of fuel on offer, along with business strategy, marketing support and operating cost savings have all contributed to very good financial results of the retail segment. A positive impact on the results was also delivered by improved competitiveness of the market environment and favourable macroeconomic factors, which positively influenced the demand for both gasoline and diesel. The highly competitive environment in the retail market was in 2017 again attributable to a large number of petrol stations in the Czech Republic.

Non-fuel sales

Total revenues from sales, within the non-fuel segment, increased notably, by 25.3% in 2017, compared to 2016 results. Higher dynamics were recorded within the sub-segment of gastronomy, where revenue grew by 33.7%. This positive development was mainly due to the introduction of the Stop Cafe fast food concept, where customers can enjoy quality coffee, hot dogs, fresh sandwiches and hot meals.

Expected development in 2018

The current economic conditions in the Eurozone and economic reforms in the Czech Republic, in particular the growth-promoting measures adopted by the Czech government prepare the ground for further growth of the Czech economy with a positive impact on increased demand for fuels on the domestic market, mainly through rising performance of diesel-intensive sectors. The tax-advantageous CNG will further strengthen its stable position on the market. The strong competition in the market will continue to exert pressure on fuel profit margins throughout the year.

The petrol and diesel ranges available in 2018 will depend on the conditions defined by the environmental legislation determining the level of binding obligations for reducing fossil fuel CO₂ emissions in terms of the bio-component content with lower carbon footprint in 2018-2020. In addition, a further expansion of the range of fossil fuels with additives, alternatives such as CNG or fast charging points for electric cars at petrol stations can be expected. The remaining market space will be occupied by low-cost, self-service petrol stations.

Benzina keeps its priorities within the framework focused on increasing the market share of fuel sales, increasing the average throughput per petrol station as well as increasing sales in the non-fuel segment, including the extension and harmonisation of refreshment offers. Benzina will also work towards boosting customer confidence.

According to market development, the state of fleet modernisation and new technologies of fuel combustion in cars, Benzina petrol stations will continue to improve the range of fuel assortment, premium fuels, CNG and Ad Blue, the environmentally friendly operating fluid.

Investments

The biggest investment project in 2017, which commenced in 2015, was the new polyethylene unit PE3. The unit is expected to be put into operation in late 2018.

Other ongoing investments focused primarily on safety maintenance and operational reliability, compliance with the environmental regulatory requirements, operational efficiency improvements (energy efficiency improvements in particular). The key ongoing investment projects are T700 power station revamp, in UNIPETROL RPA, and the newly approved POX (Partial Oxidation unit) revitalisation program.

No significant scheduled shut-downs were carried out in 2017. The next maintenance upgrade is scheduled for spring 2018 at the Kralupy refinery.

The steam cracker unit's new boiler house construction in Litvínov was the biggest investment project started in 2017.

Investments in the new acquisition, Spolana Neratovice, contributed in terms of approved strategic company revitalisation, with biggest projects related to Ammonium sulphate granulation line, PVC production and utilities availability.

In the logistic area, a successful delivery of a new Vectron and Bizon locomotives was completed.

Looking at the retail segment the majority of investments related to the acquisition and rebranding of petrol stations which the Group acquired from OMV. During 2017, the retail segment also invested in the expansion of the Stop Cafe 2.0 refreshment concept, implemented at 29 petrol stations in total. An investment into new coffee machines was made as well.

Investments in the corporate functions segment were directed mainly at projects of Unipetrol Centre for Research and Education (a subsidiary) and at IT projects. The main goal is to intensify and streamline research and development in the industrial chemistry and environmental technology areas.

Amongst IT projects, it is important to note the ONE SAP project, relating to SAP system implementation (covering UNIPETROL RPA, Česká rafinářská, Benzina and Polymer institute Brno), which was launched at the end of 2017 and will be carried over into 2018.

