ҚазМұнайГаз
NATIONAL COMPANY ҰЛТТЫҚ КОМПАНИЯСЫ

Fostering SUSTAINABILITY driving GROWTH

ANNUAL
REPORT
2020

STRATEGIC REPORT

CORPORATE GOVERNANCE

FINANCIAL STATEMENTS

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STRATEGIC REPORT

« In 2020, we all faced the global challenge of the COVID-19 pandemic, which tested our resilience and teamwork in the face of adversity. I am pleased to inform you that this past year has evidenced KMG's resilience, and that our long-term efforts in all areas of strategic importance have provided a cushion of support for the Company in this difficult period. I would also like to note the tremendous work undertaken this year by the entire team to adapt the Company's activities to the new normal and adjusted expectations concerning the international and domestic market environment.

Christopher Walton,
Chairman of the Board of Directors
of JSC NC KazMunayGas

COMPANY OVERVIEW

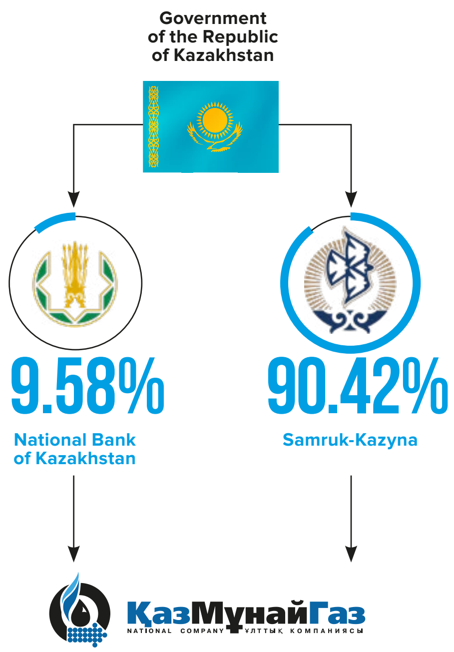
SCOPE OF OPERATION

JSC National Company KazMunayGas ("KMG", the "Company") is Kazakhstan's leading vertically integrated oil and gas company, operating assets across the entire production cycle from the exploration and production of hydrocarbons to transportation, refining and services. Established in 2002, the Company represents the interests of the Republic of Kazakhstan in the national oil and gas industry.

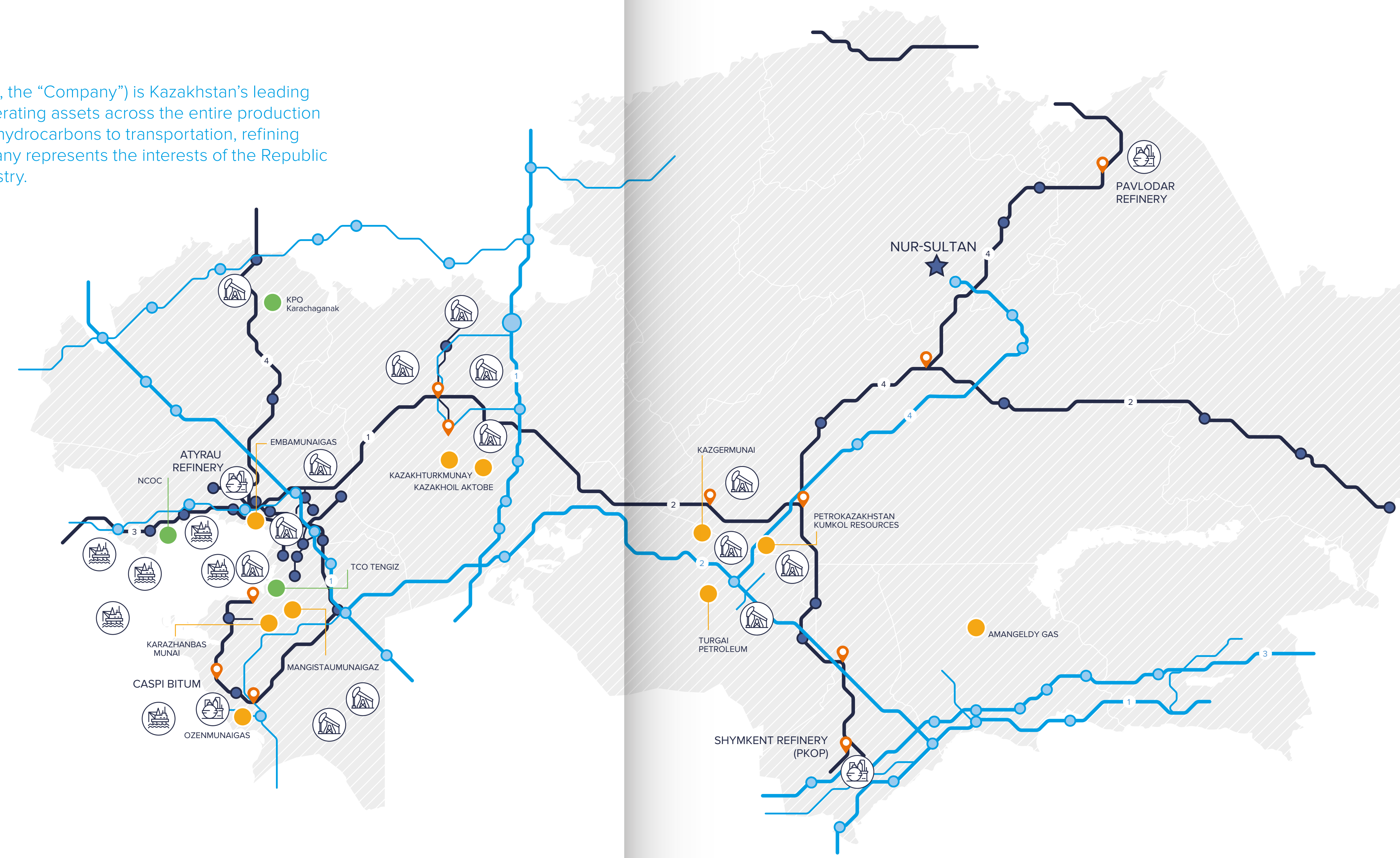
CAPITAL STRUCTURE

KMG is owned by Sovereign Wealth Fund Samruk-Kazyna Joint-Stock Company ("Samruk-Kazyna", the "Fund") (90.42%) and the National Bank of Kazakhstan ("NBK") (9.58%), the share of which was transferred to the trust management of the Fund on 12 October 2015.

Samruk-Kazyna is a sovereign fund, the sole shareholder of which is the Government of the Republic of Kazakhstan. The Fund's mission is to improve the sovereign welfare of the Republic of Kazakhstan and ensure long-term sustainability for future generations. The Fund's portfolio includes companies operating in the oil and gas, transport, logistics, chemical, nuclear, mining and metallurgical, energy and real estate industries.



GEOGRAPHY



1. MunayTas North-West Pipeline Company LLP
2. Kazakhstan–China Pipeline LLP
3. Caspian Pipeline Consortium
4. JSC KazTransOil

1. JSC Intergas Central Asia
2. Beineu–Shymkent Gas Pipeline LLP
3. Asia Gas Pipeline LLP
4. Saryarka gas pipeline project

- OPERATING PRODUCTIONS ASSETS
- MEGAPROJECTS
- Oil pumping station
- Head oil pumping station
- Compressor station

- OPERATIONAL OIL PIPELINE
- OPERATIONAL GAS PIPELINE
- EXPLORATION AND PRODUCTION
- REFINING

#1 IN KAZAKHSTAN

- FOR OIL PRODUCTION
- FOR OIL AND GAS TRANSPORTATION
- FOR OIL REFINING

KEY INDICATORS

21.8 MLN TONNES
Oil and condensate production

8.2 BLN M^3
Gas production

73.2 MLN TONNES
Oil transportation

86.6 BLN M^3
Gas transportation

18.1 MLN TONNES
Oil refining

ASSET STRUCTURE

KMG'S SIGNIFICANT ASSETS INCLUDE

UPSTREAM

OPERATING ASSETS:

