



PJSC LUKOIL

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL
CONDITION AND RESULTS OF OPERATIONS**

**for the three-month periods ended
30 June and 31 March 2019
and six-month periods ended
30 June 2019 and 2018**

The following report contains a discussion and analysis of the financial position of PJSC LUKOIL at 30 June 2019 and the results of its operations for the three-month periods ended 30 June and 31 March 2019 and six-month periods ended 30 June 2019 and 2018, as well as significant factors that may affect its future performance. It should be read in conjunction with our International Financial Reporting Standards (“IFRS”) condensed interim consolidated financial statements for the respective periods, including notes.

References to “LUKOIL,” “the Company,” “the Group,” “we” or “us” are references to PJSC LUKOIL and its subsidiaries and equity affiliates. All ruble amounts are in millions of Russian rubles (“RUB”), unless otherwise indicated. Income and expenses of our foreign subsidiaries were translated to rubles at rates, which approximate actual rates at the date of the transaction. Tonnes of crude oil and natural gas liquids produced were translated into barrels using conversion rates characterizing the density of crude oil from each of our oilfields and the actual density of liquids produced at our gas processing plants. Hydrocarbon extraction expenses per barrel were calculated using these actual production volumes. Other operational indicators expressed in barrels were translated into barrels using an average conversion rate of 7.33 barrels per tonne. Translations of cubic meters to cubic feet were made at the rate of 35.31 cubic feet per cubic meter. Translations of barrels of crude oil into barrels of oil equivalent (“BOE”) were made at the rate of 1 barrel per BOE and of cubic feet – at the rate of 6 thousand cubic feet per BOE.

This report includes forward-looking statements – words such as “believes,” “anticipates,” “expects,” “estimates,” “intends,” “plans,” etc. – that reflect management’s current estimates and beliefs, but are not guarantees of future results.

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Business overview

The primary activities of LUKOIL and its subsidiaries are hydrocarbon exploration, production, refining, marketing and distribution.

LUKOIL is one of the world's largest publicly traded vertically integrated energy companies. Our proved reserves under SEC standards amounted to 15.9 billion BOE at 1 January 2019 and comprised of 12.1 billion barrels of crude oil and 23.1 trillion cubic feet of gas. Most of our reserves are conventional. We undertake exploration for, and production of, crude oil and natural gas in Russia and internationally. In Russia, our major oil producing regions are West Siberia, Timan-Pechora, Ural and Volga region. Our international upstream segment includes stakes in PSA's and other projects in Kazakhstan, Azerbaijan, Uzbekistan, Romania, Iraq, Egypt, Ghana, Norway, Cameroon, Nigeria and Mexico. Our daily hydrocarbon production in the first half of 2019 amounted to 2.4 million BOE, with liquid hydrocarbons representing approximately 76% of our overall production volumes.

LUKOIL has geographically diversified downstream assets portfolio primarily in Russia and Europe. Our downstream operations include crude oil refining, petrochemical and transport operations, marketing and trading of crude oil, natural gas and refined products, power generation, transportation and sales of electricity, heat and related services.

We own and operate four refineries located in European Russia and three refineries located outside Russia – in Bulgaria, Romania, and Italy. Moreover, we have a 45% interest in the Zeeland refinery in the Netherlands. We also own two petrochemical plants in Russia and have petrochemical capacities at our refineries in Bulgaria and Italy. Along with our own production of refined products, we refine crude oil at third party refineries depending on market conditions and other factors. Throughput at our refineries in the first half of 2019 amounted to 1.4 million barrels per day, and we produced 0.6 million tonnes of petrochemicals.

We market our own and third-party crude oil and refined products through our sales channels in Russia, Europe, South-East Asia, Central and North America and other regions. We own petrol stations in 18 countries. Most of our retail networks are located close to our refineries. Our retail sales in the first half of 2019 amounted to 6.8 million tonnes of refined products.

We are involved in production, distribution and marketing of electrical energy and heat both in Russia and internationally. In the first half of 2019, our total output of electrical energy was 9.2 billion kWh.

Our operations and finance activities are coordinated from our headquarters in Moscow. We divide our operations into three main business segments: "Exploration and production," "Refining, marketing and distribution," and "Corporate and other".

Key financial and operational results

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
	(millions of rubles)					
Sales.....	2,125,552	1,850,933	14.8	3,976,485	3,686,786	7.9
EBITDA ¹ , including.....	332,170	298,057	11.4	630,227	514,675	22.5
Exploration and production segment.....	235,074	235,132	-	470,206	411,617	14.2
Refining, marketing and distribution segment.....	93,167	79,938	16.5	173,105	118,469	46.1
EBITDA ¹ net of West Qurna-2 project.....	324,376	292,945	10.7	617,321	502,643	22.8
Profit for the period attributable to LUKOIL shareholders.....	181,245	149,236	21.4	330,481	276,380	19.6
Capital expenditures.....	107,555	97,421	10.4	204,976	226,834	(9.6)
Free cash flow ²	162,363	145,903	11.3	308,266	183,107	68.4
Free cash flow before changes in working capital.....	189,466	183,337	3.3	372,803	250,960	48.6
	(thousand BOE per day)					
Production of hydrocarbons, including our share in equity affiliates.....	2,355	2,407	(2.2)	2,381	2,316	2.8
crude oil and natural gas liquids.....	1,813	1,820	(0.4)	1,817	1,792	1.4
gas.....	542	587	(7.7)	564	524	7.6
Refinery throughput at the Group refineries.....	1,355	1,358	(0.2)	1,356	1,330	2.0

¹ Profit from operating activities before depreciation, depletion and amortization.

² Cash flow from operating activities less capital expenditures.

Compared to the first quarter of 2019, our results were positively impacted by an increase in hydrocarbon prices, bigger share of high-margin volumes in our domestic crude oil production structure, an increase in domestic refining margins and better profitability of our retail business, as well as a release of inventories accumulated in the first quarter of 2019. Among the restraining factors affecting the second quarter of 2019 results were a decline in international gas production volumes, the effect of the ruble appreciation, as well as a negative inventory effect at our refineries and export duty and mineral extraction tax lag effects.

Compared to the first half of 2018, our results improved due to growth in volumes of production of crude oil in Russia and gas outside Russia, an increase in share of high-margin volumes in our domestic crude oil production structure, the effect of the ruble devaluation, an implementation of a tax on additional income from the hydrocarbon production at certain fields, as well as better profitability of our retail and trading businesses. Our results dynamics was negatively affected by a decrease in international hydrocarbon prices and European refining margins.

From 1 January 2019, the Company adopted IFRS 16 “Leases” that had a positive impact on our EBITDA in the first half of 2019 in the amount of 17.5 billion RUB, on our profit for the period in the amount of 4.9 billion RUB, and on our free cash flow in the amount of 22.8 billion RUB.

Our EBITDA amounted to 332 billion RUB in the second quarter of 2019, an increase of 11.4% to the first quarter of 2019, and amounted to 630 billion RUB in the first half of 2019, an increase of 22.5% to the first half of 2018.

Our depreciation, depletion and amortization expenses increased compared to the first half of 2018 mainly as a result of the adoption of IFRS 16 “Leases”, as well as due to an increase in gas production.

In the second quarter of 2019, profit attributable to LUKOIL shareholders amounted to 181 billion RUB, an increase of 21.4% to the first quarter of 2019. In the first half of 2019, profit attributable to LUKOIL shareholders amounted to 330 billion RUB, an increase of 19.6% to the first half of 2018.

Our capital expenditures increased by 10 billion RUB, or by 10.4%, compared to the first quarter of 2019, and decreased by 22 billion RUB, or by 9.6%, compared to the first half of 2018.

In the second quarter of 2019, our free cash flow amounted to 162 billion RUB, an increase of 11.3% compared to the first quarter of 2019, and amounted to 308 billion RUB in the first half of 2019, an increase of 68.4% to the first half of 2018. This was mainly due to an increase in profitability of our core operations.

The Group’s average daily hydrocarbon production decreased by 2.2% compared to the first quarter of 2019, which was attributable to a decrease in gas production in Uzbekistan and external limitations of Russian companies’ crude oil production volumes, and increased by 2.8% compared to the first half of 2018, driven primarily by growth in gas production in Uzbekistan.

Compared to the first quarter of 2019, throughput at our refineries didn’t change significantly, and increased by 2.0% compared to the first half of 2018.

Changes in accounting policies

The Group adopted IFRS 16 “Leases” (“IFRS 16”) from 1 January 2019, which introduced a single, on-balance sheet lease accounting model for lessees. Under IFRS 16, a contract is, or contains, a lease if it conveys a right to control the use of an identified asset for a period of time in exchange for consideration. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short-term leases and leases of low value items.

The Group applied IFRS 16 using the modified retrospective approach by one-off recognition of non-current assets and financial liabilities of 162 billion RUB at 1 January 2019 measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate as at 1 January 2019.

Primarily the Group leases such assets as transport (vessels, tank cars), land, drilling rigs and other equipment, storage facilities. The lease typically runs for a period of 3–5 years. Some leases include an option to renew the lease for additional period after the end of the non-cancellable period. The Group has applied judgement to determine the lease term for some lease contracts in which it is a lessee that includes renewal option. Moreover, in determining the lease term the Group also took into account economic factors, which influence asset usage duration in its activity.

The nature of expenses related to new assets and liabilities recognized for operating leases will now change because the Group will recognize a depreciation charge for right-of-use assets and interest expense on lease liabilities. Previously the Group recognized lease expenses on a straight-line basis over the term of the lease, and recognized assets and liabilities only to the extent that there was a timing difference between actual lease payments and the expense recognized.

Adoption of IFRS 16 in the first half of 2019 had the following effects on the Group's financial statements.

Our operating, transportation and selling, general and administrative expenses decreased by 3.3 billion RUB, 9.7 billion RUB and 4.5 billion RUB, respectively. Our depreciation expenses, finance costs and income tax expenses increased by 15.4 billion RUB, 3.4 billion RUB and 0.9 billion RUB, respectively. The Group also recognized a foreign exchange gain of 7.2 billion RUB related to certain lease liabilities in foreign currencies. As a result, our EBITDA increased by 17.5 billion RUB, our profit for the period attributable to LUKOIL shareholders increased by 4.9 billion RUB and our free cash flow increased by 22.8 billion RUB.

At the same time, our debt at 30 June 2019 increased by 142.0 billion RUB.

Changes in Group structure

In the second quarter of 2019, a Group company entered into a contract with New Age M12 Holdings Limited to acquire a 25% interest in the Marine XII license in the Republic of Congo (Congo, Brazzaville) for \$800 million, of which \$60 million were paid as security deposit. The transaction is subject to customary conditions, including approval by the government of the Republic of Congo.

Main macroeconomic factors affecting our results of operations

International crude oil and refined products prices

The price at which we sell crude oil and refined products is the primary driver of the Group's revenues.

The dynamics of our realized prices on international markets generally matches the dynamics of commonly used spot benchmarks such as Brent crude oil price, however our average prices are usually different from such benchmarks due to different delivery terms, quality mix, as well as specifics of regional markets in case of petroleum product sales.

In the first half of 2019, the price for Brent crude oil fluctuated between \$50 and \$75 per barrel, reached its maximum of \$74.7 at the middle of May and its minimum of \$50.2 in early January. Average price expressed in US dollars increased by 9.4% compared to the first quarter of 2019, and decreased by 6.4% compared to the first half of 2018.

The following tables show the average crude oil and refined product prices.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(US dollars per BOE)					
Brent crude	68.94	63.05	9.4	66.01	70.54	(6.4)
Urals crude (CIF Mediterranean).....	68.29	63.33	7.8	65.82	68.95	(4.5)
Urals crude (CIF Rotterdam).....	67.75	62.82	7.8	65.30	68.68	(4.9)
	(US dollars per tonne)					
Diesel fuel 10 ppm (FOB Rotterdam).....	610.38	587.57	3.9	599.04	624.96	(4.1)
High-octane gasoline (FOB Rotterdam)	684.09	548.36	24.8	616.60	678.55	(9.1)
Naphtha (FOB Rotterdam)	524.53	492.07	6.6	508.39	600.77	(15.4)
Jet fuel (FOB Rotterdam)	646.47	620.51	4.2	633.56	676.63	(6.4)
Vacuum gas oil (FOB Rotterdam)	490.82	426.06	15.2	458.62	489.01	(6.2)
Fuel oil 3.5% (FOB Rotterdam)	387.74	376.25	3.1	382.03	377.43	1.2

Source: Platts.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(rubles per BOE)					
Brent crude	4,451	4,169	6.8	4,313	4,187	3.0
Urals crude (CIF Mediterranean).....	4,408	4,188	5.3	4,301	4,092	5.1
Urals crude (CIF Rotterdam).....	4,374	4,154	5.3	4,267	4,077	4.7
	(rubles per tonne)					
Diesel fuel 10 ppm (FOB Rotterdam).....	39,405	38,854	1.4	39,140	37,094	5.5
High-octane gasoline (FOB Rotterdam)	44,164	36,262	21.8	40,288	40,274	-
Naphtha (FOB Rotterdam)	33,863	32,539	4.1	33,217	35,658	(6.8)
Jet fuel (FOB Rotterdam)	41,735	41,032	1.7	41,396	40,160	3.1
Vacuum gas oil (FOB Rotterdam)	31,686	28,174	12.5	29,966	29,025	3.2
Fuel oil 3.5% (FOB Rotterdam)	25,032	24,880	0.6	24,961	22,402	11.4

Translated to rubles using average exchange rate for the period.