Unipetrol Group CAPEX overview according to the investment category and business part for the year 2017 and plan for the year 2018 (CZK million)

Investment category/ Business part		Downstream	Retail	Corporate functions	Total
2017	Development	4,123	815	61	4,999
	Maintenance/refurbishment	1,918	98	144	2,161
	Environment	209	0	0	209
	Safety	168	0	4	172
	Total	6,419	913	209	7,541
2018	Development	2,148	550	152	2,851
	Maintenance/refurbishment	2,807	202	215	3,223
	Environment	740	0	0	740
	Safety	303	0	41	344
	Total	5,998	752	408	7,158

Research and development

The three fundamental areas of Unipetrol's development and research are: plastics, petro chemistry, and refinery.

In 2017, the petrochemical and refinery research was performed by Unipetrol Centre for Research and Education, a.s. (UniCRE), while the plastics research and development was carried out by the Polymer Institute Brno (PIB) registered branch.

The results of research and development are applied within technical support for production, preparation of individual strategies, or directly for the purposes of introducing new products in the production portfolio.

In 2017, UniCRE continued with the implementation of NSP (National Sustainability Program) and CATPRO (Large Infrastructures) programs. Following the support of the large research infrastructure (CATPRO), the CATAMARAN project was launched. The main purpose of the project is to complete investments.

Establishing and cultivating cooperation with academic institutions and universities, both in the Czech Republic and abroad: cooperation agreements were signed with workplaces at the CAS (Institute of Physical Chemistry, Institute of Chemical Process Fundamentals) and Universities (University of Pardubice, TUO Ostrava, UJEP). Plans for cooperation were negotiated with universities abroad (Universität Leipzig, SUT Bratislava, VTT Technical Research Centre of Finland, Åbo Akademi University, University of St Andrews).

In the field of education, UniCRE cooperated with the University Centre UCT Prague - Unipetrol in Litvínov, providing facilities for 20 students within the "Auxiliary Scientific Staff" program, and prepared new topics for the Bachelor and Master Theses. It worked with high school students and arranged laboratory exercises for students of the University Centre. UniCRE extended its educational activities and cooperated with secondary schools in (not only) Ústí region. During the last year's school term, 19 tours of the Unipetrol and UniCRE facilities were organised for more than 500 students.

UniCRE projects applications were submitted within the following programs: Ministry of Industry and Trade - program TRIO, Ministry of Education, Youth and Sports - Operational Programme Research, Development and Education, Technology Agency of the Czech Republic – programs Epsilon and Zeta, Ministry of Agriculture of the Czech Republic - program Earth and Grant Agency of the Czech Republic.

During 2017, UniCRE delivered projects for the Technology Agency of the Czech Republic, Grant Agency of the Czech Republic, Ministry of Industry and Trade, Ministry of Education, Youth and Sports, Horizon 2020, Research Fund for Coal and Steel. UniCRE also implemented other activities, which received support from the Ministry of Education, Youth and Sports and the Ministry of Industry and Trade.

UniCRE is considered one of the leaders in the field of applied chemical research in the Czech Republic.

Refining business

Research and development in refining technologies and products focused on two main areas – the production of motor fuels and the processing of residual fractions.

The availability and exploitation of renewable resources in refining operations and motor fuels production will be a key factor for each refinery. The legislative regulation of greenhouse gas emissions and the proportions of renewables in energetic materials are speeding-up the industrial innovations and new technology applications. The previous and long-term research, technological and analytical support of UniCRE helped to complete industrial test-run focused on hydrogenation of used cooking oil in the Litvínov refinery. The investigation of potential raw material sources exploring alternative materials and wastes for motor fuels production purposes also continued in 2017. Moreover, the innovation and development activities in motor fuel component desulphurisation, blending and additivisation successfully continued in 2017.

In 2020, the stricter limit for sulphur content in marine fuels is expected; therefore, the conversion of residual fractions will become an important economical aspect for each refinery. The strategy in this area focuses on decreasing the share of heavy and residual products and a complex processing thereof. A further increase in the production of light products and alternative possibilities of residual fractions processing are emphasised. A rather large proportion of activities focused on feedstock and quality of pavement grade bitumens. Latest rheological, instrumental and analytical methods were developed and further implemented in bitumen investigation.

