

Abstract

We continue to publish [a series of reports on oil and gas industry](#) of the Republic of Kazakhstan as the end of 2018 and updated statistical data for 2017. If in 2017 crude oil output, including gas condensate, in the Republic of Kazakhstan increased by 10.5% y/y and amounted to 86.2 million tons or 1.8 million barrels per day, in 12 months of 2018 oil and gas condensate output reached a record of 90.36 million tons, having increased by 4.8% y/y. A significant increase in crude oil output in 2017 resulted from reaching the level of commercial production at the Kashagan oil field from 180 thousand barrels per day at the beginning of the year to 270 thousand barrels at the end with an annual production output of 8.35 million tons of oil. In 2018, oil output was increased to 330-340 thousand barrels per day, however, the set target of the first phase of 370 thousand was not reached due to intake capacity of the reservoir. According to forecasts of the Ministry of Energy of the Republic of Kazakhstan, oil output in 2019 will be 89 million tons. Over 12 months of last year, natural gas production increased by 4.5% y/y and amounted to 55 mn cubic meters.

According to preliminary statistical data of the Committee on Statistics of the Ministry of National Economy of the republic of Kazakhstan (CS of MNE RK), pipeline transportation in 2018 increased by 20.6% y/y and amounted to 281 mn tons. According to our estimates, the volume of oil transportation amounted to about 168 mn tons. Oil refining in the republic is carried out at three main oil refineries located in Atyrau (Atyrau refinery), Pavlodar (Pavlodar refinery) and SKR (Shymkent refinery). Three refineries account for about 94% of refined products in the country in 2007-2018. In 2016-2018, the main refineries in the republic were modernized. The total cost of modernization of the three refineries is estimated at \$ 6.0 bn. Before the modernization of the refineries, about one third of gasoline was imported from the Russian Federation, whilst by the end of 2018 all domestic fuel demand was covered by domestic production and, moreover, there was a surplus for the production of high-octane gas distillate AI 92.

According to the Ministry of Energy, in 2019 considering the current rate of production of high-octane distillates there will be a surplus of domestic gasoline output in the amount of 500-600 thousand tons. The ratification of the agreement within the framework of the EAEU will allow Kazakhstan to export surplus of fuel to the countries outside the Union.

According to preliminary data for 2018, oil and gas industry's share in the GDP structure increased from 17% a year earlier to 21%. However, if we take into account oil and gas industry and related industries (oil refining and production of petrochemical products), as well as their servicing industries (trade and transportation of oil and oil products), the share of the industry, according to our current estimate, approaches 46%-47% of GDP.

In 2011-2014, the share of oil revenues in the structure of the consolidated budget was 46-48%. Starting from 2015, oil revenues began to decline amid a plunge of crude oil prices to 32.4% in 2015 and in 2016 they reached their minimum value of 22.3% during the period under review. According to our preliminary calculations for 11M2018, the share of oil revenues of the consolidated budget was 36.2%. In 2017, the share of expenditures of the consolidated budget to GDP for the first time in 4 years increased to 26%. Such an increase budget expenditures resulted from provision of assistance to the banking system. Over 11M2018, the share of expenditures of the consolidated budget to the forecast GDP decreased to 17%. Along with the reduction in expenses of the consolidated budget, there is a decrease in the share of transfers from the National Fund (NF) in at the amount of 25.9% of the official budget to. The non-oil deficit of the state budget for 11 months of 2018 was at the level of T365 billion (-0.6% of the forecast value of GDP) against the planned T883 billion or 1.5% of GDP. The non-oil deficit of the consolidated budget for 11M2018 amounted to T4.9 trillion and decreased as compared to 11M2017 (-T7.3 trillion). According to our estimates, according to the results of 2018, the non-oil deficit of the consolidated budget will amount to -8% of GDP, while the oil sector will decrease to -1.4% of GDP.

Increase in the cost of oil at the global markets and the expansion of oil output contributed to the increase in revenues to the National Fund (NF) from the oil sector in the form of taxes by 60% y/y to T3,201bn in 2018.

Balance of payment of oil-exporting countries is directly dependent on energy prices at global markets, as well as oil demand in oil importing countries. With this in mind, the change in the value of energy commodities, which in the structure of domestic exports reach at least 60-80% (the share of crude oil and gas condensate 57-72%), significantly affects the nominal value of the country's export proceedings. The growth of oil prices in 2017 reduced current account deficit to \$ 5.4 bn, or -3.4% of GDP. For 9 months of 2018, current account deficit continued to decline and amounted to \$488 mn, which is about -0.3% of GDP, with the average Brent oil price at \$ 71.5 per barrel of Brent. According to preliminary estimates, current account balance in 2018 reached a surplus of \$925 mn, or circa 0.5% of GDP. This sensitivity of current account to exports with oil and oil products is due to the fact that net exports are the only "balancing" item in current account structure of the country.

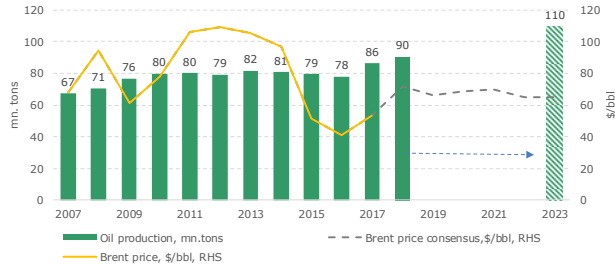
Foreign direct investment is another "balancing" item in the country's balance of payments. Significant decline of the nominal value of Kazakhstan's exports were compensated by direct investments inflow under the financial account, reaching in some years \$13 bn (2008 and 2016). As of 2017, balance of direct investment amounted to \$3.7 bn US dollars (-72.5% y/y). For the first 9 months of 2018, balance of direct investments, according to preliminary data from the NBK, amounted to \$4.9 billion US dollars (+ 69.4% y/y).

Oil and gas production

Crude oil

In 2017, crude oil production, including gas condensate, in the Republic of Kazakhstan increased by 10.5% yoy and amounted to 86.2 million tons or 1.79 million barrels per day. For 12 months of 2018, the volume of oil and gas condensate production reached a record volume of 90.3 million tons (+ 4.8% y / y) (Fig. 1).