Domestic crude oil and refined products prices

Most of the crude oil in Russia is produced and then refined or exported by vertically integrated oil companies. As a result, there is no liquid spot market for crude oil in Russia and no publicly available spot price benchmark. Domestic prices may deviate significantly from export netbacks and they also vary between different regions of Russia driven by supply-demand balance on regional markets.

Domestic prices for refined products correlate to some extent with export netbacks, but are also materially affected by supply-demand balance on regional markets.

The table below represents average domestic wholesale prices for refined products for the respective periods.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(rubles per tonne)					
Diesel fuel.....	40,092	39,791	0.8	39,942	39,149	2.0
High-octane gasoline (Regular).....	39,046	35,965	8.6	37,506	39,216	(4.4)
High-octane gasoline (Premium)	41,886	36,924	13.4	39,405	39,985	(1.5)
Fuel oil.....	16,855	16,014	5.3	16,434	13,694	20.0

Source: InfoTEK (excluding VAT).

Crude oil extraction tax rate is calculated on a monthly basis. Crude oil extraction tax is payable in rubles per metric tonne extracted. The tax rate is calculated according to the formula below:

$$\text{Rate} = 919 \times (\text{Price} - 15) \times \frac{\text{Exchange Rate}}{261} - \text{Incentive} + \text{Fixed Factor} \\ + \text{Tax Manoeuvre Factor} + \text{Damper Factors},$$

where *Price* is a Urals blend price in US dollars per barrel and *Exchange Rate* is an average ruble exchange rate to US dollar during the period. The *Incentive Factor* represents incentives discussed further in this section. The *Fixed Factor* is presented in the table below. The *Tax Manoeuvre Factor* is derived as Export duty reduction factor multiplied by the base export duty rate. The *Damper Factors* are applicable when the corresponding components of a negative excise formula are positive.

The table below sets out key fixed components of the extraction tax formula for crude oil.

	2018	1 January to 30 September 2019	1 October to 31 December 2019	2020	2021	2022	2023	2024 and further
Export duty rate reduction Factor	-	0.167	0.167	0.333	0.500	0.667	0.833	-
				(rubles)				
Fixed Factor.....	357	428	428	428	428	-	-	-
Damper Factor for gasoline	-	125	200	105	105	105	105	105
Damper Factor for diesel fuel	-	110	185	92	92	92	92	92

From 2020, a new variable Damper Factor will be added to the formula in addition to the fixed factors.

There are different types of tax incentives on the mineral extraction tax on crude oil applied to our fields and deposits:

- A special reducing coefficient is applied to the standard tax rate depending on location, depletion, type of reserves, size and complexity of a particular field. This type of incentive with different coefficients is applied to our highly depleted fields (more than 80% depletion), our Yu. Korchagin field located in the Caspian offshore, the Permian layers of our Usinskoye field in Timan-Pechora producing high-viscous crude oil, our Pyakyakhinskoye field located in the Yamal-Nenets Autonomous region of West Siberia (starting from 2019, the field is subject to a tax on additional income from hydrocarbon production), a number of fields in the Nenets Autonomous region, as well as to our new small-sized fields (recoverable reserves less than 5 million tonnes) and fields and deposits with low permeability like V.N. Vinogradov and Imilorskoye fields and Tyumen deposits;
- A fixed tax rate of 15% of the Urals price is applied to our V. Filanovsky offshore field, located in the Caspian offshore;
- A fixed tax rate of 30% of the Urals price is applied to our offshore greenfields, located in the Baltic Sea;
- A reduced tax rate is applied to our Yaregskoye field producing extra-viscous crude oil, as well as to certain unconventional deposits.

Some of the mineral extraction tax incentives are limited in time or by cumulative oil production volumes.

The table below illustrates the impact of tax incentives on taxation of crude oil production from different fields and deposits in our portfolio at \$50 per barrel Urals price.

	Mineral extraction tax	Export duty (in US dollars per barrel)	Total	As % of oil price
Under 2019 tax formulas				
Standard	20.2	9.6	29.8	59.6
Yaregskoye field	0.7	0.9	1.6	3.3
Yu. Korchagin field.....	8.0	0.0	8.0	16.0
V. Filanovsky field.....	7.5	0.0	7.5	15.0
Usinskoye (Permian layers).....	9.9	9.6	19.5	39.0
V. Vinogradov and Imilorskoe fields	12.0	9.6	21.6	43.1
Fields with depletion above 80%	13.0–20.2	9.6	22.6–29.8	45.2–59.6
New fields with reserves below 5 million tonnes.....	13.8–20.2	9.6	23.4–29.8	46.7–59.6
Tyumen deposits	18.1	9.6	27.7	55.5

Tax on additional income. Starting from 2019, a tax on additional income from the hydrocarbon production (hereinafter TAI) has been implemented for certain license areas. The TAI rate is set at 50% and is applied to the estimated sales revenue less actual and estimated costs, where actual costs include both operating expenses and capital expenditures. Moreover, TAI tax base may be reduced by the historical cumulative losses attributable to the license area. For crude oil production subject to TAI, a special mineral extraction tax rate formula is applied. The special mineral extraction tax rate (in US dollars per barrel) equals to 50% of the difference between Urals oil price and \$15 less the enacted export duty rate.

TAI is implemented for four groups of license areas. In Group 1, LUKOIL has nineteen license areas with greenfields in new regions, including Pyakyakhinskoye field, and a number of fields in Timan-Pechora with total crude oil production of 886 thousand tonnes in the first half of 2019. In Group 3, LUKOIL has eight license areas with brownfields in West Siberia with total crude oil production of 1,411 thousand tonnes in the first half of 2019. In Group 4, LUKOIL has two license areas with greenfields in traditional regions (West Siberia) with total crude oil production of 18 thousand tonnes in the first half of 2019.

TAI has significant positive impact on development plans for, and production profile of, the Company's license areas subject to TAI.

Crude oil export duty rate is denominated in US dollars per tonne of crude oil exported and is calculated by multiplying the base export duty rate calculated on a monthly basis by the adjusting factor from tables below.

International Urals price	Base export duty rate
Less than, or equal to, \$109.5 per tonne (\$15 per barrel)	\$0 per tonne
Above \$109.5 but less than, or equal to, \$146.0 per tonne (\$20 per barrel)	35% of the difference between the actual price and \$109.5 per tonne (or \$0.35 per barrel per each \$1 increase in crude oil price over \$15 per barrel)
Above \$146.0 but less than, or equal to, \$182.5 per tonne (\$25 per barrel)	\$12.78 per tonne plus 45% of the difference between the actual price and \$146.0 per tonne (or \$1.75 plus \$0.45 per barrel per each \$1 increase in crude oil price over \$20 per barrel)
Above \$182.5 per tonne (\$25 per barrel)	\$29.2 per tonne plus 30% of the difference between the actual price and \$182.5 per tonne (or \$4 plus \$0.3 per barrel per each \$1 increase in crude oil price over \$25 per barrel)

	2018	2019	2020	2021	2022	2023	2024 and further
Adjusting factor	-	0.833	0.667	0.5	0.333	0.167	0

The rate for the next month is being based on average Urals price for the period from the 15th day of the previous month to the 14th day of the current month. This calculation methodology results in the so-called "export duty lag effect," when export duty rate lags the oil price changes, which may result in sizeable impact on our financial results in the periods of high oil price volatility. As a result of the tax manoeuvre, the lag effect will gradually migrate from the export duty to the mineral extraction tax by 2024.

	Q2 2019	Q1 2019	Change, %	1st half of 2019	1st half of 2018	Change, %
	(US dollars per barrel)					
Urals price (Argus)	68.46	63.21	8.3	65.85	68.84	(4.3)
Export duty on crude oil	14.27	11.94	19.5	13.11	16.26	(19.4)
Mineral extraction tax on crude oil	30.06	26.83	12.0	28.44	26.87	5.8
Net Urals price ¹	24.13	24.44	(1.3)	24.30	25.70	(5.5)
Export duty lag effect	(0.08)	0.93	-	0.42	0.88	(52.4)
Mineral extraction tax lag effect	(0.01)	0.17	-	0.07	-	-
Net Urals price ¹ assuming no lag	24.22	23.34	3.8	23.81	24.82	(4.1)
	(rubles per barrel) ²					
Urals price (Argus)	4,420	4,180	5.7	4,303	4,086	5.3
Export duty on crude oil	921	790	16.6	857	965	(11.2)
Mineral extraction tax on crude oil	1,941	1,774	9.4	1,858	1,595	16.5
Net Urals price ¹	1,558	1,616	(3.6)	1,588	1,526	4.1
Export duty lag effect	(5)	61	-	27	52	(48.1)
Mineral extraction tax lag effect	(1)	11	-	5	-	-
Net Urals price ¹ assuming no lag	1,564	1,544	1.3	1,556	1,474	5.6

¹ Urals price net of export duty and mineral extraction tax on crude oil.

² Translated to rubles using average exchange rate for the period.

Crude oil produced at some of our fields is subject to special export duty rates calculated according to specific formulas and are lower than the standard rates. A reduced rate is applied to crude oil produced at our Yaregskoye field producing extra-viscous crude oil and our Yu. Korchagin field in the Caspian offshore. A zero rate applies to crude oil of our V. Filanovsky field also located in the Caspian offshore, as well as the offshore greenfields in the Baltic Sea.

Crude oil exported to member countries of the Customs Union in the Eurasian Economic Union of Russia, Belarus, Kazakhstan, Armenia and the Kyrgyz Republic (Customs Union) is not subject to export duties.

Crude oil and refined products exported from Russia are subject to two steps of customs declaration and duty payments: temporary and complete. A temporary declaration is submitted based on preliminary exports volumes and the duty is paid in rubles translated from US dollars at the date of the temporary declaration. A complete declaration is submitted after receiving the actual data on the exported volumes, but no later than six months after the date of the temporary declaration. The final amount of the export duty is adjusted depending on the actual volumes, the ruble-US dollar exchange rate at the date of the complete declaration (except for pipeline deliveries for which the exchange rate at the temporary declaration date is used) and the export duty rate. If temporary and complete declarations are submitted in different reporting periods, the final amount of the export duty is adjusted in the period of submission of the complete declaration. The high volatility of the ruble-dollar exchange rates may lead to significant adjustments. For the purposes of the IFRS consolidated financial statements, data from temporary declarations at the reporting period end is translated to rubles from US dollars using the period-end exchange rate.

Natural gas extraction tax rate is calculated using a special formula depending on average regulated wholesale natural gas price in Russia, Urals price, the share of gas production in total hydrocarbon production at particular license area, regional location and complexity of particular gas field. Reinjected natural gas and associated petroleum gas are subject to zero extraction tax rate.

Gas produced from our two major fields in Russia, Nakhodkinskoye and Pyakyakhinskoye, is taxed at the rates subject to application of reducing coefficients due to the fields' geographical location and the depth of reservoir.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(US dollars per tonne) ¹					
Nakhodkinskoye field.....	5.47	5.34	2.4	5.40	5.04	7.1
Pyakyakhinskoye field.....	8.26	8.23	0.4	8.23	8.90	(7.5)

¹ Translated from rubles using average exchange

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(rubles per tonne)					
Nakhodkinskoye field.....	353	353	-	353	299	17.9
Pyakyakhinskoye field.....	533	544	(2.0)	538	528	1.8

Export duty rates on refined products are calculated by multiplying the enacted crude oil export duty rate by a coefficient according to the table below.

	2018 and further
Multiplier for:	
Gasolines, diesel fuel and other light and middle distillates	0.30
Straight-run gasoline.....	0.55
Fuel oil.....	1.00

Refined products exported to member countries of the Customs Union are not subject to export duties.

Excise taxes on refined products. The responsibility to pay excises on refined products in Russia is imposed on refined product producers (except for straight-run gasoline). Only domestic sales volumes are subject to excises.

Excise tax expense on straight-run gasoline used as a petrochemical feedstock is reimbursed with a coefficient of 1.7, and excise tax expense on middle distillates processed and bunker fuel marketed is reimbursed in double amount.

In other countries where the Group operates, excise taxes are paid by either producers or retailers depending on the local legislation.