- OzenMunaiGas (OMG) **100%**
- Mangistaumunaigaz (MMG) **50%**
- Embamunaigas (EMG) **100%**
- Kazgermunai (KGM) **50%**
- PetroKazakhstan Inc. (PKI) **33%**
- Karazhanbasmunai (KBM) **50%**
- Kazakhoil Aktobe (KOA) **50%**
- Kazakhturkmunay (KTM) **100%**
- KazMunayTeniz **100%**
- Urikhtau Operating (UO) **100%**

MEGAPROJECTS:

- Tengiz (TCO) **20%**
- Karachaganak (KPO) **10%**
- Kashagan (NCOC)[1] **8.44%**

MIDSTREAM

- KazTransOil (KTO) **90%**
  - 50% Kazakhstan–China Pipeline
  - 51% MunaiTas North-West Pipeline Company
  - 100% Batumi Oil Terminal
- Caspian Pipeline Consortium (CPC)[2] **20.75%**
- Kazmortransflot (KMTF) **100%**
- KazTransGas **100%**
  - 100% Intergas Central Asia (ICA)
  - 50% Asia Gas Pipeline (AGP)
  - 100% KazTransGas Aimak (KTG Aimak)
  - 50% Beineu–Shymkent Gas Pipeline (BSGP)
- KazRosGas **50%**

REFINING

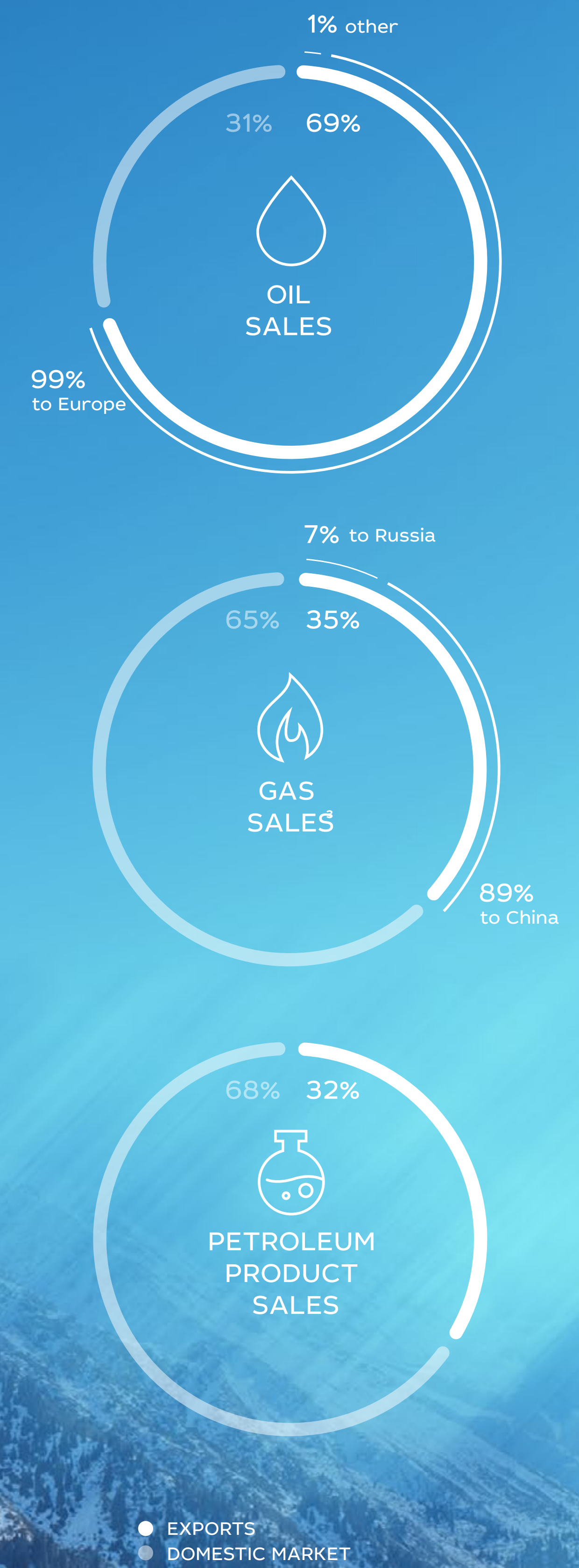
- Pavlodar Refinery **100%**
- Atyrau Refinery **99.53%**
- Shymkent Refinery (PKOP) **49.72%**
- Caspi Bitum **50%**
- KMG International **100%**
  - 54.63% Petromidia Refinery
  - 54.63% Vega Refinery

OILFIELD SERVICES

- KMG Nabors Drilling Company **49%**
- KMG Parker Drilling Company **49%**
- KMG Automation **49%**
- KMG Systems & Services **100%**
- TenizService **48.996%**

1. In October 2015, Samruk-Kazyna acquired a 50% stake in Kashagan with a right to purchase shares under an option agreement in 2020 and 2022. KMG and Samruk-Kazyna jointly hold 16.88% in Kashagan.
2. 19% via KMG and 1.75% via Kazakhstan Pipeline Ventures (KPV).

KEY MARKETS



BUSINESS MODEL

COMPETITIVE ADVANTAGES

UNIQUE GEOGRAPHY

Kazakhstan has an extensive resource base, favourable location, and a unique opportunity to export to Europe and fast-growing Asian markets.

FULL INTEGRATION ACROSS THE VALUE CHAIN

KMG is the national leader in Kazakhstan's oil and gas industry.

FINANCIAL STABILITY

Thanks to major efforts to maintain KMG's financial stability undertaken over several years, the Company was better prepared for new challenges.

DIFFERENTIATED UPSTREAM PORTFOLIO

KMG has a diversified portfolio of oil and gas production assets with an attractive growth potential.

LEADING POSITION IN KAZAKHSTAN'S MIDSTREAM SECTOR

KMG has a 56% share of Kazakhstan's oil transportation market and a 79% share of its gas transportation market.

ADVANCED OIL REFINERIES

The Company operates the four largest refineries in Kazakhstan and two in Romania.

ADVANCED CORPORATE GOVERNANCE FRAMEWORK AND COMMITMENT TO SUSTAINABLE DEVELOPMENT PRINCIPLES

Sustainable development is a strategic priority for KMG.

	OIL AND GAS EXPLORATION AND PRODUCTION	OIL TRANSPORTATION	GAS TRADING AND TRANSPORTATION	REFINING AND SALES OF CRUDE OIL AND OIL PRODUCTS
RESOURCES	PROVED PLUS PROBABLE RESERVES (2P): 635 MLN TOE OR 4,894 MLN BOE; OIL AND CONDENSATE PRODUCTION: 21.8 MLN TONNES, 445 KBOPD; GAS PRODUCTION: 8.2 BLN M³	OIL TRANSPORTATION: 73.2 MLN TONNES; LENGTH OF OIL PIPELINES: 5,372 KM	GAS TRANSPORTATION: 86.6 BLN M³; LENGTH OF GAS PIPELINES: 12,481 KM	OIL REFINING: 18.1 MLN TONNES; 12.9 mln tonnes Refining in Kazakhstan; 5.3 mln tonnes Refining in Romania
EBITDA[1]	$944 USD MLN; ₸390,221 MLN; 34 %	$549 USD MLN; ₸226,838 MLN; 20 %	$853 USD MLN; ₸352,565 MLN; 30 %	$520 USD MLN; ₸214,839 MLN; 19 %

OPERATIONAL CHAIN

[1] Numbers may not add up due to rounding. EBITDA also includes the results of the Corporate (KZT-25,077 mln, USD -61 mln, -2% share in EBITDA) and other (KZT -7,959 mln, USD -19 mln, -1% share in EBITDA).

STAKEHOLDER VALUE

Leadership and presence across all sectors of Kazakhstan's oil and gas industry, from exploration to product sales, enable KMG to create value for a wide range of stakeholders. KMG makes regular payouts to shareholders, duly meets its obligations to investors and creditors and is a major employer and taxpayer. The Company promotes mutually beneficial cooperation with partners, invests in social projects and ensures high standards of environmental protection:

Dividends to shareholders: 82 BLN TENGE	Taxes and other mandatory payments to the national budget: 548 BLN TENGE
Permanent jobs: >60 THOUS. JOBS	Social assistance to employees: 21 BLN TENGE

Social investments under subsoil use contracts: 4.5 BLN TENGE

Sponsorship assistance to the national health care system and local executive bodies: 6.2 BLN TENGE

Procurement volume: 1,826 BLN TENGE	The share of local content: 82 %

COMPETITIVE ADVANTAGES

UNIQUE GEOGRAPHY

Kazakhstan has an extensive resource base, favourable location, and a unique opportunity to export to Europe and fast-growing Asian markets, including China.