Fig. 1. Crude oil and gas condensate production

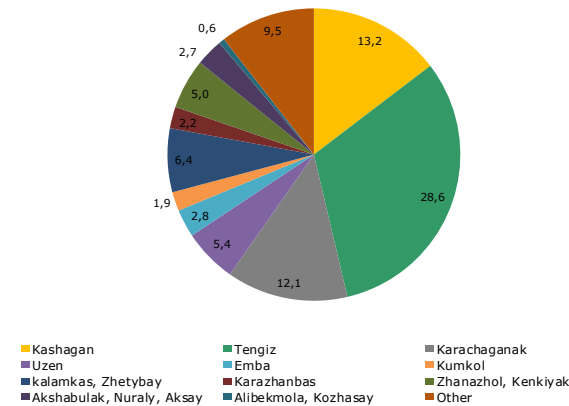


Source: BP, Bloomberg, Ministry of National Economy, Halyk Finance

A significant increase in crude oil production in 2017 resulted from reaching the level of commercial production at the Kashagan oil field from 180 thousand barrels per day at the beginning of the year to 270 thousand barrels at the end of it, with an annual output of 8.35 million tons of oil. In 2018, production was increased to 330-340 thousand barrels per day, however, the set target of the first phase of 370 thousand was not reached due to intake capacity of the reservoir. In 2018, production at the field amounted to 13.2 million tons (Fig. 2). The increase in oil production in 2017 was also contributed to the increase in oil production at the Tengiz field by 4% y/y to 28.7 million tons. In 2018, the crude oil and gas condensate production at the Tengiz field was 28.6 million tons, which is 0.3% less than the year before. Oil and gas condensate production at the Karachaganak field in 2018 amounted to 12.1 million tons (-3.2% y/y, 12.5 million tons in 2017). The volume of production at other fields of the republic as of the end of 2018 amounted to about 36.45 million tons.

Thus, due to an increase in production at the Kashagan field, it was possible to stop the general trend of reduction in oil output, observed in 2013-2016 at 4% per year, which we described in our [previous industry survey](#).

Fig 2. Oil and gas condensate in 2018, mn. tons*



Source: Ministry of energy of Kazakhstan, *Halyk Finance estimate

According to the data of the International Energy Agency (IEA - International Energy Agency), crude oil output in Kazakhstan in 2018 ranged from 1.80-1.96 million barrels per day, with an average daily production for 11 months of 1.91 mn barrels of the crude. In November 2018, daily production amounted to 1.95 million barrels. Remind that Kazakhstan assumed obligations of oil cut in 2018 by 20 thousand barrels per day under the OPEC+ agreement.

Thus, considering oil output of 90.3 million tons (1.87 million bpd) in 2018 vs. 86.2 million tons (1.79 million bpd) in 2017 due to an increase in production at the Kashagan oilfield while reducing at the Tengiz and Karachaganak fields, the republic's contribution to oil cuts agreement is not entirely clear.

In 2019, Kazakhstan also participates in the oil cuts agreement, by taking obligations to reduce daily production by 40 thousand barrels during 6 months of 2019 from the average annual level, which will be about 1.86 million barrels per day. According to the December agreement of the last year in Vienna to cut oil output, Saudi Arabia and the Russian Federation agreed to reduce its production. For the OPEC-member countries, a decrease of 800 thousand barrels per day is expected. Non-OPEC countries, including Kazakhstan, will commit to reduce oil production by 400 thousand barrels per day. The contract comes into force on January 1, 2019 and will be valid during the first half of 2019. According to the forecasts of the Ministry of Energy of the Republic of Kazakhstan, the production of oil and gas condensate in 2019 will decrease to 89 million tons (1.82 million barrels per day). The program on technical maintenance at the Kashagan field (for 45 days) in April

and at the Tengiz oilfield for 45 days in August and 10 days in October will contribute to this goal.

Natural gas

Natural gas production (in liquid or gaseous state) in 2017 increased by 13.4% y/y and amounted to 52.9 mn cubic meters. In the 12 months of last year, natural gas production continued to grow by 4.5% y/y and amounted to 55 mn cubic meters. According to the current plans of the Ministry of Energy of the Republic of Kazakhstan, natural gas production in 2030 will reach 87 million cubic meters with the expansion of domestic consumption to 63 million cubic meters.

Oil and natural gas production outlooks

According to the updated forecasts of socio-economic development (SED) of the Republic of Kazakhstan from November 26, 2018, oil and gas condensate production in the republic in 2019 is expected to reach 88 million tons. However, according to the Minister of Energy, the estimated crude oil and gas condensate output in 2019 will be circa 89 million tons. In the future, an increase in output of 1 million tons per year is expected. According to our current forecast, the average annual increase in the production of crude oil and gas condensate in the period 2019-2023 will be about 3.8-3.9% and as of 2023 and will reach 110 million tons. Such a significant increase in production will be possible due to the expansion of Tengiz oilfield to 39 million tons (850-900 thousand barrels per day), as well as due to output expansion to 18 million tons per year at Kashagan oilfield. Oil production at Karachaganak field is projected at 12-13 million tons of crude per year. Crude oil production at other fields of the republic will be circa 35-40 mn tons per year.

According to the forecasts of the Ministry of Energy of Kazakhstan, in 2020 natural gas production will be 87 million cubic meters. To achieve this level of production, the annual increase in production should be circa 4.1%, with an average increase in output of 5.0% in 2010-2017 it seems to us possible. The driver of domestic consumption growth will be the gasification of settlements of the republic, the coverage of which should reach 56% by 2030.

Industry impact in economy

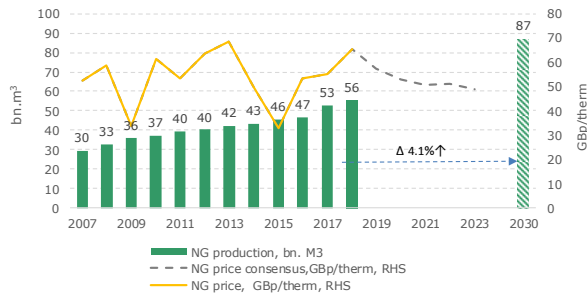
GDP

Oil and gas industry of Kazakhstan began to increase its share in nominal GDP since 1999, together with a gradual increase in the cost of oil on global energy markets. If in 1999 the contribution of oil and gas industry to nominal GDP was 16.8% (7.8% in 1998), then already in 2000 its share increased abruptly to 26.6%. In 2015, the industry shared a minimum of 14% in GDP and afterwards gradually recovered to 17% in 2017 (Fig. 4.).

According to the preliminary data for 2018, the industry's share in GDP increased to 21%. However, if we consider oil and gas industry and its related industries in manufacture (oil refining and production of petrochemical products), as well as servicing industries (trade and transportation of oil and petroleum products), the share of all petroleum related parts of the economy approach 46-47% of GDP.