Excise rates on motor fuels in Russia are tied to the ecological class of fuel. Excise tax rates for the periods considered are listed below.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(rubles per tonne)					
Gasoline						
Below Euro-5.....	13,100	13,100	-	13,100	13,100	-
Euro-5.....	12,314	12,314	-	12,314	10,716	14.9
Diesel fuel						
All ecological classes.....	8,541	8,541	-	8,541	7,334	16.5
Motor oils.....	5,400	5,400	-	5,400	5,400	-
Middle distillates.....	9,241	9,241	-	9,241	8,662	6.7
Straight-run gasoline.....	13,912	13,912	-	13,912	13,100	6.2

Established excise tax rates starting from 2018 are listed below.

	1 January to 31 May 2018	1 June to 31 December 2018	2019	2020	2021
	(rubles per tonne)				
Gasoline					
Below Euro-5.....	13,100	13,100	13,100	13,100	13,624
Euro-5.....	11,213	8,213	12,314	12,752	13,262
Diesel fuel					
All ecological classes.....	7,665	5,665	8,541	8,835	9,188
Motor oils.....	5,400	5,400	5,400	5,616	5,841
Middle distillates.....	8,662	6,665	9,241	9,535	9,916
Straight-run gasoline.....	13,100	13,100	13,912	14,720	15,533

Negative excise tax on refinery feedstock

The reduction of export duties on crude oil in the course of the tax manoeuvre in Russia leads to an increase in feedstock costs for the domestic refineries. This negative effect is partially compensated by a decrease in export duties on refined products, with the remaining part of the negative effect being fully offset by the negative excise tax implemented from 1 January 2019. The negative excise tax is payable by the Government to the refineries. The negative excise tax rate is calculated separately for each refinery based on the average Urals crude oil price and refinery slate during the month. Our Ukhta refinery benefits from a special uplift regional coefficient of 1.3 applied to the negative excise tax.

The negative excise tax formula also includes the damper coefficient for gasoline and diesel fuel sold on the domestic market. The damper coefficient is calculated by multiplying Compensation Coefficient and a difference between gasoline and diesel fuel export netbacks at North-Western Russia delivery basis and corresponding *Fixed benchmarks*. When the damper coefficient is positive, it is payable by the Government to the refinery, and vice versa.

The *Fixed benchmarks* and *Compensation Coefficients* are presented in the tables below:

	1 January to 30 June 2019	1 July to 31 December 2019	2020	2021	2022	2023	2024
	(rubles per tonne)						
Fixed benchmark for gasoline.....	56,000	51,000	53,600	56,300	59,000	62,000	65,000
Fixed benchmark for diesel fuel.....	50,000	46,000	48,300	50,700	53,250	56,000	58,700

	1 January to 30 June 2019	1 July to 31 December 2019	2020 and further
Compensation coefficient for gasoline.....	0.60	0.75	0.68
Compensation coefficient for diesel fuel.....	0.60	0.70	0.65

The following table presents the average enacted damper coefficients for the respective periods:

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
	(US dollars per tonne) ¹					
				2019	2018	
Gasoline.....	107.19	(7.66)	-	49.10	-	-
Diesel fuel.....	83.94	77.62	8.1	80.68	-	-

¹ Translated from rubles using average exchange rate for the period.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
	(rubles per tonne)					
				2019	2018	
Gasoline.....	6,920	(545)	-	3,208	-	-
Diesel fuel.....	5,419	5,122	5.8	5,271	-	-

Income tax. Operations in the Russian Federation are subject to a 20% income tax rate. For the period from 2017 till 2024 (inclusive) a Federal income tax rate is set as 3.0% and a regional income tax rate varies from 12.5% to 17.0% at the discretion of the individual regional administration. Legislation sets certain restrictions on the application of the reduced regional rates.

The Company and its Russian subsidiaries file income tax returns in Russia. A number of Group companies in Russia are paying income tax as a consolidated taxpayers' group ("CTG"). This allows taxpayers to offset taxable losses generated by certain participants of a CTG against taxable profits of other participants of the CTG.

The Group's foreign operations are subject to taxes at the tax rates applicable to the jurisdictions in which they operate.

Transportation tariffs on crude oil, natural gas and refined products in Russia

Many of our production assets are located relatively far from our customers. As a result, transportation tariffs are an important factor affecting our profitability.

Crude oil produced at our fields in Russia is transported to refineries and exported primarily through the trunk oil pipeline system of the state-owned company, Transneft. In some cases, crude oil is also shipped via railway infrastructure of the state-owned company, Russian Railways.

Refined products produced at our Russian refineries are transported primarily by railway (Russian Railways) and the pipeline system of Transneftproduct, a subsidiary of Transneft.

Gas that is not sold at the wellhead is transported through the Unified Gas Supply System owned and operated by Gazprom.

Transneft, Russian Railways and Gazprom are state-controlled natural transportation infrastructure monopolies and their tariffs are regulated by the Federal Antimonopoly Service of Russia and set in rubles.

The following table sets forth the changes in the average tariffs charged by the state-controlled transportation service providers in Russia.

	2 nd quarter of 2019 to 1 st quarter of 2019	1 st half of 2019 to 1 st half of 2018
Transneft (crude oil)	0.0%	3.9%
Russian Railways (crude oil and refined products).....	0.0%	3.5%

The tariffs for transportation of crude oil and refined products were increased on 1 January 2019. Tariffs for crude oil export through the trunk oil pipeline system grew by 3.87%. Tariffs for crude oil and refined products transportation via railway infrastructure increased by 3.50%, while tariffs for transportation of refined products by pipeline changed for the Groups' refineries in a range from 3.61% to 3.83%.

Segments highlights

Our operations are divided into three main business segments:

- **Exploration and Production** – which includes our exploration, development and production operations related to crude oil and gas. These activities are primarily located within Russia, with additional activities in Azerbaijan, Kazakhstan, Uzbekistan, the Middle East, Northern and Western Africa, Norway, Romania and Mexico.
- **Refining, Marketing and Distribution** – which includes refining, petrochemical and transport operations, marketing and trading of crude oil, natural gas and refined products, generation, transportation and sales of electricity, heat and related services.
- **Corporate and other** – which includes operations related to our headquarters (which coordinates operations of the Group companies), finance activities, and certain other activities, that are not primary to the Group.

Each of our segments is dependent on the others, with a portion of the revenues of one segment being a part of the costs of the others. In particular, our Refining, Marketing and Distribution segment purchases crude oil from our Exploration and Production segment. As a result of certain factors considered in the “Domestic crude oil and refined products prices” section on p. 7, benchmark crude oil market prices in Russia cannot be determined with certainty. Therefore, the prices set for inter-segment purchases of crude oil reflect a combination of market factors, primarily international crude oil market prices, transportation costs, regional market conditions, the cost of crude oil refining and other factors. We present the financial data for each segment in Note 28 “Segment information” to our condensed interim consolidated financial statements.

Exploration and production

The following table summarizes key figures on our Exploration and production segment:

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
	(millions of rubles)					
EBITDA	235,074	235,132	-	470,206	411,617	14.2
in Russia	193,730	192,395	0.7	386,125	348,182	10.9
outside Russia and Iraq.....	33,550	37,625	(10.8)	71,175	51,403	38.5
in Iraq	7,794	5,112	52.5	12,906	12,032	7.3
Hydrocarbon extraction expenses	52,843	50,586	4.5	103,429	103,761	(0.3)
in Russia	43,092	41,243	4.5	84,335	86,574	(2.6)
outside Russia and Iraq.....	5,482	4,586	19.5	10,068	9,351	7.7
in Iraq	4,269	4,757	(10.3)	9,026	7,836	15.2
	(rubles per BOE)					
Hydrocarbon extraction expenses (excluding Iraq)	236	220	7.3	228	238	(4.3)
in Russia	240	231	3.7	236	245	(3.8)
outside Russia and Iraq.....	208	152	37.0	178	192	(7.4)
	(US dollars per BOE)					
Hydrocarbon extraction expenses (excluding Iraq)	3.65	3.32	9.9	3.49	4.02	(13.3)
in Russia	3.72	3.50	6.2	3.61	4.13	(12.6)
outside Russia and Iraq.....	3.22	2.29	40.3	2.72	3.22	(15.5)

Our upstream EBITDA didn't change significantly compared to the first quarter of 2019. In Russia, an increase in hydrocarbon prices was largely offset by negative export duty and mineral extraction tax lag effects and the ruble appreciation. Outside Russia, our upstream EBITDA declined due to a decrease in gas production volumes in Uzbekistan. At the same time, EBITDA of the West Qurna-2 project in Iraq increased significantly compared to the first quarter of 2019 as a result of higher amount of capital expenditures compensation.

Compared to the first half of 2018, our upstream EBITDA increased by 14.2% that was mainly a result of an increase in hydrocarbon prices in ruble terms due to the ruble devaluation. In Russia, an increase in upstream EBITDA was supported by bigger share of high-margin volumes in our production structure. At the same time, this growth was restrained by adverse change in export duty and mineral extraction tax lag effects, compared to the first half of 2018. Outside Russia, our upstream EBITDA was positively impacted by an increase in gas production volumes and gas prices in Uzbekistan. Higher EBITDA of the West Qurna-2 project in Iraq also contributed to the overall upstream EBITDA growth.

In the first half of 2019, our upstream EBITDA was also positively affected by the effect of IFRS 16 adoption, which resulted in lower operating expenses.

The following table summarizes our hydrocarbon production by major regions.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
	(thousand BOE per day)					
	2019	2019		2019	2018	
Crude oil and natural gas liquids						
Consolidated subsidiaries						
West Siberia	765	768	(0.4)	768	771	(0.4)
Timan-Pechora	318	319	(0.3)	318	316	0.6
Ural region.....	334	335	(0.3)	334	327	2.1
Volga region.....	238	240	(0.8)	239	220	8.6
Other in Russia.....	31	31	-	31	31	-
Total in Russia	1,686	1,693	(0.4)	1,690	1,665	1.5
Iraq ¹	31	28	10.7	29	29	-
Other outside Russia.....	46	48	(4.2)	48	47	2.1
Total outside Russia.....	77	76	1.3	77	76	1.3
Total consolidated subsidiaries	1,763	1,769	(0.3)	1,767	1,741	1.5
Our share in equity affiliates						
in Russia	13	13	-	13	13	-
outside Russia.....	37	38	(2.6)	37	38	(2.6)
Total share in equity affiliates.....	50	51	(2.0)	50	51	(2.0)
Total crude oil and natural gas liquids	1,813	1,820	(0.4)	1,817	1,792	1.4
Natural and petroleum gas²						
Consolidated subsidiaries						
West Siberia.....	203	201	1.0	202	215	(6.0)
Timan-Pechora.....	33	34	(2.9)	33	33	-
Ural region.....	21	24	(12.5)	22	14	57.1
Volga region.....	29	28	3.6	28	27	3.7
Other in Russia.....	-	-	-	1	1	-
Total in Russia.....	286	287	(0.3)	286	290	(1.4)
Uzbekistan	207	250	(17.2)	229	197	16.2
Other outside Russia	37	38	(2.6)	37	25	48.0
Total outside Russia	244	288	(15.3)	266	222	19.8
Total consolidated subsidiaries	530	575	(7.8)	552	512	7.8
Share in equity affiliates						
in Russia	2	1	51.3	1	1	-
outside Russia.....	10	11	(5.4)	11	11	-
Total share in production of equity affiliates.....	12	12	(0.7)	12	12	-
Total natural and petroleum gas	542	587	(7.7)	564	524	7.6
Total daily hydrocarbon production.....	2,355	2,407	(2.2)	2,381	2,316	2.8
Including natural gas liquids produced at the gas processing plants	46	46	0.9	46	45	3.4

¹ Compensation crude oil related to the Group.

² Natural and petroleum gas production excluding flaring, reinjected gas and gas used in production of natural gas liquids.

Crude oil production by major regions is presented in the table below.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(thousands of tonnes)					
West Siberia.....	9,213	9,159	0.6	18,372	18,473	(0.5)
Timan-Pechora	4,018	3,988	0.8	8,006	7,942	0.8
Ural region.....	3,845	3,820	0.7	7,665	7,497	2.2
Volga region	2,818	2,822	(0.1)	5,640	5,237	7.7
Other in Russia	410	388	5.7	798	794	0.5
Crude oil produced in Russia.....	20,304	20,177	0.6	40,481	39,943	1.3
Iraq ¹	410	365	12.3	775	769	0.8
Other outside Russia.....	476	484	(1.7)	960	947	1.4
Crude oil produced outside Russia	886	849	4.4	1,735	1,716	1.1
Total crude oil produced by consolidated subsidiaries	21,190	21,026	0.8	42,216	41,659	1.3
Our share in crude oil produced by equity affiliates:						
in Russia	155	151	2.6	306	315	(2.9)
outside Russia.....	418	433	(3.5)	851	856	(0.6)
Total crude oil produced	21,763	21,610	0.7	43,373	42,830	1.3

¹ Compensation crude oil related to the Group.

Our main oil producing region is West Siberia where we produced 43.5% of our crude oil in the second quarter of 2019 and in the first half of 2019 (43.6% in the first quarter of 2019, 44.3% in the first half of 2018).