Kazakhstan's economy has grown nine-fold over the last 20 years due to political and social stability, natural resources development, and boosting industrial infrastructure.

Kazakhstan's GDP, USD bln

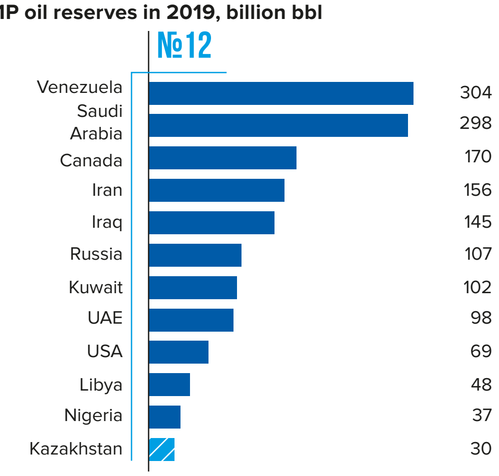
Source: Committee on Statistics of the Republic of Kazakhstan

×9

economic growth since 2000

The oil and gas industry is the leading economic sector in Kazakhstan. The oil and gas sector contributes significantly to Kazakhstan's aggregate income from taxes and exports and remains a key investment destination. Foreign direct investment (FDI) into the industry was higher than USD 70 bln over the last decade. The wide presence of global energy majors promotes Kazakhstan as an attractive investment region. In 2019, Kazakhstan was ranked 12th globally in terms of 1P[1] oil reserves.

1P oil reserves in 2019, billion bbl

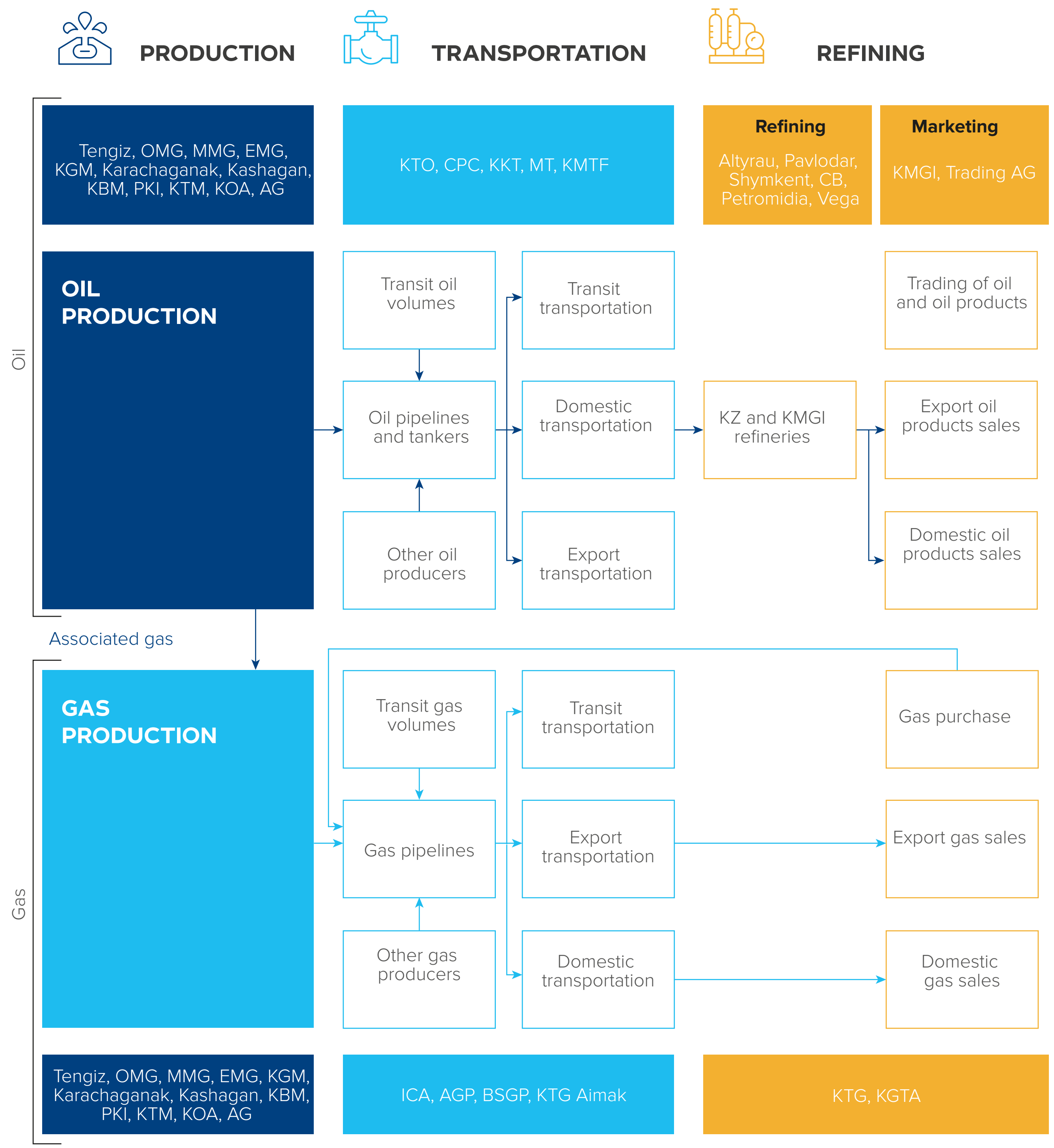


[1] Source: BP Statistical Review of World Energy

FULL INTEGRATION ACROSS THE VALUE CHAIN

KMG is the national leader in Kazakhstan's oil and gas industry with a fully integrated added value chain. As a national leader and a vertically integrated company, KMG has a strong foundation supporting its long-term sustainable development. KMG's assets comprise an entire hydrocarbon added value chain including exploration, production, transportation, refining, and marketing. The Company operates in Kazakhstan and Romania.

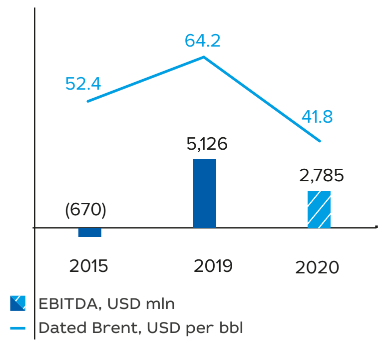
KMG's value chain



FINANCIAL STABILITY

Thanks to major efforts to maintain KMG's financial stability undertaken over several years, the Company was better prepared for new challenges in 2020 than in previous periods of low oil prices. Specifically, following a 34.8% year-on-year decline in the average Dated Brent oil price to USD 41.8 per bbl in 2020, EBITDA amounted to USD 2,785 mln, compared to 2015, when the average Dated Brent oil price was USD 52.37 per bbl, down 47.1% year-on-year, and EBITDA was negative at USD 670 mln

EBITDA and Dated Brent price



Sources: S&P Global Platts, Company's estimates

DIFFERENTIATED UPSTREAM PORTFOLIO

KMG has a diversified portfolio of oil and gas production assets with an attractive growth potential. We also have a unique access to new licences and oil and gas assets in Kazakhstan to sustain inorganic growth.

KMG partners with international companies for major oil and gas projects on a global scale with a potential to boost hydrocarbon production: Tengiz, Kashagan and Karachaganak. Operating assets are mainly mature fields with stable production levels, and production efficiency improvement is a key objective for the Company.

25% of total oil and condensate production in Kazakhstan

15% of total gas production in Kazakhstan

22 YEARS

2P oil and condensate reserves life (based on 2020 oil and condensate production level)

LEADING POSITION IN KAZAKHSTAN'S MIDSTREAM SECTOR

KMG has a 56% share of Kazakhstan's oil transportation market and a 79% share of its gas transportation market.

The oil transportation system managed by KMG is well-diversified and has a high transit and export potential. The active investment phase in this segment has been completed, and the capacities have been ramped up to meet the needs of growing production volumes in Kazakhstan.