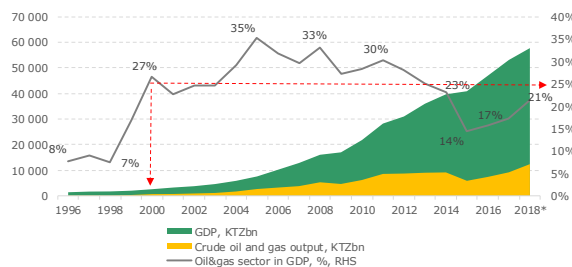
Correlation between GDP growth (2010 = 0) in Kazakhstan and oil prices at global markets increased in 2006-2017 from 85.4% to 89.9%. In 2010-2018 direct relationship

Fig.3. Natural gas production in liquid and gaseous state



Source: Bloomberg, МНЭ РК, Halyk Finance

Fig.4. Oil sector in GDP



Source: CS MNE, Halyk Finance

between these two economic indicators has increased even more and amounted to about 93.1%.

Thus, downtrend of oil price to \$ 52 per barrel at global energy markets with crude oil production in 80 million tons in 2015 reduced the contribution of oil and gas industry to 14.4% from 23.1% a year earlier. The reverse was observed in 2017, when oil prices uptrend to \$54 and the expansion of production to 86 million barrels led to an increase in contribution to GDP to 17.3% (Fig. 4). According to our estimates, oil and gas industry shared 21% in the republic's GDP in 2018 (January-September 2018, 23.1% according to preliminary data). In 2019, the industry's share in GDP will be closer to the average value of 25.7%, recorded in the period 2000-2018. (Fig.4).

The identified correlation, in our opinion, is explained by the existing imbalance in the structure of the economy in favor of commodity sector, the increase or decrease in production of which has a "pass-through" effect on related manufacturing industries (production of coke and refined petroleum products, production of chemical industry, production of rubber and plastic products, etc.), as well as on trade and transportation of oil and oil products. The same correlation is shifted to other sectors of the economy, since in the country there is a transmission of revenues of oil and gas sector to other sectors of the economy through budgetary injections from the National Fund of Kazakhstan in the form of guaranteed and targeted transfers.

Structural imbalances of the economy was largely shaped and deepened due to FDIs inflows in oil and gas sector of the economy (oil and gas production, geological exploration).

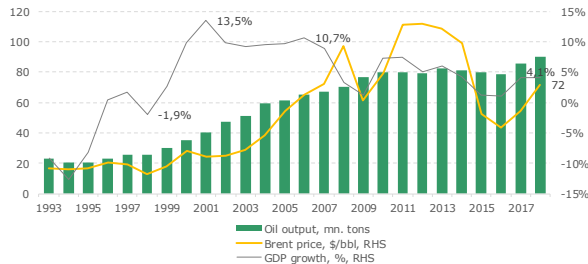
Balance of Payment

Export

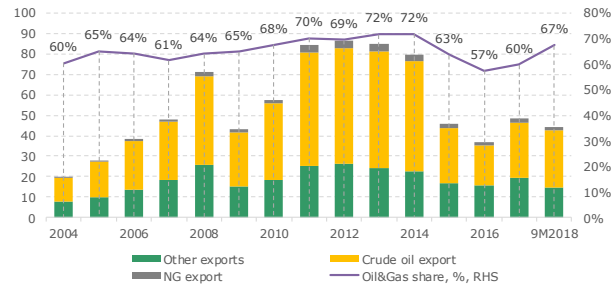
Balance of payments of oil-exporters is directly dependent on energy prices at global energy markets, as well as on domestic energy demand of oil-importer. Taking into account the fact that crude oil exports in Kazakhstan in 2010-2017 averaged 3.0% or 1.4 million tons per day (according to OPEC) of total crude oil exports in the world (3.1% in 2017), the republic cannot have a significant impact on global oil supply. Therefore, price changes of mineral products, which in exports are at least 60-80% (crude oil and gas condensate is 57-72%), significantly affect the country's export earnings in nominal terms.

Thus, oil prices slump of 2014 from \$ 99 to \$ 55 per barrel of Brent with maintaining oil production at 80 mn tons (81 mn in 2014) and decreasing exports of the crude from 68 mn tons to 63 mn tons, led to a reduction in crude oil exports in nominal terms from 53.6 bn US dollars in 2014 to 26.8 bn US dollars in 2015. At the same time, the trade surplus dropped from 36, 2 bn US dollars to 12.7 bn US dollars. Current account balance deteriorated sharply from a surplus of \$6.1 bn in 2014 (+ 2.8% of GDP) to a deficit of \$5.1 bn in 2015 (-2.8% of GDP). A further drop in oil prices in 2016 expanded current account deficit to a record \$8.9 bn (-6.5% of GDP). The growth of oil prices in 2017 reduced current account deficit to 5.4 billion US dollars (-3.4% of GDP). For 9 months of 2018, current account deficit, according to the updated data of the NBK, continued to decline and amounted to \$487 mn, which is about -0.3% of GDP, with an oil price of 71.5 dollars per barrel. According to the preliminary estimates, current account balance of the NBK for 2018, was formed with a surplus of \$ 925 million, or about 0.5% of GDP. Such sensitivity of

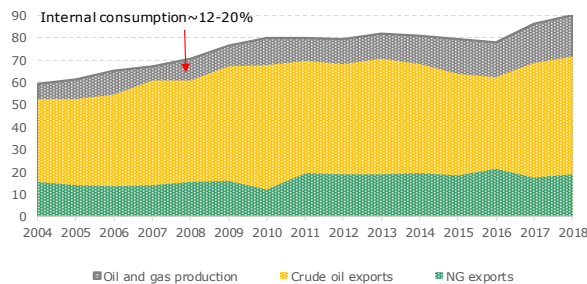
Fig.5. Oil output vs. economic growth



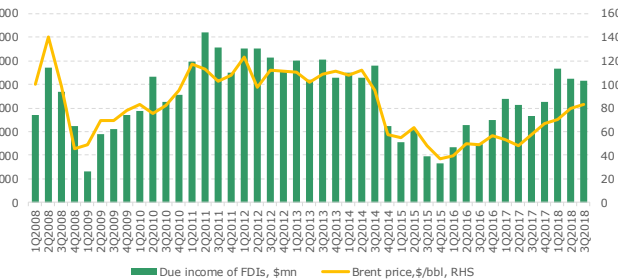
Source: BP, IMF, Halyk Finance

Fig.8. Crude oil and NG export earnings, US\$bn


Source: Trade Map, Halyk Finance

Fig.7. Export structure in quantities, mn. tons


Source: Trade Map, Halyk Finance

Fig.8. Due income of FDI vs Brent prices


Source: NBK, Halyk Finance

current account to export operations with oil and oil products is due to the fact that net exports are the only "balancing" item in current account structure of the country.