The dynamics of our crude oil production volumes was mainly driven by external limitations due to an agreement of OPEC and some of the non-OPEC countries, including Russia, to cap production levels in order to stabilize the global crude oil market. During the first half of 2018, our production was limited in accordance with the first OPEC+ agreement valid until the end of June 2018. We increased our production in July 2018, when the parameters of the agreement were amended. In December 2018, the OPEC+ countries agreed to decrease crude oil production relative to October 2018 levels until June 2019, which subsequently was prolonged until March 2020. The Group limited production in our traditional regions (West Siberia, Timan-Pechora, Ural) at the least-productive fields and fields with high water-cuts.

We continued increasing production at the V. Filanovsky and Yu. Korchagin (Caspian Sea), Pyakyakhinskoye and other high-margin fields, which have a major positive impact on our financial results due to high quality reserve base and tax incentives.

In the first half of 2019, three new production wells were commissioned at the second production platform of the V.Filanovsky field. We produced 3,214 thousand tonnes of crude oil at this field in the first half of 2019, an increase of 12.4%, compared to the first half of 2018.

In the first half of 2019, crude oil production at the Yu. Korchagin field increased by 30% year-on-year as a result of drilling programme at the field's second development stage.

The development of the Yaregskoye field and the Permian layers of our Usinskoye field in Timan-Pechora, including the launch of new steam-generating capacities, led to an increase in the high viscosity crude oil production to 2.4 million tonnes, or by 18%, compared to the first half of 2018.

West Siberia growth projects development continued. Total crude oil and gas condensate production at the V. Vinogradov, Imilorskoe and Pyakyakhinskoe fields increased in the first half of 2019 by 15% year-on-year.

Gas production (excluding flaring, reinjected gas and gas used in production of natural gas liquids) by major regions is presented in the table below.

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
	(millions of cubic meters)					
West Siberia.....	3,145	3,075	2.3	6,220	6,600	(5.8)
Timan-Pechora	503	519	(3.1)	1,022	1,023	(0.1)
Ural region.....	325	362	(10.2)	687	441	55.8
Volga region.....	447	423	5.7	870	827	5.2
Other in Russia	6	7	(14.3)	13	13	-
Gas produced in Russia	4,426	4,386	0.9	8,812	8,904	(1.0)
Uzbekistan	3,206	3,824	(16.2)	7,030	5,969	17.8
Other outside Russia.....	560	582	(3.8)	1,142	867	31.7
Gas produced outside Russia	3,766	4,406	(14.5)	8,172	6,836	19.5
Total gas produced by consolidated subsidiaries	8,192	8,792	(6.8)	16,984	15,740	7.9
Our share in gas produced by equity affiliates:						
in Russia	23	21	9.5	44	48	(8.3)
outside Russia.....	161	163	(1.2)	324	338	(4.1)
Total gas produced	8,376	8,976	(6.7)	17,352	16,126	7.6

In Russia, our major gas production region is West Siberia (Bolshekhetskaya depression), where the major part of gas is produced from the Nakhodkinskoe and Pyakyakhinskoe fields. Outside of Russia, the main gas production region is Uzbekistan where we have shares in two PSAs. In the first half of 2019, LUKOIL Group's gas production was 17.4 billion cubic meters, which was 7.6% higher year-on-year. The main driver of gas production growth was the development of projects in Uzbekistan. As a result of the launch of the second stage of the Kandym gas processing plant, our international gas production (including our share in affiliates' production) increased by 18.4%.

A quarter-on-quarter decrease in gas production in the second quarter of 2019 was due to seasonality factor, as well as scheduled maintenance works at Kandym gas processing complex and technical limitations in gas intake from Gissar project by Shurtan gas chemical complex (JSC "Uzbekneftegas") in Uzbekistan.

West Qurna-2 project

The West Qurna-2 field in Iraq is developed under the service contract, signed in January 2010. In May 2018, a Group company and Iraqi party signed a new field development plan, according to which, crude oil production is planned to increase to 800 thousand barrels per day by 2025.

Accounting for the cost compensation within the West Qurna-2 project in our consolidated statement of financial position and consolidated statement of profit or loss and other comprehensive income is as follows.

Capital expenditures are recognized in *Property, plant and equipment*. Extraction expenses are recognized in *Operating expenses* in respect of all the volume of crude oil production at the field regardless of the volume of compensation crude oil the Group is eligible for. As the compensation revenue is recognized, capitalized costs are amortized.

There are two steps of revenue recognition:

- The Iraqi party, on a quarterly basis, approves invoice for cost recovery and remuneration fee for which the Group is eligible for in the reporting period. Amount of the invoice depends on crude oil production volumes during the period and amount of costs claimed for reimbursement. Approved invoice amount for the reporting quarter is recognized in crude oil sales revenue.
- Based on the approved invoices, the Iraqi party arranges schedule of crude oil shipments against its liability for cost compensation and remuneration. As this crude oil is actually shipped, its cost is recognized at current market price in Cost of purchased crude oil, gas and products. Further, revenue from sales of this crude oil, or products from its refining, is recognized in *Sales*. Unsold crude oil and refined products are recognized in *Inventories*.

The following table summarizes data on capital and operating costs incurred, compensation crude oil received, costs yet unrecovered and remuneration fee.

	Costs incurred ¹	Remuneration fee	Crude oil received	Crude oil to be received
Cumulative at 31 December 2018.....	8,597	424	8,681	340
Change in the 1 st half of 2019.....	288	60	237	111
Cumulative at 30 June 2019.....	8,885	484	8,918	451

¹ Including prepayments.

The West Qurna-2 project summary is presented below:

	Q2 2019		Q1 2019		Change, %	
	(thousand barrels)	(thousand tonnes)	(thousand barrels)	(thousand tonnes)		
Total production	36,185	5,291	32,274	4,718	12.1	12.1
Production related to cost compensation and remuneration.....	2,800	410	2,498	365	12.1	12.1
Shipment of compensation crude oil ¹	1,834	268	1,895	277	(3.2)	(3.2)
	(millions of rubles)	(millions of US dollars)	(millions of rubles)	(millions of US dollars)		
Cost compensation.....	10,081	156	8,125	123	24.1	26.8
Remuneration fee.....	2,076	32	1,846	28	12.5	14.3
	12,157	188	9,971	151	21.9	24.5
Cost of compensation crude oil, received as liability settlement (included in Cost of purchased crude oil, gas and products) ¹	7,860	122	7,625	115	3.1	6.1
Extraction expenses	4,269	66	4,757	72	(10.3)	(8.3)
Depreciation, depletion and amortization	5,820	90	3,407	52	70.8	73.1
EBITDA	7,794	121	5,112	77	52.5	57.1

¹ This crude oil is sold to third party customers or delivered to our refineries. After realization of these products, respective sales revenues are recognized.

	2019		1 st half of 2018		Change, %	
	(thousand barrels)	(thousand tonnes)	(thousand barrels)	(thousand tonnes)		
Total production	68,459	10,009	67,670	9,893	1.2	1.2
Production related to cost compensation and remuneration.....	5,298	775	5,263	769	0.7	0.7
Shipment of compensation crude oil ¹	3,729	545	6,887	1,007	(45.9)	(45.9)
	(millions of rubles)	(millions of US dollars)	(millions of rubles)	(millions of US dollars)		
Cost compensation.....	18,206	279	16,578	279	9.8	-
Remuneration fee.....	3,922	60	3,466	58	13.2	3.4
	22,128	339	20,044	337	10.4	0.6
Cost of compensation crude oil, received as liability settlement (included in Cost of purchased crude oil, gas and products) ¹	15,485	237	28,035	463	(44.8)	(48.8)
Extraction expenses	9,026	138	7,836	132	15.2	4.5
Depreciation, depletion and amortization	9,227	142	8,811	149	4.7	(4.7)
EBITDA	12,906	198	12,032	203	7.3	(2.5)

¹ This crude oil is sold to third party customers or delivered to our refineries. After realization of these products, respective sales revenues are recognized.

Refining, marketing and distribution

The following table summarizes key figures on our Refining, marketing and distribution segment:

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(millions of rubles)					
EBITDA	93,167	79,938	16.5	173,105	118,469	46.1
in Russia.....	67,972	73,887	(8.0)	141,859	94,994	49.3
outside Russia	25,195	6,051	316.4	31,246	23,475	33.1
Refining expenses at the Group refineries	23,461	23,504	(0.2)	46,965	47,673	(1.5)
in Russia.....	10,551	9,640	9.5	20,191	20,055	0.7
outside Russia	12,910	13,864	(6.9)	26,774	27,618	(3.1)
	(rubles per tonne)					
Refining expenses at the Group refineries	1,395	1,410	(1.1)	1,402	1,451	(3.4)
in Russia.....	982	879	11.7	930	941	(1.2)
outside Russia	2,125	2,432	(12.6)	2,274	2,397	(5.1)
	(US dollars per tonne)					
Refining expenses at the Group refineries	21.61	21.32	1.3	21.46	24.42	(12.1)
in Russia.....	15.21	13.29	14.4	14.23	15.83	(10.1)
outside Russia	32.92	36.77	(10.5)	34.80	40.32	(13.7)

Our refining, marketing and distribution EBITDA was 16.5% higher than in the first quarter of 2019.

In Russia, our refining, marketing and distribution EBITDA decreased compared to the first quarter of 2019 pressured by a negative inventory effect at our refineries that was partially offset by higher refining margins and better profitability of our retail business. Moreover, EBITDA of our power generation and distribution entities decreased owing to seasonality. Outside Russia, our refining, marketing and distribution EBITDA increased as a result of accounting specifics of trading operations, despite significant negative inventory effect at our refineries.

Our refining, marketing and distribution EBITDA was 46.1% higher than in the first half of 2018.

Compared to the first half of 2018, our refining, marketing and distribution EBITDA in Russia increased largely due to higher refining margins and throughput volumes, as well as better profitability of our retail business. Outside Russia, our downstream EBITDA increased due to higher trading margins and the effect of the ruble devaluation despite lower refining margins.

Moreover, in the first half of 2019, our refining, marketing and distribution EBITDA both in and outside Russia was positively affected by the effect of IFRS 16 adoption, which resulted in lower transportation expenses.

Refining and petrochemicals

The following table summarizes key figures for our refining and petrochemical volumes.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(thousands of tonnes)					
Refinery throughput at the Group refineries	16,823	16,668	0.9	33,491	32,847	2.0
in Russia.....	10,749	10,967	(2.0)	21,716	21,323	1.8
outside Russia, including	6,074	5,701	6.5	11,775	11,524	2.2
crude oil.....	5,554	5,224	6.3	10,778	9,889	9.0
refined products.....	520	477	9.0	997	1,635	(39.0)
Refinery throughput at third party refineries	1,643	1,588	3.5	3,231	3,291	(1.8)
Total refinery throughput	18,466	18,256	1.2	36,722	36,138	1.6
Production of the Group refineries in Russia¹.....	10,179	10,400	(2.1)	20,579	20,111	2.3
diesel fuel.....	3,836	4,161	(7.8)	7,997	8,117	(1.5)
motor gasoline.....	1,822	1,831	(0.5)	3,653	4,052	(9.8)
fuel oil.....	1,339	1,167	14.7	2,506	2,370	5.7
jet fuel	727	625	16.3	1,352	1,354	(0.1)
lubricants and components.....	212	248	(14.5)	460	469	(1.9)
straight-run gasoline.....	738	769	(4.0)	1,507	1,127	33.7
vacuum gas oil	44	237	(81.4)	281	197	42.6
bitumen	233	197	18.3	430	362	18.8
coke.....	224	280	(20.0)	504	576	(12.5)
bunker fuel	370	313	18.2	683	781	(12.5)
gas products	78	82	(4.9)	160	178	(10.1)
petrochemicals	126	151	(16.6)	277	177	56.5
other products.....	430	339	26.8	769	351	119.1
Production of the Group refineries outside						
Russia.....	5,848	5,343	9.5	11,191	10,784	3.8
diesel fuel.....	2,724	2,344	16.2	5,068	4,363	16.2
motor gasoline.....	1,256	1,116	12.5	2,372	2,053	15.5
fuel oil.....	738	446	65.5	1,184	1,449	(18.3)
jet fuel	269	254	5.9	523	614	(14.8)
straight-run gasoline.....	485	538	(9.9)	1,023	991	3.2
coke.....	27	32	(15.6)	59	104	(43.3)
gas products	181	99	82.8	280	254	10.2
petrochemicals	11	9	22.2	20	25	(20.0)
other products.....	157	505	(68.9)	662	931	(28.9)
Refined products produced by the Group	16,027	15,743	1.8	31,770	30,895	2.8
Refined products produced at third party refineries	1,553	1,504	3.3	3,057	3,240	(5.6)
Total refined products produced	17,580	17,247	1.9	34,827	34,135	2.0
Reference: Net of cross-supplies of refined products between the Group refineries.....	(355)	(343)	3.5	(698)	(956)	(27.0)
Products produced at petrochemical plants and facilities.....	334	287	16.4	621	637	(2.5)
in Russia.....	235	215	9.3	450	475	(5.3)
outside Russia	99	72	37.5	171	162	5.6

¹ Net of cross-supplies of refined products among the Group.