56% of Oil transportation volumes in the Republic of Kazakhstan

77% of gas transportation volumes in the Republic of Kazakhstan

ADVANCED OIL REFINERIES

The Company operates the four largest refineries in Kazakhstan and two in Romania. As a result of their comprehensive modernisation, KMG improved refining depth. Domestic demand for high-quality light products was fully covered. Moreover, our production capacities allow us to export a part of our oil products.

81% KMG has interests in all major modern refineries in Kazakhstan, with a combined market share of

ADVANCED CORPORATE GOVERNANCE FRAMEWORK AND COMMITMENT TO SUSTAINABLE DEVELOPMENT PRINCIPLES

Sustainable development is a strategic priority for KMG. Over the past few years, the Company has progressed significantly in its ESG development, as evidenced by the dynamics of environmental and social performance along with achievements in improving the corporate governance framework.

KMG's environmental agenda prioritises GHG emissions, water and production waste management, flaring reduction, land remediation and energy efficiency.

We promote meritocracy, fairness, and integrity while providing every employee with a workplace conducive to new achievements and assessing their respective contributions to KMG's overall success based on merit. We are implementing the Leadership programme and the Mentoring, Coaching, Training programme along with plans to strengthen corporate culture and enhance social stability and industrial relations.

The Company strives to comply with international best practices and places a particular emphasis on continuous improvement of its corporate governance framework. The current composition of the Board of Directors is optimally balanced in terms of competencies to enable quality decision-making. Three out of seven Board members are independent directors, three are nominated by the major shareholder, and one is an executive director (Chairman of the Management Board). All Committees of the Board of Directors are chaired by independent directors.

PERFORMANCE HIGHLIGHTS

> To sum up the 2020 highlights, I would like to commend the vital work carried out by KMG's Management Board, who are coping well with the challenges involved in implementing our crisis response measures

Christopher Walton,
Chairman of the Board of Directors
of JSC NC KazMunayGas

OPERATIONAL HIGHLIGHTS

2P hydrocarbon reserves, mln tonnes

−6.1%

2020	635
2019	676

Oil and condensate production, ths tonnes

−7.9%

2020	21,752
2019	23,618
2018	23,606

Natural and associated gas production, mln m³

−3.1%

2020	8,191
2019	8,455
2018	8,137

Oil transportation, ths tonnes

−6.3%

2020	73,171
2019	78,066
2018	75,038

Gas transportation, mln m³

−16.3%

2020	86,590
2019	103,494
2018	111,567

Oil refining, ths tonnes

−12.2%

2020	18,077
2019	20,588
2018	19,715

For more details see the Operating Overview section on page 48.

FINANCIAL HIGHLIGHTS

EBITDA, USD mln

−45.7%

2020	2,785
2019	5,126
2018	4,947

Revenue, USD mln

−38.5%

2020	11,019
2019	17,915
2018	20,255

Share in the revenue of joint ventures and associates, USD mln

−42.8%

2020	1,236
2019	2,163
2018	2,021

Net profit, USD mln

−86.3%

2020	416
2019	3,026
2018	2,010

CAPEX on an accruals basis , USD mln

−16.8%

2020	1,098
2019	1,320
2018	1,820

CAPEX on a cash basis, USD mln

−17.4%

2020	959
2019	1,160
2018	1,247

Net debt, USD mln

−0.2%

2020	6,162
2019	6,171
2018	5,661

Free cash flow, USD mln

−86.2%

2020	213
2019	1,537
2018	1,206

Net debt / EBITDA

2020	2.21
2019	1.20
2018	1.14

For more details see the Financial Overview section on page 76.

SOCIAL HIGHLIGHTS

Actual number of employees[1]

−2.3%

2020	60,173
2019	61,587
2018	66,110

Lost Time Incident Rate (LTIR), per 1 mln man-hours

−29%

2020	0.22
2019	0.31
2018	0.32

Fatal Accident Rate (FAR), per 100 mln man-hours

2020	0
2019	1.28
2018	0.65

For more details see the Ensuring sustainable development section on page 88.

[1] In 2020, the Company revised its methodology to calculate the actual number of employees (by including employees from consolidated companies with an ownership interest of, or above, 51% in the calculation). Data for prior periods were also recalculated.

ENVIRONMENTAL HIGHLIGHTS

NOX emissions, tonnes per 1,000 tonnes of produced hydrocarbons

±4.8%

2020	0.22
2019	0.21
2018	0.20

SOX emissions, tonnes per 1,000 tonnes of produced hydrocarbons

±15%

2020	0.23
2019	0.20
2018	0.25

APG flaring rate, tonnes per 1,000 tonnes of produced hydrocarbons

−25.4%

2020	2.2
2019	2.95
2018	6.0

For more details see the Ensuring sustainable development section on page 88.

STATEMENT FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS

DEAR INVESTORS, SHAREHOLDERS, COLLEAGUES AND PARTNERS,

In 2020, we all faced the global challenge of the COVID-19 pandemic, which tested our resilience and teamwork in the face of adversity. I am pleased to inform you that this past year has evidenced KMG's resilience, and that our long-term efforts in all areas of strategic importance have provided a cushion of support for the Company in this difficult period. I would also like to note the tremendous work undertaken this year by the entire team to adapt the Company's activities to the new normal and adjusted expectations concerning the international and domestic market environment.

Crisis response strategy

As a leader in the oil and gas industry of Kazakhstan and a representative of government interests who bears sizeable social obligations, KMG was particularly exposed to the negative impact of the pandemic and its consequences across virtually all of our business lines. The headwinds faced by the Company included a decline in oil prices, OPEC+ production cut commitments, lower demand for oil products, reduced hydrocarbon transportation volumes, a national lockdown, and many further factors. To ensure the Company could adapt to a lower oil price environment while maintaining production capacity and retaining talent, KMG's Board of Directors swiftly developed a comprehensive suite of crisis response measures for 2020 and 2021 and immediately set the ball rolling on their implementation. We identified five key areas for crisis response: our operating model, operational efficiency, financial stability, investment activities, and digital transformation.

We optimised the organisational structure of KMG's headquarters by downsizing its headcount by 34% and implementing a threefold reduction in the number of departments.

As part of our efforts to improve financial stability, we cut the Company's consolidated debt by USD 341 mln and smoothed out the schedule of lump-sum payments on our USD 907 mln Eurobonds through refinancing.

In 2020, we successfully launched a process for embedding different approaches to portfolio and project management when putting investment projects into motion. Portfolios are now managed by ranking projects and prioritising high-impact, strategic ones. Our prioritised project portfolio now also includes crisis response related digital transformation initiatives, which generated net benefits of KZT 9.3 bln in 2020, exceeding targets by 127%. At the same time, the list for asset divestment was expanded.

Our crisis response measures led to a better-than-expected financial performance in 2020, exceeding our start-of-year forecast which included no such response amidst a sharp fall in oil prices. EBITDA stood at USD 2.8 bln. Free cash flow was positive at USD 213 mln, despite a negative cash flow forecast in the early stages of the pandemic.

The success of our crisis response measures was confirmed by the fact that we retained our credit ratings from Moody's, Fitch and S&P. Key factors at play were our debt management and reduction programme of 2017–2019, swift refinancing of large lump-sum repayments, an improved covenant package, better liquidity control, cost optimisation and stronger overall financial health.

Safety

I am pleased to report that, in 2020, KMG had no fatal accidents related to work. This is the first time we have achieved this in the history of KMG. This achievement was matched by a 29% decrease

in the number of Lost Time Injuries Ratio. For the first time since KMG joined the International Association of Oil and Gas Producers (IOGP), KMG's injury rate is lower than the IOGP average.
It is my intent that every KMG employee returns to their family safely at the end of each work day. We are making significant steps in attaining this goal. I thank management and staff for their efforts in enabling this to happen.

Sustainable development

During the year, we were able to maintain our strong sustainability momentum from previous years and even make significant progress in this area, despite the extremely unfavourable environment. Embedding best practices in corporate governance and sustainability is one of our strategic priorities. KMG remains strongly committed to the United Nations Global Compact's (UNGC) ten principles for sustainable development and 17 global Sustainable Development Goals. To embed sustainability principles in the daily life of the Company in the most efficient way possible, in 2020, we developed a comprehensive, three-stage implementation roadmap to 2028. At the first stage, we selected six priority goals that KMG will focus on over the next five years, including human health, energy efficiency, economic growth, the environment, innovation, and climate action.