Thus, the analysis of other current account items in 2010-2017 showed that the services account (- \$6.2 billion average), primary (- \$20.6 billion) and secondary income (- \$ 853 million) had a negative balance. According to updated data for the first 9 months of 2018, the situation has not changed significantly. Negative balance of services account for 9 months of the current year amounted to circa \$3.1 bn (-0.3% y/y). According to preliminary data for 12 months, negative balance on of services amounted to \$4.1 bn (-6.7% y/y). Negative balance of primary income account (current 9M2018 data) increased by 35% and reached \$17.2 bn due to income from direct investments, net balance of which increased by 29% y/y. According to preliminary estimates, the negative balance of primary income balance for 12 months last year increased by 25.4% y/y and amounted to \$22.4 bn. Secondary income balance for 9 months of 2018 was formed with a slight surplus of \$ 8.9 million, that does not have a significant contribution to balancing of the current account. A preliminary estimate by the NBK for this current account item shows a further expansion of the surplus to \$ 50 million.

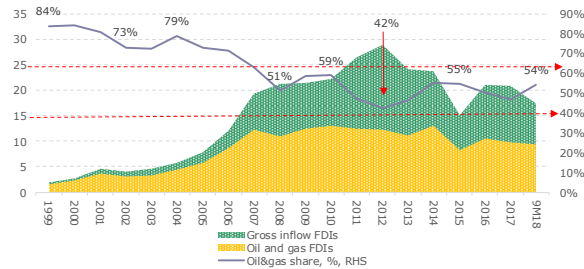
A significant burden on the current account is formed from the investment income of foreign investors, which is in direct correlation with the increase in hydrocarbon prices (Fig. 8). According to our calculations, an increase in Brent prices by 1% leads to an increase in liabilities of primary income account, for the item "income from direct investments (debit)" by 0.92% (observation period from Q1 2008 to 3 sq. 2018).

Despite a significant share of crude oil in the country's exports, there has been a gradual increase in domestic consumption of oil and petroleum products. According to the CS MNE of Kazakhstan, the average increase in domestic consumption in 2011-2018 amounted to circa 6.1% (+ 10.8% in 2017 and + 7.8% in 2018). In 2018, an increase in energy consumption was observed due to the domestic production of high-octane distillates. We expect domestic consumption to expand at an average level of 3.4% -3.6% from 2018-2023.

Foreign direct investments (FDI)

FDIs is another "balancing" item in the country's balance of payments. Substantial slump of Kazakhstan's exports in nominal values, which on average consist of 70% of mineral products, were compensated by the inflow of foreign direct investments under the financial account, reaching in some years \$13 bn (2008 and 2016). According to the NBK, the average value of direct investments in 2000-2016 was 6.3 billion US dollars. As of 2017, the balance of direct investments amounted to \$3.7 bn (-72.5% y/y). For the first 9 months of 2018, the balance of direct investments, according to preliminary data from the NBK, amounted to \$4.9 bn (+ 69.4% y/y).

Analysis of gross inflows of FDI showed that the share of the investments in oil and gas sector was gradually reduced in the period 2008-2017 and was within the band of 42% - 59%. (Fig. 10). However, the gross inflow of FDIs at the level of 80% and higher, observed until 2008, laid the foundation for deepening the disproportions in the economy towards the development of commodity industries. In 2005-2017, FDI distribution in crude oil and gas production industry was irregular and was largely determined by oil

Fig.9. Gross inflow of FDI, USbn


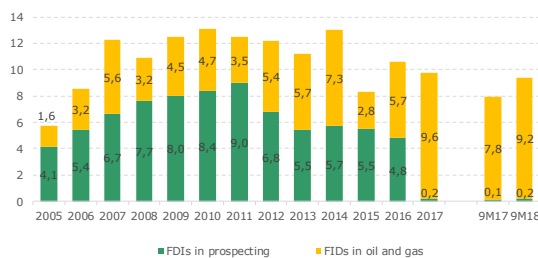
Source: NBK, WB, IMF, Halyk Finance

prices at the global energy markets, while investment in oil prospecting was relatively stable and grew in 2005-2011. In 2012-2016 FDI amounted to 4.8-6.8 billion US dollars annually. As of 2017, FDI's share in oil and gas sector declined to 47%, while investment in oil prospecting decreased drastically from 4.8 billion US dollars in 2016 to 198 million US dollars in 2017. FDI's in oil and gas sector, on the contrary, increased by 27.5% y/y and amounted to \$5.2 bn. For the first 9 months of 2018, FDI's in prospecting amounted to \$205 mn, while FDI's in oil and gas production increased by 17.1% y/y to \$ 9.2 bn. The share of the oil and gas sector in the total structure of FDI in the first half of 2018 was 53% (54% for 9M2018).

Such a change in FDI's structure slanted to oil and gas extraction from oil prospecting has been observed since 2012 and indicates that foreign investors limit their investments in prospecting of oil at existing or new fields in the republic and only to existing projects (Kashagan, Tengiz, Karachaganak). We believe that overproduction and imbalance in demand and supply of crude oil creates certain risks of price uncertainty at the oil market, forcing investors to reduce capital investments for prospecting and increase investment in technologies for extracting crude oil and gas at the existing oilfields (Fig. 10).

FDI outlooks

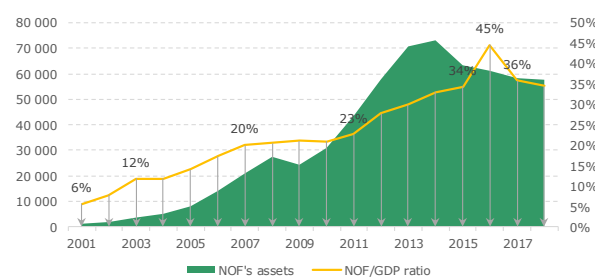
We believe that the main inflow of foreign investment in the next 5 years will be mainly limited to Kashagan, Tengiz and Karachaganak oilfields. About \$ 37 billion will be invested in Tengiz oilfield as part of the future expansion project, as well as the wellhead pressure management project. According to preliminary estimates, the consortium will invest about \$5 bn in the implementation of Karachaganak's future development gas consortium KPO invests \$1.1 bn. Initially, investments in Kashagan oilfield worth \$5 bn were associated with the construction of the compression center TsK-01 for second injection to expand production at the level of 370 thousand barrels per day. In the autumn of last year, a statement was made that a concept was being worked out to expand oil production to 450 thousand barrels per day, but the amount of investment under this project was not specified.