Compared to the first quarter of 2019, refinery throughput at the Group's refineries didn't change significantly. In Russia, a quarter-on-quarter decrease in refinery throughput was due to scheduled maintenance at the Perm refinery. Outside Russia, a quarter-on-quarter increase in refinery throughput was driven by feedstock supply disruptions through the port of Novorossiysk in the first quarter of 2019 due to weather conditions.

In the first half of 2019, refinery throughput at the Group's refineries was 33.5 million tonnes, which is 2.0% higher year-on-year. In Russia, an increase of 1.8% was mainly due to higher utilization rate of the Nizhny Novgorod refinery. Outside Russia, the growth of 2.2% was driven by the maintenance at the refinery in Bulgaria in the first quarter of 2018.

In the periods considered, we processed our crude oil at third party refineries in Belarus, Kazakhstan and Canada. In 2016, a Group company entered into a tolling agreement valid through 2019 with a Canadian refinery. In the second quarter of 2019 and the first half of 2019, attributable refined products output amounted to 1.5 million tonnes and 3.0 million tonnes (1.5 million tonnes in the first quarter of 2019 and 3.2 million tonnes in the first half of 2018).

Marketing and trading

In addition to our production, we purchase crude oil in Russia and on international markets. In Russia, we primarily purchase crude oil from affiliated producing companies and other producers. Then we either refine or export purchased crude oil. Crude oil purchased on international markets is used for trading activities, for supplying our international refineries or for processing at third party refineries.

In Russia, we purchase refined products on occasion, primarily to manage supply chain bottlenecks. Refined products purchases outside Russia are either traded or supplied to our international refineries.

We undertake trading operations on international markets through our 100% subsidiary LITASCO. We use traditional physical volumes hedging techniques to hedge our trading operations to secure trading margin.

The following table shows the volumes of crude oil purchases by the Group during the periods considered.

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	1 st half of 2018	Change, %
	(thousands of tonnes)					
Crude oil purchases						
In Russia	188	168	11.9	356	404	(11.9)
For trading internationally	14,654	10,187	43.9	24,841	22,300	11.4
For refining internationally	5,132	6,388	(19.7)	11,520	10,691	7.8
Shipment of the West Qurna-2 compensation crude oil	268	277	(3.2)	545	1,007	(45.9)
Total crude oil purchased	20,242	17,020	18.9	37,262	34,402	8.3

The table below summarizes figures for our refined products and petrochemicals marketing and trading activities.

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	1 st half of 2018	Change, %
	(thousands of tonnes)					
Refined products retail sales	3,515	3,322	5.8	6,837	7,171	(4.7)
Refined products wholesale sales	28,617	25,149	13.8	53,766	53,673	0.2
Total refined products sales	32,132	28,471	12.9	60,603	60,844	(0.4)
Refined products purchased in Russia	194	247	(21.5)	441	580	(24.0)
Refined products purchased internationally	13,768	13,216	4.2	26,984	27,550	(2.1)
Total refined products purchased	13,962	13,463	3.7	27,425	28,130	(2.5)
Petrochemical products purchased in Russia	10	9	11.1	19	16	18.8
Petrochemical products purchased internationally	287	366	(21.6)	653	279	134.1
Total petrochemical products purchased	297	375	(20.8)	672	295	127.8

Exports of crude oil, refined and petrochemical products from Russia by our subsidiaries and export revenues (both to the Group companies and third parties) are summarized as follows:

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	1 st half of 2018	Change, %
	(thousands of tonnes)					
Exports of crude oil to Customs Union.....	603	674	(10.5)	1,277	1,370	(6.8)
Exports of crude oil beyond Customs Union	8,836	8,314	6.3	17,150	16,287	5.3
Total crude oil exports.....	9,439	8,988	5.0	18,427	17,657	4.4
Exports of crude oil through Transneft and other third party infrastructure including:	7,220	6,764	6.7	13,984	13,483	3.7
ESPO pipeline.....	580	379	53.0	959	600	59.9
CPC pipeline.....	1,326	1,303	1.8	2,629	2,199	19.6
Exports of crude oil through the Group's transportation infrastructure.....	2,219	2,224	(0.2)	4,443	4,174	6.4
Total crude oil exports.....	9,439	8,988	5.0	18,427	17,657	4.4
	(millions of rubles)					
Exports of crude oil to Customs Union.....	15,015	16,234	(7.5)	31,249	30,713	1.7
Exports of crude oil beyond Customs Union	273,520	244,423	11.9	517,943	474,879	9.1
Total crude oil exports.....	288,535	260,657	10.7	549,192	505,592	8.6
	(thousands of tonnes)					
Refined products exports						
diesel fuel.....	2,243	2,769	(19.0)	5,012	5,199	(3.6)
gasoline	62	118	(47.5)	180	223	(19.3)
fuel oil.....	364	587	(38.0)	951	816	16.5
jet fuel	3	3	-	6	36	(83.3)
lubricants and components.....	144	161	(10.6)	305	305	-
gas refinery products.....	513	463	10.8	976	545	79.1
other products.....	769	1,075	(28.5)	1,844	1,179	56.4
Total refined products exports	4,098	5,176	(20.8)	9,274	8,303	11.7
Total petrochemical products exports.....	88	98	(10.2)	186	172	8.1
	(millions of rubles)					
Total refined products and petrochemicals exports	145,329	176,531	(17.7)	321,860	285,326	12.8

The volume of our crude oil exports from Russia increased by 5.0% compared to the first quarter of 2019, and increased by 4.4% compared to the first half of 2018. In the second quarter of 2019 and the first half of 2019, we exported 46.5% and 45.5% of our domestic crude oil production (44.5% in the first quarter of 2019 and 44.2% in the first half of 2018) and 73 thousand tonnes and 74 thousand tonnes of crude oil purchased from our affiliates and third parties (1 thousand tonnes in the first quarter of 2019 and 74 thousand tonnes in the first half of 2018), respectively.

The volume of our refined products exports decreased by 20.8% compared to the first quarter of 2019 as a result of planned maintenance at our Perm refinery and consecutive decrease in production volumes, as well as seasonal increase in domestic demand, and increased by 11.7% compared to the first half of 2018 against the background of relatively low volumes of export in the first half of 2018 due to high domestic demand for our products.

Substantially, we use the Transneft infrastructure to export our crude oil. Nevertheless, a sizeable amount of crude oil is exported through our own infrastructure, which allows us to preserve the premium quality of crude oil and thus enables to achieve higher netbacks. All the volume of crude oil exported that bypassed Transneft was routed beyond the Customs Union.

Besides our own infrastructure, we also export the light crude oil through the Caspian Pipeline Consortium and Eastern Siberia – Pacific Ocean pipelines that also allows us to preserve the premium quality of crude oil and to achieve higher netbacks compared to traditional export routes.

Priority sales channels. We develop our priority sales channels aiming at increasing our margin on sale of refined products produced by the Group.

In the second quarter of 2019 and the first half of 2019, we sold 2.5 million tonnes and 4.8 million tonnes of motor fuels via our domestic retail network, which was 5.4% more compared to the first quarter of 2019 due to seasonality factor, and 6.8% less compared to the first half of 2018 due to high demand for our products in the previous year. Outside Russia, retail sales increased by 6.7% compared to the first quarter of 2019 due to seasonality factor, and didn't change compared to the first half of 2018.

We also supply jet fuel to airports and bunker fuel to sea and river ports in and outside Russia.

Power generation. We established a vertically integrated chain from generation to transportation and sale of power and heat for third party customers (commercial generation) and own consumption. We own commercial generation facilities in the Southern regions of European Russia, Romania and Italy. We also own renewable energy capacity in Russia and abroad. In the second quarter of 2019 and the first half of 2019, our total output of commercial electrical energy was 3.6 billion kWh and 9.2 billion kWh (5.6 billion kWh in the first quarter of 2019 and 10.2 billion kWh in the first half of 2018), and our total output of commercial heat energy was approximately 1.3 million Gcal and 5.9 million Gcal (4.6 million Gcal in the first quarter of 2019 and 6.5 million Gcal in the first half of 2018), respectively.

Financial results

The table below sets forth data from our consolidated statements of profit or loss and other comprehensive income for the periods indicated.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
	(millions of rubles)					
Revenues						
Sales (including excise and export tariffs)	2,125,552	1,850,933	14.8	3,976,485	3,686,786	7.9
Costs and other deductions						
Operating expenses	(113,690)	(109,169)	4.1	(222,859)	(220,861)	0.9
Cost of purchased crude oil, gas and products	(1,210,383)	(987,525)	22.6	(2,197,908)	(2,079,312)	5.7
Transportation expenses	(64,032)	(73,222)	(12.6)	(137,254)	(134,262)	2.2
Selling, general and administrative expenses	(48,987)	(49,573)	(1.2)	(98,560)	(77,163)	27.7
Depreciation, depletion and amortization	(105,730)	(103,830)	1.8	(209,560)	(185,283)	13.1
Taxes other than income taxes	(254,494)	(221,019)	15.1	(475,513)	(400,637)	18.7
Excise and export tariffs	(101,200)	(111,456)	(9.2)	(212,656)	(258,593)	(17.8)
Exploration expenses	(596)	(912)	(34.6)	(1,508)	(1,283)	17.5
Profit from operating activities	226,440	194,227	16.6	420,667	329,392	27.7
Finance income	6,075	5,984	1.5	12,059	8,162	47.7
Finance costs	(10,976)	(11,734)	(6.5)	(22,710)	(15,601)	45.6
Equity share in income of affiliates	4,942	6,180	(20.0)	11,122	11,353	(2.0)
Foreign exchange gain	3,607	1,901	89.7	5,508	20,962	(73.7)
Other expenses	(6,360)	(3,972)	60.1	(10,332)	(9,863)	4.8
Profit before income taxes	223,728	192,586	16.2	416,314	344,405	20.9
Current income taxes	(40,675)	(41,381)	(1.7)	(82,056)	(58,189)	41.0
Deferred income taxes	(1,252)	(1,415)	(11.5)	(2,667)	(8,796)	(69.7)
Total income tax expense	(41,927)	(42,796)	(2.0)	(84,723)	(66,985)	26.5
Profit for the period	181,801	149,790	21.4	331,591	277,420	19.5
Profit for the period attributable to non-controlling interests	(556)	(554)	0.4	(1,110)	(1,040)	6.7
Profit for the period attributable to PJSC LUKOIL shareholders						
LUKOIL shareholders	181,245	149,236	21.4	330,481	276,380	19.6
Earnings per share of common stock attributable to PJSC LUKOIL shareholders (in Russian rubles):						
Basic	268.96	215.71	24.7	484.00	389.47	24.3
Diluted	261.30	210.35	24.2	470.87	389.47	20.9

The analysis of the main financial indicators of the financial statements is provided below.

Sales revenues

Sales breakdown	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(millions of rubles)					
Crude oil						
Export and sales on international markets other than Customs Union	722,518	581,528	24.2	1,304,046	1,156,737	12.7
Export and sales to Customs Union	15,191	16,581	(8.4)	31,772	30,989	2.5
Domestic sales	4,093	9,505	(56.9)	13,598	24,244	(43.9)
	741,802	607,614	22.1	1,349,416	1,211,970	11.3
Cost compensation and remuneration at the West Qurna-2 project	12,157	9,971	21.9	22,128	20,044	10.4
	753,959	617,585	22.1	1,371,544	1,232,014	11.3
Refined products¹						
Export and sales on international markets						
Wholesale	938,894	813,461	15.4	1,752,355	1,681,179	4.2
Retail	88,262	82,134	7.5	170,396	158,800	7.3
Domestic sales						
Wholesale	116,445	95,749	21.6	212,194	196,127	8.2
Retail	118,393	111,421	6.3	229,814	224,891	2.2
	1,261,994	1,102,765	14.4	2,364,759	2,260,997	4.6
Petrochemicals						
Export and sales on international markets	24,530	31,379	(21.8)	55,909	30,622	82.6
Domestic sales	11,509	10,944	5.2	22,453	21,769	3.1
	36,039	42,323	(14.8)	78,362	52,391	49.6
Gas						
Sales on international markets	30,985	38,229	(18.9)	69,214	46,246	49.7
Domestic sales	8,159	7,965	2.4	16,124	16,750	(3.7)
	39,144	46,194	(15.3)	85,338	62,996	35.5
Sales of energy and related services						
Sales on international markets	3,125	4,076	(23.3)	7,201	6,035	19.3
Domestic sales	10,462	17,888	(41.5)	28,350	28,303	0.2
	13,587	21,964	(38.1)	35,551	34,338	3.5
Other						
Export and sales on international markets	10,032	10,185	(1.5)	20,217	21,787	(7.2)
Domestic sales	10,797	9,917	8.9	20,714	22,263	(7.0)
	20,829	20,102	3.6	40,931	44,050	(7.1)
Total sales	2,125,552	1,850,933	14.8	3,976,485	3,686,786	7.9

¹ Including revenue from gas refined products sales.