In 2020, the Board of Directors included ESG rating in the list of corporate KPIs for Board members for the first time, thus cascading the Company's strategic goal to the entire executive suite to ensure that every member of our team is motivated to embed sustainability in their daily activities.

I would also like to note that this year the Company expanded its Carbon Disclosure Project (CDP) reporting scope, with water management disclosures posted on the CDP's website for the first time as part of the 2019 Water Security Questionnaire. At the same time, we issued our second annual report on greenhouse gas emissions as part of our disclosures under the CDP Climate Change Questionnaire, disclosing data on direct and indirect greenhouse gas (GHG) emissions, GHG emissions management, key risks and opportunities.

We earned a further endorsement of our sustainability efforts when the Sustainalytics international rating agency scored KMG at 69 out of 100, which reflects the Company's robust sustainability performance. KMG's ESG aspects were rated as follows: Environmental scored 69, Social scored 70, and Governance scored 67.

KMG's ESG risk rating was assessed at 34.5, reflecting a high level of unmanageable risk. Although the Company was assigned to Category 4 out of five based on its ESG risk rating, the analysts at Sustainalytics rated KMG's ESG risk management as "strong".

Company outlook

This past year demonstrated once again that oil companies are highly exposed to oil price volatility. Being a vertically integrated company, KMG was able to mitigate the negative impact of falling oil prices. However, in addition to its existing areas for development, the Company finds it strategically feasible and expedient to venture into new businesses that will increase its value and sustain cash flows in the long run.

According to OPEC's World Oil Outlook 2045, petrochemicals will be the largest source of incremental demand for crude oil in the forecast period. KMG is already launching production of petrochemicals (benzene and paraxylene) and is involved as a trustee of JSC Samruk-Kazyna in petrochemical projects (KPI and KLPE), covering polyethylene and polypropylene production. KMG is tentatively exploring the production of other petrochemicals as promising development opportunities.

The 2020 crisis gave an added impetus to energy companies in the oil and gas industry to review their strategies for reducing their carbon footprint by promoting renewable energy and decarbonisation projects.
With the European Union's Carbon Border Adjustment Mechanism (CBAM) being developed under the Green Deal, a policy that envisages levying a carbon tax on EU imports with a large carbon footprint, KMG is looking into the possibility of tapping into low-carbon opportunities through decarbonisation and alternative energy projects, as well as GHG trading.

An important consideration in financing promising projects is the Company's focus on enhancing shareholder value while maintaining financial stability; that is to say that the Company's expenses must be covered by its revenues, the existing debt level be reduced and any additional debt may only be raised to finance high return projects.

To sum up the 2020 highlights, I would like to commend the vital work carried out by KMG's Management Board, who are coping well with the challenges involved in implementing our anti-crisis response measures, as well as the efforts of all KMG Group employees, who, each and every day, face distinct tasks on the front line and find solutions for them. I hope that next year, everyone can keep up this high pace in advancing our common, strategic mission.

« To sum up the 2020 highlights, I would like to commend the vital work carried out by KMG's Management Board, who are coping well with the challenges involved in implementing our anti-crisis response measures

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STATEMENT FROM THE CHAIRMAN OF THE MANAGEMENT BOARD

DEAR SHAREHOLDERS, INVESTORS AND PARTNERS,

As years go, 2020 was unprecedented – for the entire world, but for the oil and gas industry in particular. The COVID-19 pandemic and the ensuing drop in energy demand, coupled with our OPEC+ production cut commitments led to a decline in our key operating results. Our consistent, multi-year effort to build up resiliency, paired with the concerted, comprehensive action taken by our entire team, helped us stay stable and cope with the major challenges of the year. Moreover, we were able to contribute as much as we could to the global fight against COVID-19.

Maintaining leadership in the national oil and gas industry

Oil and condensate production for 2020 was 21.8 mln tonnes or 445 ths bbl per day, down 7.9% year-on-year, mainly attributable to OPEC+ compliance with pledged output curbs as well as natural decline in production from mature fields. KMG fully delivered on its commitment to cut oil and condensate production by 1.3 mln tonnes compared to the original pre-COVID targets for 2020.

Despite production declines, there have been some positive developments in our upstream segment, with two wells brought into pilot operation at the East Urikhtau field in the Aktobe Region in December 2020. If the wells prove successful at the first phase, and if the market conditions are favourable, the Company will consider moving on to the second phase, under which 58 wells will operate at the Urikhtau group of fields and a number of production facilities will be constructed. If we carry out the full-scale implementation of the project, the expected production may reach 1.5 bln m3 of gas and 500 ths tonnes of oil annually.

I would also like to stress our achievements in ongoing exploration projects. A natural flow of up to 85 tonnes per day of water-free Jurassic oil was produced from an exploration well on the Bekturly Vostochny block in 2020. Further exploration projects include a natural flow of 70 tonnes per day of water-free Triassic oil from Embamunaigas' Sagidulla Nurzhanov field.

Oil transportation by pipeline and by sea decreased by 6.3% year-on-year to 73.2 mln tonnes. The decline was driven by the limited oil supply from JSC CNPC International Aktobe Petroleum, after a critical excess of organochlorine compounds was discovered in their oil supply in January 2020, compounded by an overall decline in oil supply amid a drop in oil production from other companies. Within the flow reversal project at the Kenkiyak–Atyrau oil pipeline, launched in 2018, the first start-up complex has been commissioned, and the construction of the second start-up complex is now complete. Overall project completion is slated for Q2 2021.

The volume of gas transported through trunk pipelines decreased by 16.3% to 86.6 bln m3, mainly linked to lower gas transit and exports. In 2020, the Beineu–Bozoi–Shymkent gas pipeline was ramped up to its full design capacity of 15 bln m3, supplying natural gas to Kazakhstan's southern regions from the country's western fields and diversifying gas exports.

The output of oil products at our Kazakh and Romanian refineries decreased by 12.5% to 16.8 mln tonnes, of which our Kazakhstan refineries produced 11.7 mln tonnes.
As a nationwide lockdown was imposed across all cities in Kazakhstan in 2020, demand for major oil products fell, which affected the production activity of refineries across the country. In order to avoid overstocking, we cut our refining throughput and output of oil products without suspending operations, balancing refinery utilisation to match the demand.

For the second year running, we published data on our hydrocarbon reserves under international PRMS standards. At end-2020, KMG's proved plus probable (2P) reserves totalled 635 mln toe (4,894 mln boe), down 6.1% year-on-year due to natural decline in production from mature fields, lower oil price forecasts, and exchange rate volatility.

An effective crisis response

The scale of the Company's business, with its complex integrated production chain, significant economic and social role, and large operational workforce, presented significant financial and operational challenges in the context of the pandemic. The Company implemented its crisis response strategy for 2020 and 2021 in order to overcome the negative impacts of the pandemic, a move that helped us to substantially mitigate the pandemic's effects, remain resilient and retain the potential for future growth.

We maintained uninterrupted operations across all our business lines, despite the pandemic and the plummeting oil prices. To streamline our business processes, we took further steps to cut red tape in processes both at the Corporate Centre level and across our subsidiaries and associates. Unprofitable wells were shut down to boost operational efficiency.

A special emphasis was placed on optimising controllable costs within total costs and reducing the proportion of fixed costs. We also reduced our planned expenses by KZT 147 bln, including CAPEX by KZT 103 bln, OPEX by KZT 27 bln and administrative expenses by KZT 17 bln.

In 2020, KMG Group's consolidated debt was reduced by USD 341 mln. We also reduced the debt burden of our joint ventures by over USD 1.1 bln, with over half of this amount accounted for by North Caspian Operating Company N.V., which represents KMG in the Production Sharing Agreement under the North Caspian project. KMG Eurobonds were successfully refinanced for USD 907 mln, smoothing the repayment schedule, with the next large lump-sum repayment pushed out to as far as 2025 as a result.