Fig.10. Gross FDI inflows, \$bn


Source: NBK, Halyk Finance

The National Fund

According to the NBK, the currency portfolio of the National Fund of the Republic of Kazakhstan (NF RK) at the end of 2017 amounted to \$ 58.3 bn (-4.7% y/y). The size of the nominal holding of bonds of state holdings (Samruk-Kazyna, KazAgro, Baiterek) amounted to T803.2 billion (\$2.5 bn). The balance on the account in national currency amounted to T337.9 billion (\$ 1.0 bn). The value of the fund's savings portfolio was \$ 50.4 bn, or 86.4% of the total size of the currency portfolio. The value of the stabilization portfolio was at the level of \$ 7.9 billion, or 13.6% of the total currency portfolio. Investment income for 2017 was formed \$ 4.4 bn with a yield level of 7.61%. In 2017, the assets of the NF showed the highest return, which is comparable to the level of return on the portfolio of the NF, in the period of 2003-2007 (7.6% -9.9%) and 2009 (7.3%). At the same time, the share of NF's assets to GDP decreased from 45% in 2016 to 36% in 2017. The decrease in the NF's assets was contributed by the allocation of the fund's resources to maintain the sustainability of the banking sector in the amount of 4% of GDP) and funds from programs Nurly Zher and Nurly Zhol (Fig. 11).

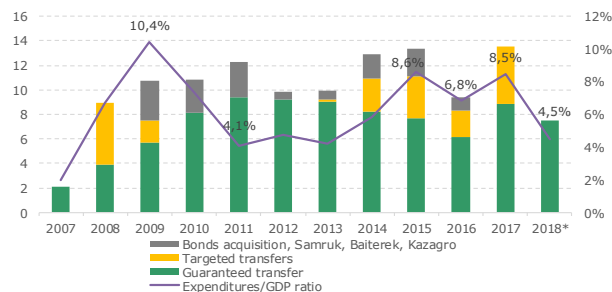
Fig.11. National Oil Fund assets, USmn


Source: NBK, IMF, Halyk Finance

For 12 months of 2018, the size of the currency portfolio of the NF decreased by 1.05% and amounted to \$ 57.7 billion.

Fig.12. Oil&gas sector taxation, \$bn


Source: MinFin, CS MNE, Halyk Finance

Fig.13. Fund expenditures, \$bn


Source: MinFin, CS MNE, Halyk Finance

An analysis of the structure of fund's revenues shows an increase in the replenishment of the fund's assets at the expense of direct taxes from oil enterprises of the republic by 60% y/y to T3.201 bn. A significant increase is observed on CIT (corporate income tax) revenues by 76% y/y, on rent tax revenues on exported crude oil 1.9 times and 70% in PSA (production sharing agreement).

The NF's expenditures for 12 months of 2018 decreased by 41% y/y and amounted to T2.618 bn. At the same time, a decrease in the use of the fund's resources in the form of a guaranteed transfer to the budget by 10% y/y was observed.

The reduction of the fund's expenditures in 2018 occurred primarily due to absence of targeted transfers to the budget, as well as by reducing the size of the guaranteed transfer from T2.880 billion to T2.600 billion (Fig. 12). The fund did not issued bonds in 2017 and in 2018. In 2017, Samruk-Kazyna JSC carried out early repayment of bonds in the amount of \$ 520 million. The fund's investment income for the 12 months of last year amounted to T1.845 billion (\$ 5.4 bn, + 22.2% y/y), having increased by 29% y/y.

It should be noted that the increase in oil prices at global market and the expansion of oil production and, as a consequence, the increase in revenues from the oil sector in the form of taxes, as well as the absence of targeted transfers, formed a positive balance of income over expenses of the NF over 12 months of 2018 in the amount of KZT2.480 billion (fig. 12).

The concept of using funds of the National Oil Fund in 2018-2020 assumed to limit the use of the fund to the amount of the guaranteed transfer to the budget, which amounted to 2.6 trillion as of December 1, 2018. tenge (\$7.5 bn) and was fully transferred. Despite all the efforts of the government to reduce the budget's dependence on the funds of the National Oil Fund of Kazakhstan, this dependence still remains. Thus, under the law "On Guaranteed Transfer from the National Fund of the Republic of Kazakhstan for 2018-2020," a gradual reduction in the size of the guaranteed transfer from T2.600 billion in 2018 to T2.300 billion in 2019 was planned and a decrease to T2,000 billion in 2020 was set. The law in November of last year lost its force. In November 2018, the Law "On the Guaranteed Transfer from the National Fund of the Republic of Kazakhstan for 2019-2021" entered into force, under which the following phased reduction of transfer is expected: 2019 - T2.450 billion, 2020 - T2,300 billion and 2021 - T2,000 billion, while maintaining the minimum balance of 30% of GDP.

We believe that the postponement explicable and reflects the inelasticity of the budget process. Thus, increasing the burden on the NF during economic crises in the economy is fully justified and expected (2008-2009), but budgetary stimulus continues even beyond the period of deteriorating macroeconomic conditions in the form of support and development programs. In our opinion, in a favorable market environment, there should be fiscal consolidation and a reduction in the burden on the fund. However, switching the budget expansion to a more neutral fiscal policy does not occur or occurs very slowly, and this leads to the fact that the fund's expenditures prevail over its revenues and the accumulation of funds does not occur.

Oil sector and consolidated budget

The consolidation of income and expenses of the NBK and the state budget is based on the IMF methodology and differs from one used by the authorized financial bodies of the Republic of Kazakhstan. Significant methodological differences, which are not taken into account in the

framework of consolidation by the financial authorities of the republic, are accounting for assistance to quasi-state structures in state expenditures, and tax deductions received from the taxation of oil and gas sector are taken into account in the revenues of the budget.