Sales volumes	Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
(thousands of tonnes)						
Crude oil						
Export and sales on international markets other than Customs Union.....	22,388	18,980	18.0	41,368	37,975	8.9
Export and sales to Customs Union.....	609	684	(11.0)	1,293	1,382	(6.4)
Domestic sales.....	154	393	(60.8)	547	1,156	(52.7)
	23,151	20,057	15.4	43,208	40,513	6.7
Crude oil volumes related to cost compensation and remuneration at the West Qurna-2 project.....	410	365	12.3	775	769	0.8
	23,561	20,422	15.4	43,983	41,282	6.5
Refined products ¹						
Export and sales on international markets						
Wholesale.....	24,871	21,927	13.4	46,798	46,616	0.4
Retail.....	1,054	988	6.7	2,042	2,026	0.8
Domestic sales						
Wholesale.....	3,746	3,222	16.3	6,968	7,057	(1.3)
Retail.....	2,461	2,334	5.4	4,795	5,145	(6.8)
	32,132	28,471	12.9	60,603	60,844	(0.4)
Petrochemicals						
Export and sales on international markets.....	403	484	(16.7)	887	495	79.2
Domestic sales.....	195	174	12.1	369	388	(4.9)
	598	658	(9.1)	1,256	883	42.2
(millions of cubic meters)						
Gas						
Sales on international markets.....	3,538	4,142	(14.6)	7,680	6,447	19.1
Domestic sales.....	3,281	3,193	2.8	6,474	6,992	(7.4)
	6,819	7,335	(7.0)	14,154	13,439	5.3

¹ Including volumes of gas refined products sales.

Realized average sales prices		Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
Average realized price on international markets							
Crude oil (beyond Customs Union) ¹	(RUB/barrel)	4,403	4,180	5.3	4,301	4,156	3.5
Crude oil (Customs Union).....	(RUB/barrel)	3,403	3,307	2.9	3,352	3,059	9.6
Refined products							
Wholesale.....	(RUB/tonne)	37,751	37,099	1.8	37,445	36,064	3.8
Retail.....	(RUB/tonne)	83,740	83,132	0.7	83,446	78,381	6.5
Petrochemicals.....	(RUB/tonne)	60,868	64,833	(6.1)	63,032	61,863	1.9
Gas (excluding royalty).....	(RUB/1,000 m ³)	8,758	9,230	(5.1)	9,012	7,173	25.6
Crude oil (beyond Customs Union) ¹	(\$/barrel)	68.20	63.21	7.9	65.82	70.01	(6.0)
Crude oil (Customs Union).....	(\$/barrel)	52.71	50.01	5.4	51.31	51.54	(0.5)
Refined products							
Wholesale.....	(\$/tonne)	585	561	4.2	573	608	(5.7)
Retail.....	(\$/tonne)	1,297	1,257	3.2	1,277	1,321	(3.3)
Petrochemicals.....	(\$/tonne)	943	980	(3.8)	965	1,042	(7.4)
Gas (excluding royalty).....	(\$/1,000 m ³)	136	140	(2.8)	138	121	14.1
Average realized price within Russia							
Crude oil.....	(RUB/barrel)	3,626	3,300	9.9	3,391	2,861	18.5
Refined products							
Wholesale.....	(RUB/tonne)	31,085	29,717	4.6	30,453	27,792	9.6
Retail.....	(RUB/tonne)	48,108	47,738	0.8	47,928	43,711	9.6
Petrochemicals.....	(RUB/tonne)	59,021	62,897	(6.2)	60,848	56,106	8.5
Gas ²	(RUB/1,000 m ³)	2,487	2,495	(0.3)	2,491	2,396	4.0

¹ Excluding cost compensation and remuneration at the West Qurna-2 project.

² The price does not include cost of transportation by Unified Gas Supply System of Gazprom, as most of our gas production in Russia is sold ex-field.

Compared to the first quarter of 2019, our revenues increased by 14.8% driven mainly by an increase in hydrocarbon prices and crude oil and refined products trading volumes. At the same time, our revenues from gas sales decreased by 15.3%, primarily as a result of a decrease in gas production volumes.

Compared to the first half of 2018, our revenues increased by 7.9%, largely as a result of the effect of the ruble devaluation on our revenues denominated in the US dollars and euro, and an increase in crude oil trading and gas production volumes.

Sales of crude oil

Compared to the first quarter of 2019, our international crude oil sales revenue increased by 24.2%, mainly due to an increase in international hydrocarbon prices and our trading sales volumes (beyond the Customs Union). In the second quarter of 2019, our sales volumes in Russia decreased almost two-fold and our domestic sales revenue decreased consequently.

In the first half of 2019, our international crude oil sales revenue increased by 12.7%, compared to the first half of 2018, largely due to an increase in trading volumes and international hydrocarbon prices in ruble terms. At the same time, our domestic sales volumes decreased almost two-fold, and our domestic sales revenue decreased consequently.

Sales of refined products

The second quarter of 2019 vs. the first quarter of 2019

- Our revenue from the wholesale of refined products outside Russia increased by 15.4% due to an increase in trading volumes.
- International retail revenue increased following an increase in sales volumes by 7.5% due to seasonality, while our international retail realized prices didn't change.
- Revenue from the wholesale of refined products on the domestic market increased by 21.6%, primarily as a result of a seasonal increase in sales volumes, as well as an increase in our realized ruble prices.
- Our revenue from refined products retail sales in Russia increased by 6.3% due to a seasonality factor that triggered an increase in sales volumes.

The first half of 2019 vs. the first half of 2018

- Our revenue from the wholesale of refined products outside Russia increased by 4.2% that was mainly due to the effect of the ruble devaluation on our realized prices that outweighed a decrease in prices in dollar terms.
- Our international retail revenue increased by 7.3% also mainly as a result of the effect of the ruble devaluation on our realized prices.
- Our revenue from the wholesale of refined products on the domestic market increased by 8.2% as a result of growth of our realized prices.
- Despite a decrease in sales volumes against the background of high demand for our products in the first half of 2018, our revenue from refined products retail sales in Russia increased by 2.2%, following an increase in our average domestic retail prices.

Sales of petrochemical products

Compared to the first quarter of 2019, our revenue from sales of petrochemical products decreased by 14.8%, largely as a result of a decrease in trading volumes and average realized sales prices outside Russia.

Compared to the first half of 2018, our revenue from sales of petrochemical products increased by 49.6%, as a result of the growth of trading volumes outside Russia and the effect of the ruble devaluation.

Sales of gas

Compared to the first quarter of 2019, our revenue from gas sales decreased by 15.3% due to a decline in gas production volumes and prices in Uzbekistan.

Our sales of gas increased by 35.5%, compared to the first half of 2018. This increase related mostly to our operations outside Russia and was a result of natural gas production growth in Uzbekistan. Higher gas prices also contributed to an increase in our gas sales revenue.

Sales of energy and related services

Compared to the first quarter of 2019, our revenue from sales of energy and related services decreased by 38.1%, due to seasonality.

Compared to the first half of 2018, our revenue from sales of energy and related services increased by 3.5%, primarily as a result of the effect of the ruble devaluation on our revenues denominated in the US dollars and euro.

Other sales

Other sales include non-petroleum sales through our retail network, transportation services, rental revenue, crude oil extraction services, and other revenue of our production and marketing companies from sales of goods and services not related to our primary activities.

In the second quarter of 2019, revenue from other sales increased by 3.6%, compared to the first quarter of 2019, largely as a result of seasonal increase in non-petrol revenue of our retail network.

Compared to the first half of 2018, revenue from other sales decreased by 7.1%. This was largely a result of a decrease in revenue from provision of transportation services and a discontinuing of a non-core car sales business.

Operating expenses

Operating expenses include the following:

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
	(millions of rubles)					
	2019	2019		2019	2018	
Hydrocarbon extraction expenses ¹	48,574	45,829	6.0	94,403	95,925	(1.6)
Extraction expenses at the West Qurna-2 field	4,269	4,757	(10.3)	9,026	7,836	15.2
Own refining expenses	23,461	23,504	(0.2)	46,965	47,673	(1.5)
Refining expenses at third-party refineries	1,199	2,969	(59.6)	4,168	4,030	3.4
Expenses for crude oil transportation to refineries.....	14,268	11,778	21.1	26,046	24,565	6.0
Power generation and distribution expenses	7,047	7,558	(6.8)	14,605	14,498	0.7
Petrochemical expenses	3,193	2,987	6.9	6,180	5,646	9.5
Other operating expenses	11,679	9,787	19.3	21,466	20,688	3.8
Total operating expenses	113,690	109,169	4.1	222,859	220,861	0.9

¹ Excluding extraction expenses at the West Qurna-2 field.

The method of allocation of operating expenses above differs from the approach used in preparing data for Note 28 “Segment information” to our condensed interim consolidated financial statements. Expenditures in the segment reporting are grouped depending on the segment to which a particular company belongs and do not include adjustments related to elimination of intra-group service margin. Operating expenses for the purposes of this analysis are grouped based on the nature of the costs incurred.

Hydrocarbon extraction expenses

Our extraction expenses include expenditures related to repairs of extraction equipment, labor costs, expenses on artificial stimulation of reservoirs, fuel and electricity costs, cost of extraction of natural gas liquids, property insurance of extraction equipment and other similar costs.

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
	(millions of rubles)					
	2019	2019		2019	2018	
Hydrocarbon extraction expenses ¹	48,574	45,829	6.0	94,403	95,925	(1.6)
in Russia.....	43,092	41,243	4.5	84,335	86,574	(2.6)
outside Russia ¹	5,482	4,586	19.5	10,068	9,351	7.7
	(rubles per BOE)					
Hydrocarbon extraction expenses ¹	236	220	7.3	228	238	(4.3)
in Russia.....	240	231	3.7	236	245	(3.8)
outside Russia ¹	208	152	37.0	178	192	(7.4)

¹ Excluding extraction expenses at the West Qurna-2 field.

Compared to the first quarter of 2019, our extraction expenses in Russia increased by 4.5% mainly as a result of higher expenses for repairs and maintenance and expenses on artificial stimulation of reservoirs, an increase in other expenses due to seasonality, and an increase in production volumes. Our energy expenses decreased due to seasonality. Per BOE hydrocarbon extraction expenses increased to a lesser extent by 3.7%.

Our extraction expenses outside Russia increased by 19.5% compared to the first quarter of 2019 due to higher expenses for repairs and maintenance related to the projects in Uzbekistan and Kazakhstan, as well as an increase in labor costs as a result of payments of bonuses for 2018. At the same time, per BOE hydrocarbon extraction expenses increased by 37.0% due to a decrease in gas production and its share in production structure.

In the first half of 2019, the decrease of our extraction expenses was partially driven by the adoption IFRS 16, as well as implementation of cost savings programs.

In Russia, in the first half of 2019, decrease in workover operations was partially offset by higher electricity costs. Our per BOE hydrocarbon extraction expenses decreased by 3.8%.

Outside Russia, our hydrocarbon extraction expenses increased by 7.7% as a result of an increase in expenses on gas production due to substantial gas production growth in Uzbekistan, as well as the ruble devaluation. Our per BOE hydrocarbon extraction expenses outside Russia decreased by 7.4% owing to the increase in gas share in our production structure.

Own refining expenses

	Q2 2019	Q1 2019	Change, %	1st half of		Change, %
				2019	2018	
	(millions of rubles)					
Refining expenses at the Group refineries	23,461	23,504	(0.2)	46,965	47,673	(1.5)
in Russia.....	10,551	9,640	9.5	20,191	20,055	0.7
outside Russia	12,910	13,864	(6.9)	26,774	27,618	(3.1)
	(rubles per tonne)					
Refining expenses at the Group refineries	1,395	1,410	(1.1)	1,402	1,451	(3.4)
in Russia.....	982	879	11.7	930	941	(1.2)
outside Russia	2,125	2,432	(12.6)	2,274	2,397	(5.1)

Compared to the first quarter of 2019, refining expenses at our domestic refineries increased by 9.5%, mainly due to an increase in maintenance cost at our refineries in Perm and Nizhny Novgorod, as well as consumption of purchased additives. Outside Russia, our expenses decreased by 6.9% largely as a result of a decrease in fuel cost.

Compared to the first half of 2018, expenses at our domestic refineries didn't change. Outside Russia, our expenses decreased by 3.1% due to a decline in fuel, electricity and maintenance costs.

Refining expenses at third-party refineries

Along with our own production of refined products we process crude oil at third-party refineries.

At the end of 2016, as part of our trading business development, a Group company entered into a 3-year tolling agreement with a Canadian refinery. Related refining expenses represent variable toll that is mostly the difference between the price of feedstocks supplied, including various related costs, and the selling price of the refined products taken. When the refined products are sold, this toll is naturally offset by the respective refined products sales revenue. The agreed compensation is received by the Group company for execution of this agreement.