In the area of projects with public support, the cooperation with UCT Prague aiming at a higher degree of recycling of waste material from road reconstruction was successfully finished.

Together with their research and development activities, UniCRE specialists and experts in the area of refining business actively contributed to the UCT Prague study program both in terms of laboratory work, and by consulting and supervising Bachelor and Master theses.

In the area of new fuel generation, attention was paid to effective exploitation of hydrogen in the refinery-petrochemical complex and its possible use in transport.

Petrochemical business

Olefins and chemicals

Long-term plans in the area of petrochemistry are to improve the quality of the product portfolio and improve production efficiency.

In 2017, the production of foamed polystyrene from light hydrocarbon fractions project was completed.

At the same time, Unipetrol tested the possibility of manufacturing new naphthalene-based chemicals. The main activities were focused on the potential production of decahydronaphthalene and tetrahydronaphthalene. These chemicals have great potential in the production of specialty chemicals and can also serve as a source of hydrogen for alternative applications in transport

Research projects targeted theoretical problems in pyrolysis and explored other possible ways of utilising its secondary products; utilisation of renewable energy sources in petro chemistry; search for a more efficient management and economical improvements of petrochemical production applying modern, instrument-based analytical methods.

Projects covered within the UniCRE institutional financing focused on the issues of selective dehydrogenation of butane and butene to 1,3-butadien and on the use of liquid products from the pyrolysis of waste tires. The results of these constitute the base documents for the preparation of research projects.

Work was carried out on the implementation of development projects focusing on economic and environmental applications of used converters, and a non-trivial amount of work went into the area of energy savings.

New ways for conserving fresh and cooling water and improving its quality have been developed.

Polyolefins

Unipetrol continues to refine its production processes and products. In 2016, research carried out by the Polymer Institute Brno (PIB), registered branch, focused on securing high-quality propylene for the production of polypropylene, on production optimisation, and on the implementation of new catalytic systems meeting the requirements of REACH.

Research in the field of polyethylene focused on two specific areas - preparation of laboratory testing equipment (polymeration lines) for the new INEOS slurry technology, currently under construction in the Záluží facility; and selection of suitable catalytic systems for PE2 and PE3 units in order to prepare documentation for the innovation of the polymer types currently produced at the PE2 unit. Other areas of research included working towards development of selected types of matrices, currently produced at the PE1 unit, whose equivalents are not included in the INEOS license. Due to the customer demand for continued production of these materials even after the termination of production at the PE1 unit, a significant amount of attention is paid to this line of research and development.

The preparation for new production technologies also includes the necessity to develop new testing methods, since the characteristics of bimodal types of polymers differ from standard unimodal polymers significantly.

Documents were prepared for the restoration of certificates for piping materials for the region of Scandinavia, and documents supplied by the PE research Group from PIB were used to prepare a matrix which successfully passed testing in Sweden and thus regained certification for this type of products in the relevant region.

In the area of matrix additives, a test sample for operation tests was prepared based on a formula which is currently in development – the application of this formula in production would lead to significant cost savings.

In 2017, polypropylene production research was mainly focused on non-phthalate catalysts meeting the REACH regulation, which are applicable to the production of specific polypropylene types. Technical support was provided for the construction of new propylene cleaner supplied by external sources. To reduce operating costs, new methods of polypropylene copolymers blend with enhanced properties and current polymers type improvements have been investigated.

Research also focused on the area of additive formulations for polymer products and research in the area of additives/stabilisation of the polymer materials produced.

Research projects also targeted the area of polypropylene and polyethylene production. The projects pursued related to production support, where the polypropylene and polyethylene technology department of PIB worked with the polyolefin production team of UNIPETROL RPA in order to improve the production process and remove technological bottlenecks.