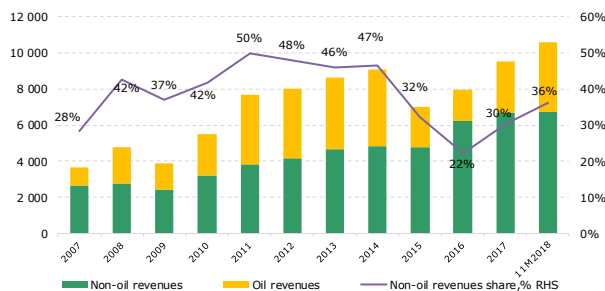
An analysis of the consolidated revenues of the NF and non-oil revenues of the state budget showed that the share of oil revenues of the NF in the consolidated revenues of the state budget and the NF increased from 28.3% in 2007 to 49.8% in 2011 (Fig. 14). In 2011-2014 the share of oil revenues in the structure of the consolidated budget was 46-48%. Starting from 2015, oil revenues began to decline amid a drop in oil prices to 32.4% in 2015 and in 2016 they reached their minimum of 22.3% during the period under review. Simultaneously with the gradual recovery in energy prices on global energy markets, as well as with an expansion of oil and oil products production in the country, the share of oil revenues of the budget also began to recover and as of 2017 amounted to 30.3%. According to our preliminary calculations for 11M2018, the share of oil revenues of the consolidated budget was 36.2%. The analysis of consolidated budget expenditures showed that in 2017 the share of consolidated budget expenditures to GDP increased for the first time in 4 years to 26%.

Such an increase in expenditures resulted from the assistance to the banking system that year. In 2014-2016 the share of expenditures to GDP was 22.1-22.9%. The increase in expenditures of the consolidated budget contributed to an increase in expenditures of the state budget by more than 32% y/y. Over 11M2018, the share of expenditures of the consolidated budget to the forecast GDP decreased to 17%. Along with the reduction of consolidated budget expenditures, there is a decrease in the share of transfers in the official budget expenditures to 25.9% (Fig. 15).

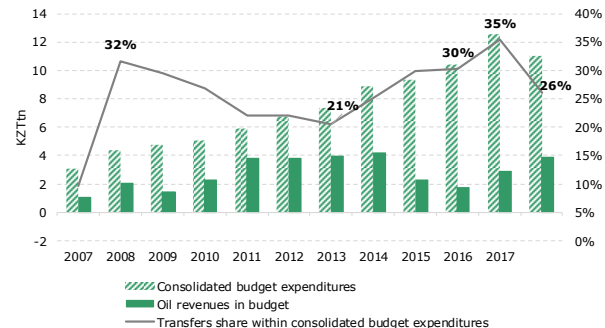
In 2018, there was a reduction in expenditures of the consolidated budget, which we estimate at the level of about 19% -20% of GDP. The reduction of expenditures of the consolidated budget was promoted by the reduction of state aid primarily to the banking system in the framework of the budget process. If the budget in 2017 was allocated T2.1 trn within the budget of 2018, budget allocations for commercial banks totaled about T640 bn. Not the least role in reducing the costs of the consolidated budget contributed to the abolition of the target transfer from the NF to the budget. The consolidated budget expenditures are reduced, on the one hand, by optimizing budget expenditures; on the other hand, budget expenditures are replaced by extra-budgetary funds - the National Bank and the UAPF (Unified Accumulating Pension Fund). In 2019, it is expected to attract circa T1.1 trn from these sources.

The non-oil deficit of the state budget for 11 months of 2018 was at the level of T365 bn (-0.6% of the forecast value of GDP) against the planned T883 bn or 1.5% of GDP (Fig. 16). The non-oil deficit of the consolidated budget for 11M2018 amounted to T4.9 trn and decreased as compared to 11M2017 (-T7.3 trn). According to our estimates, by the end of 2018, the non-oil deficit of the consolidated budget will amount to -8% of GDP, while the oil sector will decrease to -1.4% of GDP (Figure 16).

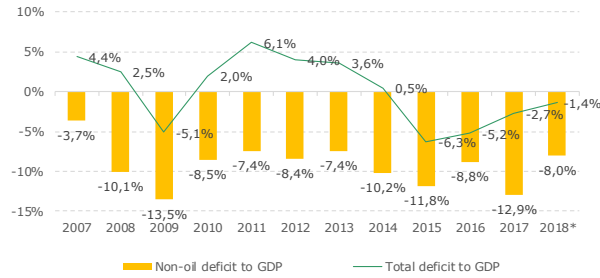
Analysis of revenues and expenditures of the consolidated budget in the period evidenced that the state of public finances continues to be directly dependent on the revenues of oil sector and experiences the cyclical nature of the industry. Budget stimulus of the economy as an anti-cyclical measure is, in our opinion, quite reasonable and

Fig. 14. Consolidated budget revenues, Tbl


Source: MinFin, Halyk Finance

Fig. 15. Expenditures of consolidated budget


Source: MinFin, Halyk Finance

Fig.16. Non-oil deficit of consolidated budget


Source: Minfin, Halyk Finance, *estimate

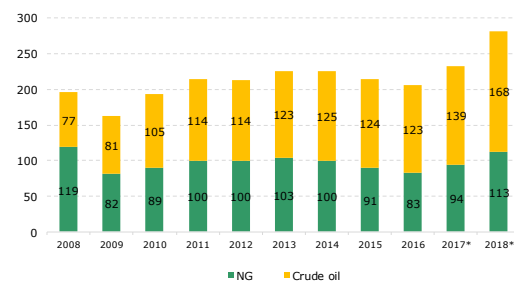
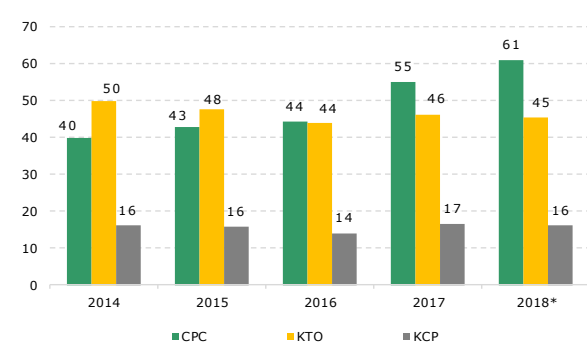
Fig.17. Main pipelines oil and gas transportation, mn. tons

 * data for 2017 on oil and gas transportation is classified, *Halyk Finance estimate
 Source: CS MNE, Halyk Finance

Fig. 18. Crude oil transportation by pipelines, mn.tons


Source: companys' data, Halyk Finance

expected measure. However, the accumulated imbalances in the economy (predominance of commodity sector) and imbalances in the mechanisms of economic development (mainly through budget transmission through targeted and guaranteed transfers within the framework of infrastructure and other government programs) make such an economic development model extremely dependent on oil revenues. Restoration of the tax base of the non-commodity part of the economy after the end of the economic downturn is more protracted and requires the redistribution of financial resources from revenues of the commodity sector of the economy, whose recovery has been marked by higher rates.