In the second quarter of 2019, this tolling fee amounted to 1.1 billion RUB compared to 2.8 billion RUB in the previous quarter.

In the first half of 2019, tolling fee amounted to 3.9 billion RUB compared to 3.8 billion RUB in the first half of 2018.

Expenses for crude oil transportation to refineries

Expenses for crude oil and refined products transportation to refineries include pipeline, railway, freight and other costs related to delivery of crude oil and refined products to refineries for further processing.

Compared to the first quarter of 2019, our expenses for crude oil transportation to refineries increased by 21.1% due to the changes in volumes and structure of crude oil supplies to our refineries in Europe.

Compared to the first half of 2018, our expenses for crude oil transportation to refineries increased by 6.0% mainly due to an increase in volumes and tariffs.

Petrochemical expenses

Our petrochemical expenses increased by 6.9% quarter-on-quarter and by 9.5% year-on-year. In Russia, it increased due to higher costs of raw materials and energy. Outside Russia, the dynamics was affected by the ruble devaluation.

Cost of purchased crude oil, gas and products

Cost of purchased crude oil, gas and products includes the cost of crude oil and refined products purchased for trading or refining, gas and fuel oil to supply our power generation entities and the result of hedging of crude oil and refined products sales.

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
(millions of rubles)						
Cost of purchased crude oil in Russia.....	4,675	4,310	8.5	8,985	9,530	(5.7)
Cost of purchased crude oil outside Russia	629,927	504,895	24.8	1,134,822	995,620	14.0
Compensation crude oil related to West Qurna-2 project.....	7,860	7,625	3.1	15,485	28,035	(44.8)
Cost of purchased crude oil.....	642,462	516,830	24.3	1,159,292	1,033,185	12.2
Cost of purchased refined products in Russia.....	8,672	9,273	(6.5)	17,945	21,740	(17.5)
Cost of purchased refined products outside Russia.....	510,846	482,942	5.8	993,788	974,131	2.0
Cost of purchased refined products	519,518	492,215	5.5	1,011,733	995,871	1.6
Other purchases	19,305	31,375	(38.5)	50,680	26,985	87.8
(Net gain)/loss from hedging of trading operations	(3,855)	48,140	(108.0)	44,285	35,091	26.2
Change in crude oil and petroleum products inventory.....	32,953	(101,035)	(132.6)	(68,082)	(11,820)	-
Total cost of purchased crude oil, gas and products.....	1,210,383	987,525	22.6	2,197,908	2,079,312	5.7

Compared to the first quarter of 2019, the cost of purchased crude oil, gas and products increased, largely as a result of an increase in hydrocarbon prices and volumes of crude oil and refined products trading.

Compared to the first half of 2018, the cost of purchased crude oil, gas and products increased, largely as a result of an increase in volumes of crude oil trading and the ruble devaluation to the US dollar.

Transportation expenses

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
(millions of rubles)						
Crude oil transportation expenses.....	21,550	28,090	(23.3)	49,640	47,323	4.9
in Russia.....	11,307	13,456	(16.0)	24,763	22,973	7.8
outside Russia	10,243	14,634	(30.0)	24,877	24,350	2.2
Refined products transportation expenses.....	38,203	41,630	(8.2)	79,833	77,740	2.7
in Russia.....	22,132	22,263	(0.6)	44,395	45,219	(1.8)
outside Russia	16,071	19,367	(17.0)	35,438	32,521	9.0
Other transportation expenses.....	4,279	3,502	22.2	7,781	9,199	(15.4)
in Russia.....	536	472	13.6	1,008	1,749	(42.4)
outside Russia	3,743	3,030	23.5	6,773	7,450	(9.1)
Total transportation expenses.....	64,032	73,222	(12.6)	137,254	134,262	2.2

Compared to the first quarter of 2019, our expenses for transportation of crude oil decreased by 23.3%. Outside Russia, transportation expenses decreased mainly due to a decrease in freight rates and an increase in volumes sold on the Incoterms without transport component. In Russia, our expenses decreased due to lower sales volumes, an inventory effect, as well as due to changes in directions and delivery terms.

Compared to the first half of 2018, our expenses for transportation of crude oil increased by 4.9%. Outside Russia, an increase in freight rates and the ruble devaluation were offset by an increase in volumes sold on the Incoterms without transport component. In Russia, our expenses increased due to indexation of tariffs, an increase in export sales volumes, an inventory effect and changes in exports directions.

Compared to the first quarter of 2019, our expenses for transportation of refined products decreased by 8.2%. Outside Russia, transportation expenses decreased mainly due to a decrease in freight rates, despite an increase in sales volumes. In Russia, our expenses didn't change significantly. The effect of a decrease in export volumes was partially offset by an increase in domestic sales volumes and an inventory effect.

Compared to the first half of 2018, our expenses for transportation of refined products increased by 2.7%. Outside Russia, our expenses increased due to the ruble devaluation and an increase in freight rates, although sales volumes didn't change, that was partially offset by the effect of IFRS 16 adoption. In Russia, our expenses decreased as a result of the effect of IFRS 16 adoption and an inventory effect, despite the indexation of tariffs and an increase in export sales volumes.

The overall positive impact of IFRS 16 on our transportation expenses in the first half of 2019 amounted to 9.7 billion RUB.

Selling, general and administrative expenses

Selling, general and administrative expenses include payroll costs (excluding production staff costs of extraction entities, refineries and power generation entities), insurance costs (except for property insurance related to extraction, refinery and power generation equipment), costs of maintenance of social infrastructure, movement in allowance for expected credit loss and other expenses. Our selling, general and administrative expenses are roughly equally split between domestic and international operations.

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
(millions of rubles)						
Labor costs included in selling, general and administrative expenses	18,447	16,067	14.8	34,514	30,468	13.3
Other selling, general and administrative expenses	21,077	20,869	1.0	41,946	45,995	(8.8)
Share-based compensation.....	7,842	7,842	-	15,684	190	-
Expenses on allowance for expected credit losses	1,621	4,795	(66.2)	6,416	510	-
Total selling, general and administrative expenses	48,987	49,573	(1.2)	98,560	77,163	27.7

In late December 2017, the Company announced a new compensation plan based on approximately 40 million shares available to certain members of management and key employees for the period from 2018 to 2022, which was implemented in July 2018 and recognized as equity-settled share-based compensation plan. The Group recognized non-cash expenses of 7.8 billion RUB under this plan both in the first and the second quarters of 2019, and did not recognize any expenses in the first half of 2018.

In the second quarter and the first half of 2019, our labor costs increased mainly due to salary indexation and bonus payments.

In the first quarter of 2019, the Group recognized an allowance for expected credit loss of 4.7 billion related to our projects in Uzbekistan.

In the first half of 2019, our selling, general and administrative expenses were also positively impacted by the effect of IFRS 16 in the amount of 4.5 billion RUB.

Depreciation, depletion and amortization

Compared to the first quarter of 2019, our depreciation, depletion and amortization expenses increased by 2 billion RUB, or by 1.8%. An increase in expenses at our West Qurna-2 field was almost offset by a decrease in depletion expenses in Uzbekistan due to lower gas production volumes.

Compared to the first half of 2018, depreciation, depletion and amortization expenses increased by 24 billion RUB, or by 13.1%, as a result of amortization of the right-of-use assets in the amount of approximately 15.4 billion RUB under newly adopted IFRS 16 and an increase in depletion expenses as a result of higher gas production volumes after launching new production facilities as part of the Gissar and Kandym project in Uzbekistan. These effects were partially offset by a decrease in depletion expenses as a result of an increase in proved developed hydrocarbon reserves at some of our fields as at the end of 2018.

Equity share in income of affiliates

The Group has investments in equity method affiliates and corporate joint ventures. These companies are primarily engaged in crude oil exploration, production, marketing and distribution operations in the Russian Federation, crude oil production and marketing in Kazakhstan. Currently, our largest affiliates are Tengizchevroil, an exploration and production company, operating in Kazakhstan, Bashneft-Polus, an exploration and production company that develops the Trebs and Titov oilfields in Timan-Pechora, Russia, South Caucasus Pipeline Company and Caspian Pipeline Consortium, midstream companies in Azerbaijan and Kazakhstan.

Our share in income of affiliates decreased by 1 billion RUB, or by 20.0%, compared to the first quarter of 2019, and didn't change significantly compared to the first half of 2018.

Taxes other than income taxes

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
(millions of rubles)						
In Russia						
Mineral extraction taxes	233,568	201,080	16.2	434,648	368,806	17.9
Tax on additional income	5,108	4,353	17.3	9,461	-	-
Social security taxes and contributions	7,203	7,144	0.8	14,347	13,846	3.6
Property tax	5,559	5,509	0.9	11,068	12,446	(11.1)
Other taxes	636	482	32.0	1,118	882	26.8
Total in Russia	252,074	218,568	15.3	470,642	395,980	18.9
International						
Social security taxes and contributions	1,473	1,522	(3.2)	2,995	2,963	1.1
Property tax	215	232	(7.3)	447	421	6.2
Other taxes	732	697	5.0	1,429	1,273	12.3
Total internationally	2,420	2,451	(1.3)	4,871	4,657	4.6
Total taxes other than income taxes	254,494	221,019	15.1	475,513	400,637	18.7

In the second quarter of 2019, our taxes other than income taxes increased compared to the previous quarter. This was a result of an increase in mineral extraction tax expense following the tax rate growth by 9.4%, as well as an inventory effect. Tax on additional income from the hydrocarbon production in the second quarter of 2019 increased by 17.3% as a result of higher production volumes and higher crude oil prices.

An increase in our taxes other than income taxes compared to the first half of 2018 was also driven by a growth in mineral extraction tax expense following an increase in the mineral extraction tax rate by 16.5%.

The following table summarizes data on application of reduced and zero mineral extraction tax rates for crude oil produced in Russia (excluding special tax regimes).

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	2018	Change, %
(millions of rubles)						
Decrease in extraction taxes from application of reduced and zero rates for crude oil production	34,262	30,098	13.8	64,360	58,621	9.8
(thousands of tonnes)						
Volume of crude oil production subject to:						
ultra-high viscosity	540	483	11.7	1,023	761	34.3
reduced rates (tax holidays for specific regions and high viscosity oil)	1,063	1,045	1.7	2,108	2,737	(23.0)
reduced rates (low permeability deposits)	292	187	56.1	479	250	91.5
reduced rates (Tyumen deposits)	159	160	(0.4)	319	388	(17.7)
reduced rates (depleted fields)	4,758	4,803	(0.9)	9,561	7,794	22.7
reduced rates (other)	615	592	3.9	1,207	1,079	11.9
Total volume of production subject to reduced or zero rates	7,427	7,270	2.2	14,697	13,009	13.0

From 1 January 2019, the Group also applies special tax regime at certain license areas with reduced mineral extraction tax for crude oil along with newly-implemented TAI. In the second quarter and the first half of 2019, the total volume of crude oil production subject to TAI amounted to 1,177 thousand tonnes and 2,315 thousand tonnes, respectively. The mineral extraction tax on crude oil produced at the license areas subject to TAI totaled 6,531 million RUB and 12,677 million RUB in the second quarter and the first half of 2019, respectively.

The Group also applies special tax regime for offshore crude oil production at certain fields and deposits. In the second quarter of 2019 and the first half of 2019, volumes of production subject to such regimes amounted to 1,612 thousand tonnes and 3,225 thousand tonnes, respectively (compared to 1,613 thousand tonnes in the first quarter of 2019 and 2,859 thousand tonnes in the first half of 2018).

Excise and export tariffs

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	1 st half of 2018	Change, %
(millions of rubles)						
In Russia						
Excise tax on refined products	35,480	30,547	16.1	66,027	62,671	5.4
Excise tax on oil feedstock (excluding damper).....	(8,059)	(7,840)	2.8	(15,899)	-	-
Damper	(20,973)	(5,978)	-	(26,951)	-	-
Crude oil export tariffs	38,019	37,493	1.4	75,512	84,892	(11.0)
Refined products export tariffs.....	10,093	13,466	(25.0)	23,559	23,352	0.9
Total in Russia	54,560	67,688	(19.4)	122,248	170,915	(28.5)
International						
Excise tax and sales taxes on refined products.....	46,585	43,699	6.6	90,284	87,546	3.1
Crude oil export tariffs	16	13	23.1	29	-	-
Refined products export tariffs.....	39	56	(30.4)	95	132	(28.0)
Total internationally.....	46,640	43,768	6.6	90,408	87,678	3.1
Total excise and export tariffs	101,200	111,456	(9.2)	212,656	258,593	(17.8)

Compared to the first quarter of 2019, crude oil export tariffs didn't change significantly. Higher export duty rates and crude oil export volumes were offset by inventory effect. Refined products export tariffs decreased, mainly as a result of a decrease in refined products export from Russia and inventory effect, despite an increase in export duty rate by 16.5%.