Aside from research activities, PIB also provided UNIPETROL RPA with specialised technical service via its customer support. PIB experts took part in preparing the medium and long-term Unipetrol strategy for polyolefins, too.

Polyethylene research was focused primarily on four broad areas: (i) preparative work related to starting up a new PE 3 unit, (ii) preparation of the background to innovate currently produced polymer grades, (iii) searching for and evaluating new methods to assess polymer resistance against slow crack growth (SCG) for modern bimodal polymer grades (pipes, HMW blow-moulding) and (iv) improving the price/performance balance for additivation formulas of polymer matrices.

(i) Launching the PE3 production unit (Innovene slurry loop polymerisation process) represents a complex set of steps that should be well prepared for, with finalisation of the product range to be produced on PE2 and PE3, including

consideration of the transition or replacement of grades from the currently operating PE1 unit. Evaluation of critical parameters (rheology, FNCT, GPC, etc.) of grades from the licensor's range and other competitors could be helpful in identifying grades that do not meet market standards and would therefore be subject to improvement. Another important part of this activity is completing all the preparative work (design and negotiations with potential manufacturers) before starting construction of the polymerisation centre, which will include polymerisation facilities for testing catalysts in both gas-phase and slurry processes.

(ii) A comprehensive study of commercial catalyst systems (Zn and Cr-based systems are tested in laboratories) started at the beginning of the year with the aim of selecting catalysts that would ensure the innovation of extrusion grades currently produced in the PE1 and PE2 units. The main object of this study is to select a reasonable set of catalysts capable of covering the grades produced in Unipetrol's portfolio. Preparation to replace C6-film grades with C4-film represents another part of our research activity in this field. The first plant trials have already been executed with the intention of preparing grades for premarketing to Unipetrol customers. Laboratory testing of these catalysts provided a selection of systems as candidates for plant trials. The foundations for plant trials are just now in preparation.

(iii) Intensive study of several techniques currently used to evaluate polymer resistance against Slow Crack Growth Propagation is another topic of our research. Since the characteristics of bimodal polymer types significantly differ from standard unimodal polymers, it is necessary to develop other testing methods. Another reason for this is that the FNCT testing method for modern bimodal polymers only provides results after as much as 10 000 hours. The aim is to obtain results in a shorter time.

(iv) At the request of certain clients, new additivation packages development formed a part of this research, while another relates to the aim of implementing our proprietary formula – allowing significant cost savings – into commercial production.

Chezacarb

Last year, the application of conductive Chezacarb soot in paint materials received technical support. A start-up project using Chezacarb in undercoats for conductive materials began. The existing as well as potential new applications of Chezacarb in polyolefin materials produced by UNIPETROL RPA and in plastics engineering were investigated in 2017.

Employees

Unipetrol Group considers human resources to be one of the key driving forces of every company. It strives to create a pleasant working environment for its employees, so allowing them to deliver the best results and therefore support the positive development of the whole Group.

Unipetrol Group was one of the biggest companies in the region with its 4,710 employees in 2017.

Total number of employees of Unipetrol Group (persons) as of 31 December 2017

Company	2017
UNIPETROL RPA, s.r.o. - BENZINA	78
Butadien Kralupy a.s. (51%) ¹	10
UNIPETROL RPA, s.r.o. – RAFINÉRIE	486
PARAMO, a.s.	450
PETROTRANS, s.r.o.	141
UNIPETROL RPA, s.r.o. - POLYMER INSTITUTE BRNO	98
UNIPETROL, a.s.	11
UNIPETROL DEUTSCHLAND GmbH	16
UNIPETROL DOPRAVA, s.r.o.	408
UNIPETROL RPA, s.r.o.	2,166
UNIPETROL SLOVENSKO s.r.o.	25
Unipetrol výzkumně vzdělávací centrum, a.s.	119
UNIPETROL RPA Hungary Kft.	9
SPOLANA a.s.	683
HC VERVA Litvínov, a.s.	10
TOTAL	4,710²

¹ Number of employees in Butadien Kralupy a.s. (100%) was 19.5.