Oil and gas transportation

Crude oil transportation in Kazakhstan in 2017 through main pipelines increased by 13.1% y/y and amounted to 232.8 million tons. According to the annual data of the Committee on Statistics, the data specifying transportation of oil and gas separately in 2017 were classified and are marked with an "X" in 2017 with the explanation that the data is confidential. According to our estimate, the volume of gas transportation was at the level of 94 million tons, and oil was 139 million tons. Oil and gas transit in 2017 increased from 33 million tons a year earlier to 67.7 million tons. In 2018, according to the preliminary statistics, crude oil pipeline transportation totaled 281 million tons.

CPC - Caspian Pipeline Consortium

Crude oil transportation via the CPC pipeline in 2017 increased by 24.4% y/y and amounted to 55.1 million tons of oil. In 2018, the volume of transportation increased by 10.8% yoy and amounted to 61.1 million tons. The expansion of oil transportation in January-December 2018 in this area is primarily due to production at the Tengiz, Karachaganak and Kashagan fields. As a result of the expansion project, the carrying capacity of the pipeline in the Tengiz-Novorossiysk direction reached 67 million tons. In March 2018, the last station of the expansion project was commissioned. (fig. 18)

KTO - KazTransOil JSC

Crude oil transportation through the KTO pipeline in 2017 increased by 5.7% and amounted to 46.3 million tons. It should be emphasized that oil is taken into the pipeline at more mature fields, where natural depletion of fields occurs and production volumes decrease by 1.6% per year. In addition, under the OPEC + Kazakhstan agreement, Kazakhstan has undertaken obligations to reduce oil production, which, according to the Minister of Energy, will be carried out in the mature fields of the country. For 12 months of 2018, the volume of transportation decreased by 2.1% y/y and amounted to 45.3 million tons. (fig. 18)

KCP - Kazakhstan-China Pipeline LLP

Crude oil transportation through the KCP pipeline in 2017 increased by 17.1% and amounted to 16.5 million tons. Transportation via the Atasu-Alashankou pipeline amounted to 12.3 million tons. The Atasu-Alashankou oil pipeline, after commissioning NPS 8 and 10, in 2013 increased its design capacity to 20 million tons of oil per year. According to the Kazakhstan-China Pipeline LLP, in 2018 the volume of oil transportation through the KCP pipeline system decreased by 3% y/y and amounted to 16 million tons. Transportation via the Atasu-Alashankou pipeline amounted to 11.4 million tons. (fig. 18)

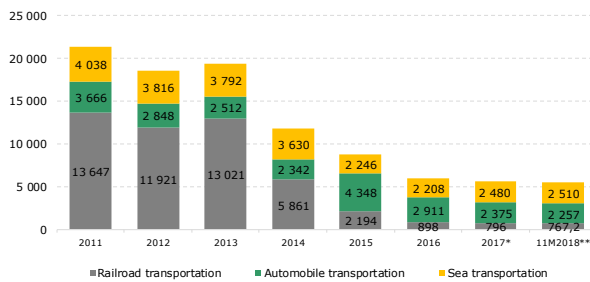
Oil transportation by other types of transport

Sea transport in terms of transportation of crude oil is in the second place. However, the information presented in the reports of the Committee on Statistics of the Republic of Kazakhstan probably does not fully take into account transportation volumes, and for 2017 it is not reflected in the statistical reporting, since bears the status of confidential information. However, the analysis of the annual reports of NMSC Kazmortransflot LLP, points to discrepancies with the official statistics of the Statistics Committee of the Republic of Kazakhstan. Thus, according to the actual data of the company, oil transportation in 2013 amounted to 5,114 thousand tons (in the directions of Aktau-Makhachkala and Aktau-Baku) against 3,792 thousand tons of the Committee on Statistics, and in 2014 transportation reached record high of 4,596 thousand tons (in the same areas) versus 3,630 thousand tons according to the data of the Committee. As of 2016, the volume of oil transportation amounted to 2,875 thousand tons versus 2,208 thousand tons according to official statistics of the Committee. According to the annual statements for 2017, the NMSC Kazmortransflot LLP transportation volume for 2017 amounted to 2,480 thousand tons. (Fig. 19). Data for 2018 are not available. According to our estimates, transportation by sea last year amounted to at least 2.5 million tons.

The third largest mean of crude oil transportation is automobile transport. According to the official statistics of the Committee, automobile transportation in 2017 decreased by 18.4% y/y and amounted to 2.4 million tons. At the same time, transportation of petroleum products for the year increased by 76.3% and amounted to 859.4 thousand tons. According to our estimates, the transportation of crude oil by road for 11 months of 2018 amounted to about 2.3 million tons. Transportation of natural gas by vehicles in the republic is not performed.

And the fourth largest transportation of crude oil in Kazakhstan is rail transport. According to the Committee, crude oil transported by rail in 2017 decreased by 11.3% y/y and amounted to 796.4 thousand tons. Oil products transportation, on the contrary, increased by 1.4% and amounted to 13,156 thousand tons. For 11 months of 2018, transportation of crude oil by this type of transport amounted to 767 thousand tons.

Fig. 19. Crude oil transportation, K tons

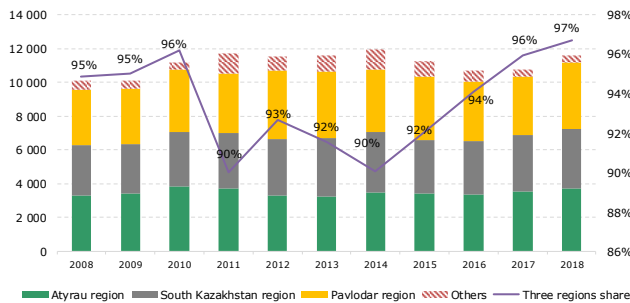


*reports of LLP «NMSC «Kazmortransflot», ** estimate
 Source: CS MNE, Halyk Finance

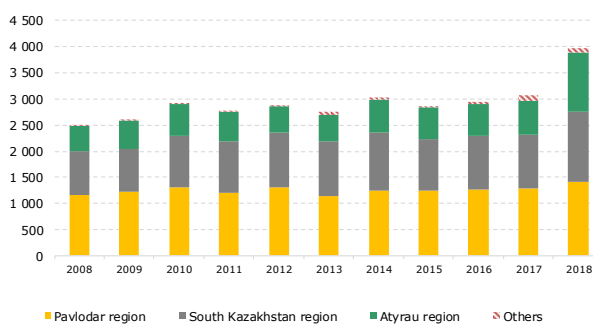
Oil refinery

Oil refining in Kazakhstan is performed at three main oil refineries located in the Atyrau region (Atyrau refinery), Pavlodar region (Pavlodar refinery) and SKR (Shymkent refinery). The share of the three regions accounted for about 94% of refined products in 2007-2018. The share of mini-refineries accounted for the remaining 6% (Fig. 20).