We launched four digital transformation projects, which turned out to be indispensable amid the pandemic: the ABAI Information System, the Engineering Simulation System at Kazakhstan Refineries, the Multifunctional KMG Shared Services Centre, and Trip Management. The benefit from these projects is expected to total KZT 72.4 bln.

With a key focus placed on the health and safety of our employees and their families, we implemented a necessary and far-reaching range of measures, drafted and adopted relevant guidelines and policies, and developed and approved specific action plans to reduce the number of COVID-19 cases and curb the virus' spread, all while mitigating its impact on production processes.

Sustainable development efforts

Apart from achieving its operational and financial targets, KMG management faces the important task of embedding sustainability into day-to-day life at KMG through a range of relevant initiatives.

KMG's environmental agenda prioritises GHG emissions, water and production waste management, flaring reduction, land remediation and energy efficiency. Management teams of KMG and its subsidiaries and associates take a zero tolerance approach to losses and harm caused by environmental pollution. In 2015, KMG supported the World Bank's Zero Routine Flaring by 2030 initiative.

KMG Group's energy saving and energy efficiency initiatives focus on process equipment upgrades, deploying energy saving technologies, optimising heat generation and consumption, and developing the Group's own generation assets, including APG-fired generation.

In reducing our GHG footprint, we focus on increasing associated petroleum gas (APG) utilisation while minimising flaring. Thanks to our development and raw gas processing programmes, we have achieved a 98% APG utilisation rate, with flaring at 2.2 tonnes per 1,000 tonnes of produced hydrocarbons (down 24% year-on-year and 79% lower than the industry average).

Our production facilities regularly monitor and control all waste handled by facilities (including contractors' waste), take measures to minimise waste generation and earmark annual funding for recycling/reuse and disposal of generated, accumulated and historical waste, with KMG spending on this topping KZT 13 bln in 2020.

Projects are underway to curb discharges and reduce fresh water withdrawal from natural sources. For example, the TAZALYQ project includes an upgrade of mechanical and biological wastewater treatment facilities, the construction of an advanced treatment facility, and the upgrade of evaporation fields. Another project envisages the construction of desalination plants near the Kenderly recreational zone in the Mangystau Region.

No protests or strikes were recorded at the Company subsidiaries over the last two years thanks to our comprehensive efforts to maintain social stability among the workforce and improve the social well-being of local communities across our operational footprint.

According to a survey conducted in November 2020 by the Social Partnership Centre at JSC Samruk-Kazyna, the social well-being index across KMG Group rose from 72% in 2019 to 74% in 2020.

Another highlight of the year was the absence of work-related fatalities, a first for the Company. We have also significantly reduced the number of accidents, with KMG's injury rate below the IOGP's industry average for the first time in our history as a company.

Our contribution to life in Kazakhstan

As a major national taxpayer, the Company paid KZT 548 bln in taxes and other mandatory payments to the national budget in 2020. Our dividends to shareholders reached KZT 82 bln.

Committed to enhancing our operational and financial performance, we embrace a responsible social policy. During the year, we provided our employees with social assistance for a total of KZT 21 bln, with our social investments under subsoil use contracts worth over KZT 4.5 bln. As part of the wider national response to the COVID-19 pandemic, the Company supported the country's national healthcare system and local executive bodies to the tune of KZT 6.2 bln. Going forward, we will uphold this responsible approach to the wider community in Kazakhstan.

To summarise the results of the past year, I would like to emphasise that we only succeeded against all headwinds through well-coordinated teamwork and the dedication of every single employee within our Company. I would like to thank all our employees for their immense hard work, which has brought us through all the trials and tribulations of 2020, while also setting us up for future growth.

Alik Aidarbayev,
Chairman
of the Management Board
of JSC NC KazMunayGas

STRATEGY

MARKET OVERVIEW

MACROECONOMICS AND GLOBAL TRENDS

GLOBAL TRENDS AND THEIR IMPACT ON STRATEGY IMPLEMENTATION

GLOBAL TRENDS

CHANGES IN THE GLOBAL ENERGY BALANCE

CHALLENGE FOR THE INDUSTRY

- The COVID-19 pandemic and its long-term impact on the decline in global oil demand
- Volatility of crude oil prices
- Changes in energy consumption patterns in the longer term
- Long-term increase in global demand for gas, including demand in China as the main driver
- Long-term growth in demand for petrochemicals

STRATEGIC RESPONSES TO TRENDS

- Crisis response strategy for 2020–2021
- Expanding and diversifying oil and gas shipments
- Expanding the value chain within the existing business and developing the petrochemical segment

DIGITALISATION

CHALLENGE FOR THE INDUSTRY

- Growth and use of digital technologies
- Business process digitisation and automation

STRATEGIC RESPONSES TO TRENDS

- Digitalisation focusing on specific issues in business processes, with an emphasis on Exploration and Production and on Refining, as well as developing targeted solutions across KMG Group.

SUSTAINABILITY AND ESG FACTORS

CHALLENGE FOR THE INDUSTRY

- The growing importance of sustainability and ESG across the investment community

STRATEGIC RESPONSES TO TRENDS

- Integrating sustainability principles into key business processes

ALTERNATIVE ENERGY AND CARBON NEUTRALITY

CHALLENGE FOR THE INDUSTRY

- The trend towards carbon neutrality in the oil and gas sector

STRATEGIC RESPONSES TO TRENDS

- Expanding and diversifying the value chain by promoting renewables and decarbonisation

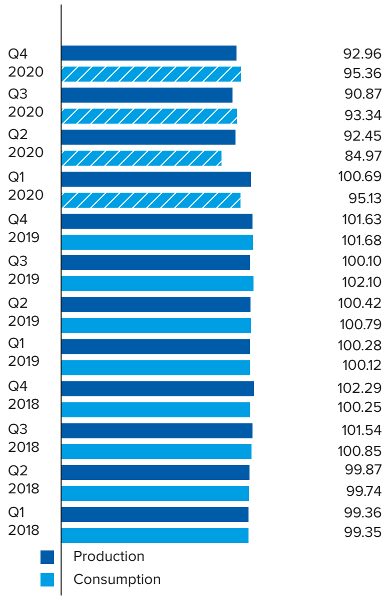
1. The COVID-19 pandemic and its long-term impact on the decline in global oil demand

In 2020, the balance between liquid fuels supply and demand experienced two different phases primarily driven by the global COVID-19 pandemic, its impact on the economy and coordinated action by OPEC+.

From January to May 2020, demand for oil was declining faster than oil production. Oil prices fell due to a significant build-up of inventories, but rebounded in the second half of 2020 driven by a recovery in oil consumption, production cuts under the OPEC+ agreement and lower crude oil production in the US.

According to the preliminary estimates by the US Energy Information Administration (EIA) dated 12 January 2021, in 2020 global consumption of crude oil and liquid fuels was down by 9 million bbl per day from 2019 – the largest annual decline since 1980, according to EIA.

Production and consumption of liquid fuels 2018–2020, million bbl per day



Source: US Energy Information Administration

2. Volatility of crude oil prices

On average in 2020, Dated Brent oil prices traded at USD 41.84 per bbl, down 34.8% year-on-year, reflecting the impact of the pandemic on the global economy and oil demand due to lockdown restrictions. Measures to reduce production under the OPEC+ agreement and the market's focus on vaccination campaigns across countries have supported oil prices in late 2020 and early 2021.

Brent prices in 2020–2021, USD per bbl

STRATEGIC DIRECTION

In order to respond swiftly to these changes, KMG developed and approved its crisis response strategy for 2020–2021, which provides not only for adapting the Company to low oil prices while retaining the maximum of its production and HR capacities, but also for building up resources, technology and competencies for KMG to recover after the crisis.

For more details see the Impact of COVID-19 and anti-crisis response section.

3. Changes in energy consumption patterns in the longer term

Global energy demand will continue to grow in the long term due to improved living standards in developing economies. However, the market expects a significant change in the structure of energy demand due to the weakening role of hydrocarbons as they are phased out by renewables. Nevertheless, oil and gas will continue to play an important role for decades to come, accounting for 20–50% in energy demand by 2050, depending on the scenario according to the estimates by British Petroleum (BP) in its Energy Outlook (2020 Edition).