² Inclusive of non-active employees

Employees' education and training

The training of Unipetrol Group's employees in 2017 was influenced mainly by the ongoing generational change. Unipetrol RPA's primary focus was on the process of succession and individual development of current employees related to that. In 2017, employee education focused on the training and development within the "Operator in training" and "Graduate" programs. Unipetrol Group training focused on training and development of internal lecturers and mentors. During 2017, Unipetrol also launched the Talent program.

As every year, the company organised, for its employees, corporate training sessions. The employees received mandatory training, professional or vocational seminars, and foreign language courses. Some employees also attended trainings financed by European funds.

HR policy

Unipetrol Group adopted its current HR policy in 2013, which determines the development in the area of HR for years 2013–2017.

The Group Strategy focuses on developing an integrated company producing and selling fuels and energy with a diversified asset structure. Realisation of these ambitious objectives requires strong management and highly qualified employees who will be able to fulfil the strategic objectives and ensure effective management of upcoming changes.

Strategic directions in HR policy

The corporate culture of Unipetrol is based on values listed below, adopted and applied in Unipetrol as well as in other companies of the capital Group of PKN ORLEN:

- Responsibility
- Progress
- People
- Energy
- Dependability

Based on this new corporate culture, HR supports managers in dealing with matters pertaining to personnel operations. In the area of segment management, the HR department takes steps aiming at the highest possible synergies.

The HR department introduces processes and means which suit the needs of business, support the implementation of the Strategy (especially in areas such as downstream and energy) and also take social conditions into consideration. The HR department's activities focus on:

- an efficient recruitment and adaptation process which facilitates the selection of employees with desirable competencies
- targeted professional development of employees, which supports strengthening of competencies desired within the Group companies
- a systematic approach to knowledge accumulation and exchange within the Group
- promotion of mobility, exchange of experience on an intercultural level
- remuneration policy which allows recruitment of new employees and influences their motivation and commitment

The HR department is responsible for a steady increase in the efficiency of HR processes within the Group and introduction of advanced and innovative solutions, while taking into account cost optimisation.

Financial standing

Consolidated statement of profit or loss and other comprehensive income

The Group's revenues for the year 2017 amounted to CZK 122,478 million and were 39% higher than in the year 2016, mainly due to restored production capacities and higher prices of the final products.

The Group's profit from operations of CZK 12,045 million on EBIT level for 2017 was achieved thanks to its stable operation and favourable macro environment. The Group recognised the one-off insurance income to the amount of CZK 2,754 million in connection with the Steam cracker unit accident and of CZK 1,320 million in respect of the Fluid Catalytic Cracking unit accident.

The Group's net profit reached the level of CZK 8,659 million at the end of the year.

Consolidated statement of financial position

As of December 31, 2017, non-current assets of Unipetrol Group amounted to CZK 37,501 million. In 2017, the Group acquired tangible and intangible assets worth CZK 7,541 million.

Most investments were done in the downstream segment CZK 6,419 million, followed by investments in the retail segment CZK 913 million.

As of December 31, 2017, total current assets amounted to CZK 38,343 million, an increase of CZK 1,960 million since previous year, mainly due to an increase of cash pool balance in the amount of CZK 2,536 million presented under Other financial assets. Compare to 31 December 2016, the inventories increased by CZK 1,258 million due to higher crude oil prices. The Trade and other receivables decreases by CZK 1,743 million mainly due to payment of the insurance compensation recognised as at December 31, 2016, in the amount of CZK 1,355 million.

Total equity has risen by CZK 8,243 million, to CZK 49,864 million during the year, stemming mainly from net profit reached in the year 2017 in the amount of CZK 8,658 million compensated by the approved dividend of CZK 1,505 million.

As at December 31, 2017, Current liabilities were lower by CZK 1,443 million from its December 31, 2016 position due to, among others, a decrease in investment liabilities by CZK 1,524 million.