In the second quarter of 2019, excise tax on refined products increased both in Russia and internationally mainly due to a seasonal increase in sales volumes subject to excise taxes.

In the second quarter of 2019, our proceeds from negative excise tax on refinery feedstock, including damper, amounted to 29 billion RUB compared to 14 billion RUB in the first quarter of 2019. This increase was primarily due to higher export netbacks for gasoline and an increase in domestic sales volumes.

Compared to the first half of 2018, crude oil export tariffs declined mainly as a result of a decrease in export duty rate by 11.3% and higher share of crude oil from fields with special export duty rates in export volumes structure. Refined products export tariffs didn't change, as higher refined products export volumes was offset by lower export duty rate.

In Russia, excise tax on refined products increased due to higher excise tax rates, compared to the first half of 2018. Outside Russia, it increased due to the ruble devaluation.

Foreign exchange gain

Foreign exchange gains or losses are mostly related to revaluation of US dollar and euro net monetary position of Russian entities that largely consists of accounts receivables, loans to our foreign subsidiaries and loans received in other currencies. In the end of 2018, the Company's net monetary position in foreign currencies significantly changed as a result of a change in the structure of intra-group financing, moreover, starting from 1 January 2019, the Group recognized certain lease liabilities in foreign currencies in accordance with IFRS 16. Current structure of the net monetary position results in exchange gains when the ruble appreciates and losses when it devaluates to those currencies.

In the second quarter of 2019 and the first half of 2019, foreign exchange gain amounted to 3.6 billion RUB and 5.5 billion RUB, compared to a foreign exchange gain of 1.9 billion RUB in the first quarter of 2019 and a gain of 21.0 billion RUB in the first half of 2018. Implementation of IFRS 16 resulted in a foreign exchange gain of 7.2 billion RUB in the first half of 2019.

Income taxes

The maximum statutory income tax rate in Russia is 20%. Nevertheless, the actual effective income tax rate may be higher due to non-deductible expenses or lower due to certain non-taxable gains and application of reduced regional income tax rates in Russia.

Compared to the first quarter of 2019, our total income tax expense decreased by 1 billion RUB, or by 2.0%. At the same time, our profit before income tax increased by 31 billion RUB, or by 16.2%. In the second quarter of 2019, our effective income tax rate was 18.7%, compared to 22.2% in the first quarter of 2019.

Compared to the first half of 2018, our total income tax expense increased by 18 billion RUB, or by 26.5%. Our profit before income tax increased by 72 billion RUB, or by 20.9%. In the first half of 2019, our effective income tax rate was 20.4%, compared to 19.4% in the first half of 2018. The increase in the effective income tax rate in the first half of 2019 was generally due to revision and changes of regional income tax incentives in certain regions of Russia.

Non-GAAP items reconciliation

Reconciliation of profit for the period attributable to PJSC LUKOIL shareholders to EBITDA

EBITDA is not defined under IFRS. We define EBITDA as profit from operating activities before depreciation, depletion and amortization. We believe that EBITDA provides useful information to investors because it is an indicator of the strength and performance of our business operations, including our ability to finance capital expenditures, acquisitions and other investments and to raise and service debt. EBITDA should not be considered in isolation as an alternative to profit or any other measure of performance under IFRS.

	Q2 2019	Q1 2019	1 st half of 2019	2018
	(millions of rubles)			
Profit for the period attributable to PJSC LUKOIL shareholders	181,245	149,236	330,481	276,380
Add back				
Profit for the period attributable to non-controlling interests.....	556	554	1,110	1,040
Income tax expense.....	41,927	42,796	84,723	66,985
Financial income.....	(6,075)	(5,984)	(12,059)	(8,162)
Financial costs.....	10,976	11,734	22,710	15,601
Foreign exchange gain	(3,607)	(1,901)	(5,508)	(20,962)
Equity share in income of affiliates.....	(4,942)	(6,180)	(11,122)	(11,353)
Other expense.....	6,360	3,972	10,332	9,863
Depreciation, depletion and amortization.....	105,730	103,830	209,560	185,283
EBITDA.....	332,170	298,057	630,227	514,675
EBITDA by operating segments				
Exploration and production.....	235,074	235,132	470,206	411,617
in Russia	193,730	192,395	386,125	348,182
outside Russia and Iraq.....	33,550	37,625	71,175	51,403
in Iraq	7,794	5,112	12,906	12,032
Refining, marketing and distribution segment	93,167	79,938	173,105	118,469
in Russia	67,972	73,887	141,859	94,994
outside Russia.....	25,195	6,051	31,246	23,475
Corporate and other.....	(8,671)	(7,068)	(15,739)	(3,205)
Elimination.....	12,600	(9,945)	2,655	(12,206)
EBITDA.....	332,170	298,057	630,227	514,675

Reconciliation of Cash provided by operating activities to Free cash flow

	Q2 2019	Q1 2019	1 st half of 2019	2018
	(millions of rubles)			
Net cash provided by operating activities	269,918	243,324	513,242	409,941
Capital expenditures	(107,555)	(97,421)	(204,976)	(226,834)
Free cash flow	162,363	145,903	308,266	183,107

Liquidity and capital resources

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(millions of rubles)					
Net cash provided by operating activities	269,918	243,324	10.9	513,242	409,941	25.2
including increase in working capital.....	(27,103)	(37,434)	(27.6)	(64,537)	(67,853)	(4.9)
Net cash used in investing activities	(109,612)	(99,551)	10.1	(209,163)	(214,312)	(2.4)
Net cash used in financing activities.....	(92,068)	(169,807)	(45.8)	(261,875)	(207,210)	26.4

Changes in operating assets and liabilities:

	Q2 2019	Q1 2019	Change, %	1 st half of		Change, %
				2019	2018	
	(millions of rubles)					
Increase in accounts receivable.....	(85,804)	(17,767)	382.9	(103,571)	(43,226)	139.6
Decrease (increase) in inventory.....	39,247	(101,788)	(138.6)	(62,541)	(40,826)	53.2
Decrease in accounts payable	14,799	56,889	(74.0)	71,688	13,864	417.1
(Decrease) increase in net taxes other than on income payable	(8,979)	35,794	(125.1)	26,815	25,908	3.5
Change in other current assets and liabilities.....	13,634	(10,562)	(229.1)	3,072	(23,573)	(113.0)
Total increase in working capital	(27,103)	(37,434)	(27.6)	(64,537)	(67,853)	(4.9)

Operating activities

Our primary source of cash flow is funds generated from our operations. Compared to the first quarter of 2019 and the first half of 2018, our cash generated from operations increased, that mainly reflected an increase in profitability of our core operations.

The positive impact of IFRS 16 adoption on our cash provided by operating activities in the first half of 2019 amounted to 17.4 billion RUB.

Investing activities

Our cash used in investing activities increased compared to the previous quarter, and decreased compared to the first half of 2018, largely due to the changes in capital expenditures.

Our capital expenditures increased by 10 billion RUB, or by 10.4%, compared to the first quarter of 2019, and decreased by 22 billion RUB, or by 9.6%, compared to the first half of 2018.

The positive impact of IFRS 16 adoption on our cash used in investing activities in the first half of 2019 amounted to 5.5 billion RUB and resulted in a decrease in capital expenditures.

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	1 st half of 2018	Change, %
	(millions of rubles)					
Capital expenditures						
Exploration and production						
West Siberia.....	35,441	32,035	10.6	67,476	70,913	(4.8)
Timan-Pechora.....	18,958	16,683	13.6	35,641	39,426	(9.6)
Ural region.....	9,444	7,459	26.6	16,903	18,157	(6.9)
Volga region.....	9,532	6,957	37.0	16,489	20,732	(20.5)
Other in Russia.....	2,374	2,337	1.6	4,711	4,226	11.5
Total in Russia.....	75,749	65,471	15.7	141,220	153,454	(8.0)
Iraq.....	7,216	3,363	114.6	10,579	9,311	13.6
Other outside Russia.....	7,789	12,004	(35.1)	19,793	27,584	(28.2)
Total outside Russia.....	15,005	15,367	(2.4)	30,372	36,895	(17.7)
Total exploration and production.....	90,754	80,838	12.3	171,592	190,349	(9.9)
Refining, marketing and distribution						
Russia.....	11,377	10,851	4.8	22,228	24,519	(9.3)
refining.....	7,643	6,777	12.8	14,420	15,364	(6.1)
retail.....	560	1,394	(59.8)	1,954	3,166	(38.3)
other.....	3,174	2,680	18.4	5,854	5,989	(2.3)
International.....	4,812	4,681	2.8	9,493	10,246	(7.3)
refining.....	3,868	3,302	17.1	7,170	7,652	(6.3)
retail.....	380	899	(57.7)	1,279	1,862	(31.3)
other.....	564	480	17.5	1,044	732	42.6
Total refining, marketing and distribution.....	16,189	15,532	4.2	31,721	34,765	(8.8)
Corporate and other.....	612	1,051	(41.8)	1,663	1,720	(3.3)
Total capital expenditures.....	107,555	97,421	10.4	204,976	226,834	(9.6)

In Russia, an increase in our upstream capital expenditures in the second quarter of 2019 was mainly due to payments related to previously incurred and accrued capital expenditures.

An increase in capital expenditures in refining segment in Russia compared to the previous quarter was primarily due to construction of a delayed coker complex at Nizhny Novgorod refinery.

Compared to the first half of 2018, our domestic capital expenditures in the exploration and production segment decreased, due to a decrease in expenses in Timan-Pechora and West Siberia regions as a result of uneven payments schedule, as well as the completion of key construction works at the Yu. Korchagin and V. Filanovsky fields in the Caspian Sea.

The dynamics of our international capital expenditures in the first half of 2019 compared to the first half of 2018 was mainly affected by a decrease in expenses in Uzbekistan.

The table below presents exploration and production capital expenditures at our growth projects.

	Q2 2019	Q1 2019	Change, %	1 st half of 2019	1 st half of 2018	Change, %
	(millions of rubles)					
West Siberia (Yamal).....	5,794	5,942	(2.5)	11,736	12,888	(8.9)
Caspian region (Projects in Russia).....	7,045	6,860	2.7	13,905	18,582	(25.2)
Timan-Pechora (Yaregskoye field).....	2,253	1,894	19.0	4,147	5,734	(27.7)
Iraq (West Qurna-2 project).....	6,457	2,720	137.4	9,177	8,818	4.1
Iraq (Block-10).....	759	643	18.0	1,402	493	184.4
Uzbekistan.....	1,018	6,296	(83.8)	7,314	15,983	(54.2)
Total.....	23,326	24,355	(4.2)	47,681	62,498	(23.7)

Financing activities

In the second quarter of 2019, net movements of short-term and long-term debt generated an outflow of 14 billion RUB, compared to an outflow of 21 billion RUB in the first quarter of 2019. In the first half of 2019, net movements of short-term and long-term debt generated an outflow of 35 billion RUB, including 18.6 billion RUB related to the newly adopted IFRS 16, compared to an outflow of 126 billion RUB in the first half of 2018.

In the first half of 2019, we also recognized additional 4.2 RUB billion of interest payments under IFRS 16.

In August 2018, we announced the start of an open market buyback programme to reduce the capital of the Company. In relation to this programme, a Group company spent 62,117 million RUB and 133,605 million RUB in the second quarter and the first half of 2019.

On 20 August 2019, the Company announced the completion of the buyback programme. From the start of the programme, a Group company purchased in aggregate 13,506,650 ordinary shares and 23,696,806 depositary receipts for the total amount of \$3 billion. The acquired securities represent 4.96% of the Company's capital.

Other information

Sectoral sanctions against the Russian companies

In July–September 2014, the United States (“US”), the European Union (“EU”) and several other countries imposed a set of sanctions on Russia, including sectoral sanctions, which affect several Russian oil and gas companies. The US Department of the Treasury has placed the Company onto the Sectoral Sanctions Identifications List subject to Directive 4 of the Office of foreign assets control (OFAC). Directive 4 prohibits US companies and individuals from providing, exporting, or re-exporting directly or indirectly, goods, services (except for financial services), or technology in support of exploration or production for deepwater, Arctic offshore or shale projects that have the potential to produce oil in the Russian Federation, or in maritime area spreading from the Russian territory and claimed by the Russian Federation.

From January 2018 (based on acts adopted in August–October 2017), the US expanded abovementioned sanctions to include certain categories of international oil projects initiated on or after 29 January 2018 in any part of the world, in which companies placed on the Sectoral Sanctions Identifications List subject to Directive 4 (including the Company) have an ownership interest of 33% or more, or ownership of a majority of the voting interests.

Management believes that current sanctions do not have a material adverse effect on the current or planned Group’s oil projects. At the same time, the Company continues to monitor and evaluate potential risks for its operations in connection with sanctions.

Operations in Iraq

The Group is exposed to political, economic and legal risks due to its operations in Iraq. Management monitors these risks and believes that there is no adverse effect on the Group’s financial position that can be reasonably estimated at present.