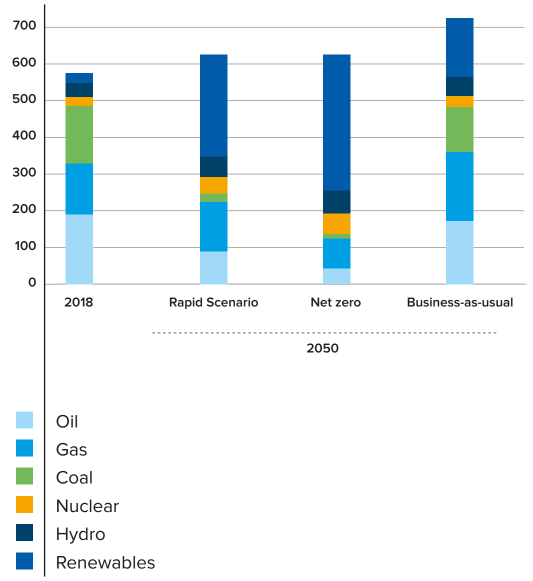
- Carbon emissions from energy use in the Rapid Scenario fall by around 70% by 2050. This fall in emissions is in line with scenarios which are consistent with limiting the rise in global temperatures by 2100 to well below 2 °C above preindustrial levels.
- The Net Zero Scenario (Net Zero) assumes significant shifts in societal behaviour and preferences, which further accelerate the reduction in carbon emissions. Global carbon emissions fall by over 95% by 2050, broadly in line with a range of scenarios which are consistent with limiting temperature rises to 1.5 °C.
- The Business-as-usual Scenario (BAU) assumes that carbon emissions peak in the mid-2020s, with emissions in 2050 less than 10% below the 2018 level.

The growth in global energy demand in all three scenarios is entirely driven by developing economies, reflecting their increasing prosperity and improved energy access while energy consumption is expected to fall in the developed world. According to BP's Energy Outlook, emerging economies are expected to account for around 70% of energy demand by 2050 in all three scenarios, up from 58% in 2018.

STRATEGIC DIRECTION

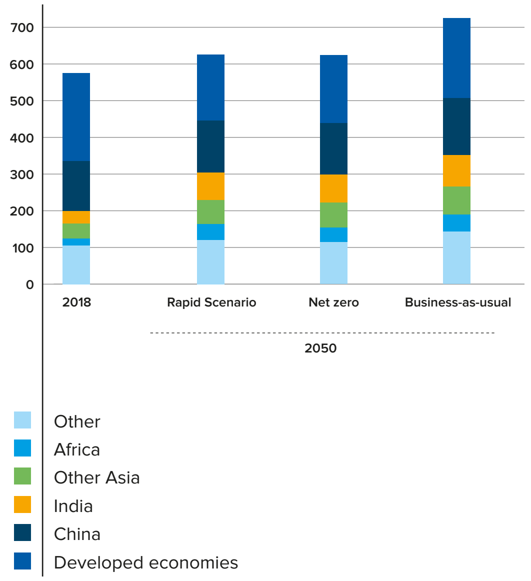
The 2020 crisis has accelerated the energy transition of oil and gas companies, which have revised their strategies to reduce their carbon footprint by developing renewables and decarbonisation. With the European Union's Carbon Border Adjustment Mechanism being developed under the Green Deal and providing for the introduction of a carbon tax on EU imports with a large carbon footprint, KMG is looking into the prospects of tapping into the low-carbon opportunities through decarbonisation and alternative energy projects, as well as trading in GHG quotas.

Energy consumption by source, EJ (2018–2050F)



Source: BP's Energy Outlook

Energy consumption by region, EJ (2018–2050F)



Source: BP's Energy Outlook

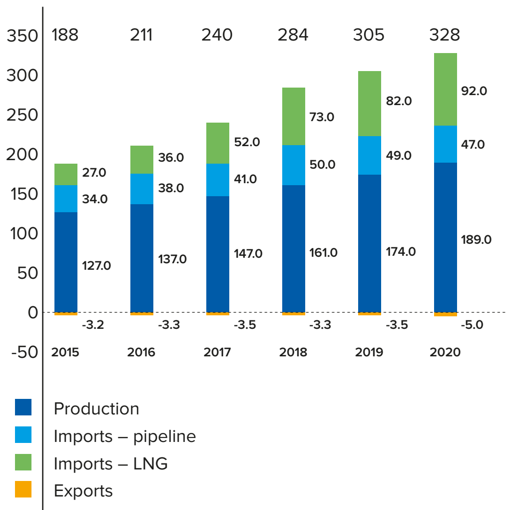
4. Long-term increase in global demand for gas, including demand in China as the main driver

Demand for gas is supported by the developing economies of Asia (China, India, other Asian countries). Gas is positioned as a fuel to be used during the transition to renewables. At a virtual meeting of the UN General Assembly in September 2020, China announced its plans to achieve carbon neutrality before 2060 while lowering carbon emissions within a fixed timeline, which is expected to catalyse the country's transition from coal to natural gas. According to Bloomberg, coal use accounted for 57.7% of China's total energy consumption from 71.6% in 2009 while the proportion of natural gas increased from 3.5% to 8.1%.

STRATEGIC DIRECTION

KMG aims to implement a number of initiatives to ensure sufficient reserves of commercial gas and adequate pipeline capacities. These measures will boost gas exports to China while meeting the growing domestic demand.

Production, imports and exports of gas in China in 2015–2020, bln m³



Source: China's National Bureau of Statistics (NBS), China's General Administration of Customs, Bloomberg

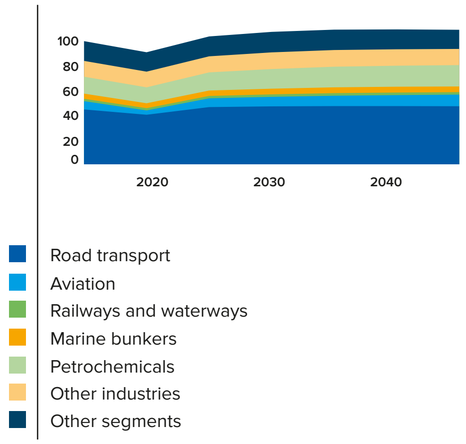
5. Long-term growth in demand for petrochemicals

According to OPEC's World Oil Outlook 2045, petrochemicals will be the largest source of incremental demand for oil in the forecast period. Demand is expected to grow by 3.7 million bbl per day from 13.7 million bbl per day in 2019 to 17.3 million bbl per day forecast for 2045, according to OPEC's estimates. Most of this incremental demand is expected to come from Asia and OPEC countries. Petrochemicals will be primarily supported by consumer demand for plastics and textile reflecting the rising income in developing economies.

STRATEGIC DIRECTION

KMG already produces benzene and paraxylene and is also involved in petrochemical projects (KPI, KLPE) that produce polyethylene and polypropylene. KMG tentatively explores the production of other petrochemicals as promising opportunities.

Oil demand by sector for 2019–2045, million bbl per day



Source: World Oil Outlook 2045, OPEC

6. Growth and use of digital technologies. Business process digitisation and automation

The COVID-19 pandemic of 2020 has hastened the use of sensors, the Internet of Things and cloud computing to support remote monitoring of oil wells and refineries. According to Bloomberg, many companies have found an answer in digital twins.

These interactive 3D simulations of oil platforms and plants allow engineers to gain virtual access to equipment from home. Computing technology, big data, clouds and machine learning streamline asset performance and remote operations.

STRATEGIC DIRECTION

In line with the shareholder's expectations and taking into account KMG's priorities, we have decided to focus digitalisation on specific issues in business processes, with an emphasis on Exploration and Production and on Refining, as well as to develop a pool of targeted solutions across KMG Group.

In line with this vision, we have developed the concept for the Smart Field programme, which will determine the unified approaches for the selection, design and implementation of processes and technologies at KMG. We have also assessed the digital maturity of the Company's businesses to identify, based on a bottom-up approach, specific business problems for each subsidiary that can be addressed through digital technology.

Overall, transition to digital technologies will be implemented under a phased approach considering existing maturity and digital literacy levels of employees as well as the availability of automation systems at facilities.