Consolidated statement of cash flows

Net cash provided by the Group's operating activities amounted to CZK 11,791 million in 2017, which were used in the investment activities resulting in a cash outflow of CZK 10,739 million driven by very high investment expenditures. Financing activities resulted in a cash outflow of CZK 1,480 million driven by dividend payment to shareholders amounting to CZK 1,525 million.

The Group's financial position was still very strong at the end of 2017 as the net cash amounted to CZK 2,233 million and financial gearing, defined as the ratio of net debt and equity, amounted to (-) 4.6%.

Revenues

Trends in revenues for own products and services

	2017	2016	2015	2014	2013
	CZK million				
Revenues	122,478	87,813	108,907	123,938	99,415

The Group's revenues for the year 2017 amounted to CZK 122,478 million and were 39% higher than in the year 2016, higher sales volumes by 1,472 thousand tones.

Structure of revenues by business segments

Business segment	2017	2016	2015	2014	2013
	Revenues in %				
Downstream	90	89	91	91	89
Retail	10	10	9	9	11

In 2017, the external sales of the downstream segment increased by CZK 31,136 million compared with the previous year and reached the level of CZK 109,679 million. This increase caused due to restored production capacities and higher prices of the final products.

The external sales of the retail segment in 2017 reached CZK 12,653 million and were higher by CZK 3,548 million compared to the previous year due to higher sales volumes of both, fuel and non-fuel sales.

Structure of sales revenues by area

Area	2017	2016	2015	2014	2013
	Revenues in %				
Czech Republic	66	68	64	67	69
Other European countries	31	30	35	31	29
Other countries	3	2	2	2	2

Compared to 2016, the territorial structure of the Group's revenues remained stable with the majority of sales directed toward EU countries.

Separate profit /loss and dividends, UNIPETROL, a.s.

(CZK million)	2017	2016	2015	2014	2013
Profit for distribution	(29)	47	2,143	328	938
Allocation to the reserve fund	--	--	--	--	47
Number of profit-bearing shares	181,334,764	181,334,764	181,334,764	181,334,764	181,334,764
Profit/loss per share (CZK/share)	(0.16)	0.26	11.82	1.81	5.17
Dividend per share (CZK/share)	-- ¹	8.30	5.52	--	--
Total for distribution	--	47	2,143	328	891
Profit brought forward as of 31 December	7,705	9,239	10,193	6,331	6,050

¹ The decision on the distribution of the profit 2017 will be made at the Annual General Meeting

Dividend policy:

The company aims to secure a safe financial situation and systematically increase its dividend pay-out per share. The Board of Directors makes a proposal. A decision on how to allocate the unconsolidated profits is made during the General Meeting, held on an annual basis, which is not bound to respect the proposal of the Board.

Property, plant and equipment

UNIPETROL, a.s., owns most of the land within the production facilities situated in the district area of Kralupy nad Vltavou and Litvínov. A major part of this land is situated underneath its subsidiaries' production facilities and underneath the production facilities of SYNTHOS Kralupy, a.s. UNIPETROL, a.s. also owns several plots of land outside these production facilities, a part of which is used by its subsidiaries and SYNTHOS Kralupy, a.s., for their activities, such as landfills, roads, location of product pipelines etc.

The total area of land owned by UNIPETROL, a.s., within the cadastres of Kralupy nad Vltavou and Litvínov is approximately 2, 496 million sq m and approximately 8, 875 million sq m, respectively.

As a non-production company, UNIPETROL, a.s. does not own any buildings or equipment on this land, neither does it have any oil fields or natural gas production sources of its own. The property, plant and equipment on UNIPETROL, a.s.' land are owned and operated predominantly by its subsidiaries that have their operations in the industrial facilities. To a lesser extent, other entities not belonging to Unipetrol Group are the owners or tenants of this property, plant or equipment where the subsidiaries have no use for such assets. SYNTHOS Kralupy, a.s. (previously KAUCUK, a.s.), which is no longer part of Unipetrol Group, is the main owner of buildings and equipment on these premises located in chemical production facilities in Kralupy nad Vltavou.