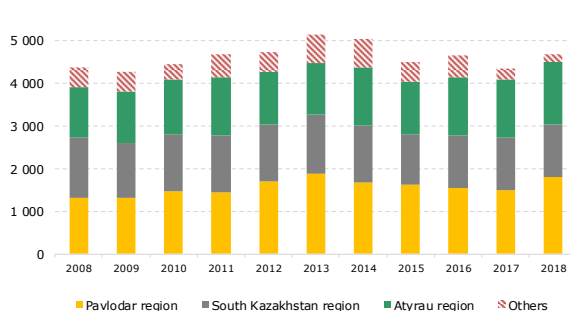
According to the data from various sources, there are about 30 mini-refineries in the republic. The largest and functioning are Condensate JSC in the West Kazakhstan Oblast and Aktobe Oil Refining LLP in Aktobe, Amangeldy GPP LLP in Zhambyl region, Astana-Oil Oil House LLP in Akmola Oblast and Kyzylorda Refinery LLP in Kyzylorda Oblast. Unlike large refineries, at the mini-refineries refining of petroleum products is carried out selectively, so the production of diesel fuel is established at all mini-refineries, and the production of high-octane products is established at Condensate JSC in WKO, Amangeldy GPP LLP in Zhambyl region. The production of products of heavy fractions of oil refining (fuel oil) has been established at Aktobe Oil Refining LLP, Amangeldy GPP LLP and Kyzylorda

Fig.20. Oil refinery products output, K tons


Source: CS MNE, Halyk Finance

Fig.21. Motor engine fuel production (gasoline and aviation gasoline), K tons


Source: CS MNE, Halyk Finance

Fig. 22. Gasoil production, K tons


Source: CS MNE, Halyk Finance

Refinery LLP. Expansion of the oil refining industry with mini-refineries in Kazakhstan began from 2002-2003.

In 2016-2018 the main refineries in the republic were modernized. The total cost of modernization of the three refineries is estimated at \$6.0 bn. The cost of modernizing the Pavlodar refinery was \$831 mn. The cost of modernizing the Atyrau refinery, according to KMG, was \$3.3 bn and consisted of building an aromatic hydrocarbons production complex (\$1,271 mn) and deep processing of oil (\$ 2,050 mn). The modernization of the Atyrau refinery was completed in December 2017. The cost of modernization of the Shymkent refinery is estimated at \$ 1,853.5 million, its funding was carried out with the assistance of the DBK as part of the GPIID for 2015-2019. The reconstruction and modernization of the Shymkent refinery was completed in two phases in June 2017 and March 2018. According to the modernization project of the Pavlodar Petrochemical Plant, its cost was estimated at \$831 mn. The modernization of the Pavlodar Petrochemical Plant was completed in December 2017.

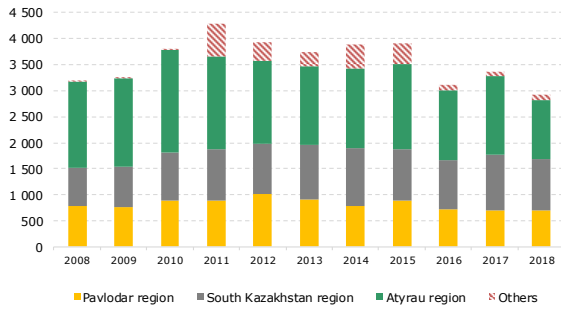
As a result of the modernization of the Atyrau oil refinery, it became possible to increase the production of high-octane distillates from 260 thousand tons per year to 600 thousand tons per year. In addition, the plant began to produce diesel fuel of environmental class K4 and K5. Production of high-octane distillates at Shymkent oil refinery as a result of modernization will increase from 882 thousand tons to 2,271 thousand tons per year, and diesel fuel from 1 209 thousand tons to 1 916 thousand tons per year. The plant also launched production of environmentally friendly diesel fuel. At Pavlodar oil refinery, production of high-octane gasoline will increase from 1,081 thousand tons to 1,492 thousand tons per year.

Before the modernization of domestic refineries, about one third of gasoline was imported from the Russian Federation, while by the end of 2018 all domestic fuel demand was covered by domestic production. So, if the production of motor fuel in 2017 amounted to 3,058 thousand tons (+ 3.7% y/y), then in 2018 the volume of processing increased by + 29.8% y/y to 3,969 thousand tons. Significant growth is also observed in the production of kerosene, including jet fuel by 29.4% to 388.3 thousand tons (+ 16.7% in 2017). A significant increase in the production of motor gasoline is observed in the Atyrau region by + 74.3% to 1,129 thousand tons in 2018. The growth in the output of motor gasoline in SKR was 29.6% y / y, or 1,332 thousand tons. Production in Pavlodar region increased by 10.7% y / y and amounted to 1,422 thousand tons.

According to the Minister of Energy, the provision of the domestic market of Kazakhstan with high-octane distillates (gasoline) of local production as of 2018 amounted to 93.2%. The provision of the republic with jet fuel in 2018 was 62%.

The growth of heavy fuel (gas oil) production amounted to 4,672 thousand tons and increased by 7.4% y/y (in 2017 - 6.4% y/y). In the Pavlodar region, the production of gasoil in 2018 increased by 19.8% y/y to 1,797 thousand tons. In the Atyrau region, gas oil production increased by 6% y/y for the same period to 1,456 thousand tons. Production in SKR increased by 2.0 y/y and amounted to 1,243 thousand tons for 12 months last year. The production of fuel oil in 2018 decreased by 12.9% y/y and amounted to 2,929 thousand tons. (Fig. 23). The decrease was due to a decline in the production of fuel oil in the Atyrau region by 25% y/y to 1,134 thousand tons, and in SKR (Shymkent) by 10.3% y/y to 971 thousand tons.

Fig 23. Fuel oil production, K tons



Source: CS MNE, Halyk Finance

The provision of domestic market of Kazakhstan with heavy fuel of local production in 2018 amounted to 91.1%.

According to the Ministry of Energy, in 2019, at the current rate of production of high-octane distillates in the country, there will be a surplus of domestic gasoline production in the amount of 500-600 thousand tons. According to the Minister, in 2019 Kazakhstan will be 100% provision of the domestic demand with the local production (with the exception of winter diesel fuel).

The ratification of the agreement within the framework of the EAEU will allow Kazakhstan to export surplus production of fuels to countries outside the Union.

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