An agreement benefiting SYNTHOS Kralupy, a.s., on the pre-emptive rights to specific in Chemical Production Complex Kralupy land used for its activities was executed on the basis of the agreement on the sale of KAUCUK, a.s., to the new owner, Firma Chemiczna Dwory S.A., Republic of Poland. The pre-emptive rights are registered in the Land Register.

Tangible assets are described in detail in the Notes to the Consolidated Financial Statements. The land owned by UNIPETROL, a.s., is not encumbered by any liens.

The land is zoned for industrial activities and its use is governed by easement agreements executed between the owner of the land, UNIPETROL, a.s., and the companies operating on both cadastral areas. The easements are provided for a consideration.

Capital resources

The Group's operational financing is provided mainly at the level of the parent company UNIPETROL, a.s., using resources available within existing cash pools or operational loans provided by reputable banks.

The total amount of credit lines originating from these contracts is CZK 10,850 million (including a separate credit line for UNIPETROL RPA of CZK 150 million in total). Out of the amount, CZK 9,734 million may be drawn in the form of bank overdrafts.

As part of the operational financing of the parent company, UNIPETROL, a.s., bank guarantees of CZK 2,001 million were provided for UNIPETROL RPA's liabilities (worth CZK 886 million), Spolana's liabilities (worth CZK 51 million), Paramo's liabilities (worth CZK 381 million), Unipetrol PRA Hungary's liabilities (worth CZK 148 million) and Unipetrol Slovensko's liabilities (worth CZK 535 million).

Additional bank guarantees were provided within the Group of UNIPETROL RPA (worth CZK 53.5 million).

Besides, UNIPETROL, a.s., issued parent company guarantees for UNIPETROL RPA, s.r.o., and SPOLANA a.s. to secure excise tax and liabilities from the contracts in place.

Risk management

Risk management in the Group is addressed primarily in the "Financial Risk Management Policy" and "Market Risk Management Policy". These documents define the rules and recommendations regulating the financial management activities in Unipetrol Group companies.

The documents create a set of rules and recommendations for risk management, and aim to provide a formal framework for treasury operations. Appendices to these documents set out the credit limits for counterparties, dealers' competencies, permitted transactions and the tools for which special permission is required.

The documents define the permissions for each of the Treasury departments and, as the case may be, for the authorised financial management department of UNIPETROL RPA to carry out activities relating to associated (underlying) risks and

reducing financial and commodity risks for the Group companies while meeting the conditions defining hedging operations from the IFRS perspective.

The applicable financial risk management policy is based on the principle that the Group companies act as conservative entities which on no account use their funds or positions for speculative purposes.

Explanation on the use of alternative performance measures

Indicator	Definition	Purpose	Reconciliation		
EBITDA	Operating profit/(loss) + depreciation and amortisation	The indicator shows operating performance of the company. It allows comparing with other companies because it does not depend on the accounting depreciation method, capital structure or tax regime.	<i>see note 3.1. of the notes to the consolidated financial statements</i>		
EBITDA LIFO	Operating profit/(loss) + depreciation and amortisation + LIFO effect	The indicator shows operating performance of the company and additionally it shows the impact of the change in the crude oil price. Using the LIFO methodology for inventory valuation (Last-In-First-Out).	<i>in CZK m</i>	for year 2016	for year 2017
			EBITDA	11,928	14,954
			LIFO effect	109	(137)
			EBITDA LIFO	12,037	14,817
EBIT	Operating profit/(loss)	The indicator shows operating performance of the company without the influence of the company's capital structure and taxation. It allows monitoring of revenues and expenses on the operational level.	<i>see note 3.1. of the notes to the consolidated financial statements</i>		
EBIT LIFO	Operating profit/(loss) + LIFO effect	The indicator shows operating performance of the company without the influence of the company's capital structure and taxation and additionally it shows the impact of the change in the crude oil price. Using the LIFO methodology for inventory valuation (Last-In-First-Out).	<i>in CZK m</i>	for year 2016	for year 2017
			EBIT	9,897	12,045
			LIFO effect	109	(137)
			EBIT LIFO	10,006	11,908
Free cash flow (FCF)	Net cash flow from operating activities + net cash used in investing activities	The indicator measures the financial performance of the company. It shows what amount of cash is the company able to generate after deducting the capital expenses.	<i>see Consolidated statement of cash flows</i>		
Net working capital	Inventories + trade and other receivables - trade and other liabilities	The indicator shows how much operating funds remains available to the company when all its short-term obligations are paid. It allows measuring of short-term financial health of the company.	<i>see note 19.7.3. of the notes to the consolidated financial statements</i>		
Net debt / net cash	Non-current loans and borrowings + current loans and	The indicator shows the financial debt less cash and cash equivalents. It	<i>see note 19.7.1. of the notes to the consolidated financial statements</i>		

	borrowings + cash pool liabilities - cash and cash equivalents	allows assessing the overall indebtedness of the company, i.e. ability of the company to pay all its debts if they were payable at the same time using only the available cash and cash equivalents.																												
Net debt / (equity – hedging reserve)	Net debt / (total equity – hedging reserve) x 100%	The indicator shows the financial debt in proportion to the equity less the hedging reserve (the amount of the hedging reserve results from the valuation of derivatives meeting the requirements of cash flow hedge accounting). It allows monitoring the company's debt level.	<p><u>Net debt</u> see note 19.7.1. of the notes to the consolidated financial statements</p> <p><u>Equity</u> see Consolidated statement of financial position</p> <p><u>Hedging reserve</u> see Consolidated statement of financial position</p>																											
Net debt / EBITDA	Net debt / EBITDA, where the EBITDA indicator is adjusted for extraordinary (one-off) items, which do not relate to the ordinary economic activity.	The indicator measures the company's ability to pay its debt. The indicator shows approximately in how long is the company able to pay back its debt out of its normal source of operating cash flow.	<p><u>Net debt</u> see note 19.7.1. of the notes to the consolidated financial statements</p> <p><u>EBITDA</u> see note 3.1. of the notes to the consolidated financial statements</p>																											
			<table border="1"> <thead> <tr> <th><i>in CZK m</i></th> <th>for year 2016</th> <th>for year 2017</th> </tr> </thead> <tbody> <tr> <td>EBITDA</td> <td>11,928</td> <td>14,954</td> </tr> <tr> <td>gain on acquisition</td> <td>-</td> <td></td> </tr> <tr> <td>impairment of the steam cracker unit</td> <td>-</td> <td></td> </tr> <tr> <td>other expenses incurred in the relation to the steam cracker unit accident</td> <td>-</td> <td></td> </tr> <tr> <td>impairment allowance of the downstream segment assets reversal</td> <td>(1,919)</td> <td></td> </tr> <tr> <td>EBITDA</td> <td>10,009</td> <td>14,954</td> </tr> <tr> <td>Net debt</td> <td>(2,757)</td> <td>(2,233)</td> </tr> <tr> <td>Net debt / EBITDA</td> <td>(0.3)</td> <td>(0.2)</td> </tr> </tbody> </table>	<i>in CZK m</i>	for year 2016	for year 2017	EBITDA	11,928	14,954	gain on acquisition	-		impairment of the steam cracker unit	-		other expenses incurred in the relation to the steam cracker unit accident	-		impairment allowance of the downstream segment assets reversal	(1,919)		EBITDA	10,009	14,954	Net debt	(2,757)	(2,233)	Net debt / EBITDA	(0.3)	(0.2)
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Capital expenditures (CAPEX)	Additions to non-current asset.	The indicator shows the additions to non-current assets of the company for the period. It allows monitoring of investing activities of the company.	see note 3.1. of the notes to the consolidated financial statements																											