For more details see the Transformation and digitalisation section

7. The growing importance of sustainability and ESG across the investment community. The trend towards carbon neutrality in the oil and gas sector

In September 2015, the leaders of 193 countries approved an ambitious comprehensive programme, Transforming Our World: the 2030 Agenda for Sustainable Development, which included the United Nations Sustainable Development Goals. According to Bloomberg, some 26 countries have announced net-zero goals for early 2021.

Climate action affects investment strategies. According to Bloomberg, net inflows to ESG ETFs totalled USD 76.8 bln in 2020 compared to USD 3.3 bln in 2015. Embracing ESG, oil majors have already announced ambitious plans to cut emissions and invest in alternative energy.

Net inflows to ESG ETFs in 2015–2020, USD bln

Source: Bloomberg

STRATEGIC DIRECTION

In making decisions, KMG factors in the national and global trends for a transition to a greener economy and recognises that long-term success in the industry requires strong ESG performance. As a signatory to the UN Global Compact, KMG reiterates its commitment to the principles of sustainable development and embraces Sustainable Development Goals while particularly focusing on climate change, prevention of adverse environmental impact and corporate social responsibility. For a fourth year running, KMG has been the leader of the environmental transparency rating of Kazakhstan oil and gas companies.

We intend to continue our consistent sustainability effort to improve KMG's ESG score while managing and reducing our ESG Risk Rating (currently scoring 34.5). Analysts of Sustainalytics assessed KMG's ESG risk management as "strong".

KMG assets use elements of renewables to generate electricity for their own needs as well as to reduce their CO2 emissions. The Company explores opportunities for investing in renewables and low-carbon technologies.

For more details see the Ensuring sustainable development section.

INTERNAL DRIVERS AND THEIR IMPACT ON STRATEGY IMPLEMENTATION

KAZAKHSTAN'S OIL AND GAS INDUSTRY IN 2020

The oil and gas industry is a key sector of Kazakhstan's economy due to its significant hydrocarbon reserves. The industry accounts for approximately 15% of Kazakhstan's total gross domestic product (GDP) and more than 40% of general government revenue, according to S&P's report dated 26 March 2020. 39% of gross foreign direct investment (FDI) inflows in 9M2020 came into the crude oil and natural gas production sector. In 2020, exports of crude oil, natural gas and oil products accounted for 57%[1] of Kazakhstan's total exports.

As production expanded over the past decades, Kazakhstan has significantly consolidated its position in the global hydrocarbon market. According to BP's Statistical Review of World Energy (June 2020), Kazakhstan ranks 12th for proved reserves globally.

According to the Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan, 85.7 mln tonnes of crude oil and gas condensate were produced in Kazakhstan in 2020 (82.1 mln tonnes and 3.6 mln tonnes, respectively), down 5.4% year-on-year. According to the Ministry of Energy, the country exported 68.5 mln tonnes. Gas production was at 55.1 bln m³ in 2020, up by 2.3% year-on-year.

In 2021, Kazakhstan's oil output is expected to total 83.4 mln tonnes as planned by the Ministry of Energy in mid-February 2021. Tengizchevroil LLP (TCO) is expected to produce 25.3 mln tonnes, Kashagan 14.5 mln tonnes and Karachaganak 12.1 mln tonnes. Oil exports are expected to total 67.5 mln tonnes in 2021.

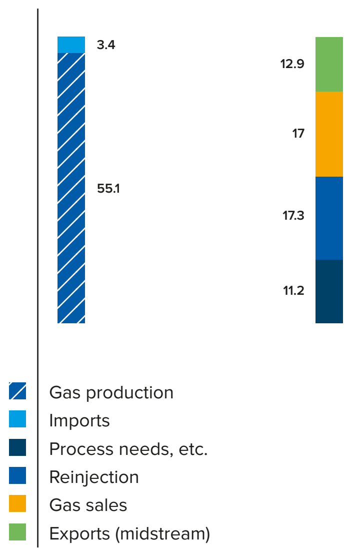
Oil and gas transportation

Kazakhstan has a modern and diversified oil and gas transportation, refining and processing infrastructure, which facilitates its exports to global sales markets.

Oil refining and gas processing

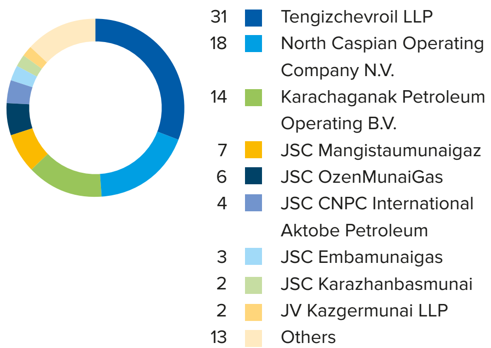
According to the Information and Analytical Centre of Oil and Gas of the Ministry of Energy, the throughput at Kazakhstan refineries was 15.8 mln tonnes in 2020, down 7.6% year-on-year. The production of petrol was at 4.5 mln tonnes (down 1.5% year-on-year), jet fuel was at 0.4 mln tonnes (down 29.9% year-on-year), and diesel fuel was at 4.6 mln tonnes (down 5.4% year-on-year).

Gas balance in Kazakhstan in 2020, bln m³



Source: Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan

Oil and condensate production in Kazakhstan in 2020, %



Source: Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan

[1] HS Code 2709 – Petroleum oils and oils obtained from bituminous minerals; crude, HS Code 2711 – Petroleum gases and other gaseous hydrocarbons, HS Code 2710 – Petroleum oils and oils from bituminous minerals, not crude.

KMG's position in Kazakhstan's oil and gas industry

KMG is the national leader in Kazakhstan's oil and gas industry with a fully integrated added value chain.

Proved (1P) oil and condensate reserves life was 16 years (based on the 2020 output), far exceeding the average of about 11 years for the global oil majors (based on the 2019 output). KMG's proved and probable (2P) oil and condensate reserves life (based on the 2020 oil and condensate production level) was 22 years.

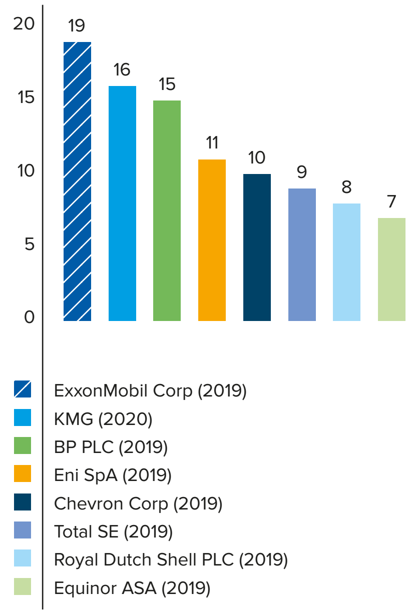
KMG showed the best operating performance for oil and condensate production in Kazakhstan in 2020, according to the Company's in-house estimates. In 2020, KMG's share was 25% in oil and condensate production in Kazakhstan and 15% in gas production.

KMG operates the four largest refineries in Kazakhstan with an 81% share in the refining market in 2020. We put in place an ambitious investment programme to upgrade the three core refineries in Kazakhstan, ramping up their refining capacity and improving their products while also fully covering the domestic demand for oil products and boosting their exports to regional markets.

The oil transportation infrastructure managed by KMG is well-diversified and has a high transit and export potential. KMG's share in the oil transportation market, including trunk pipelines and transportation by sea, totalled 56% for 2020.

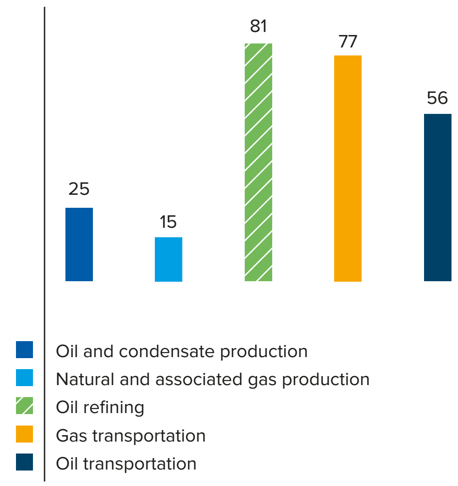
KMG has completed the construction of advanced and diversified gas transportation infrastructure to support domestic and international gas sales. KMG's share in the gas transportation segment in 2020 is estimated at 77%.

1P oil and condensate reserves life in 2019–2020



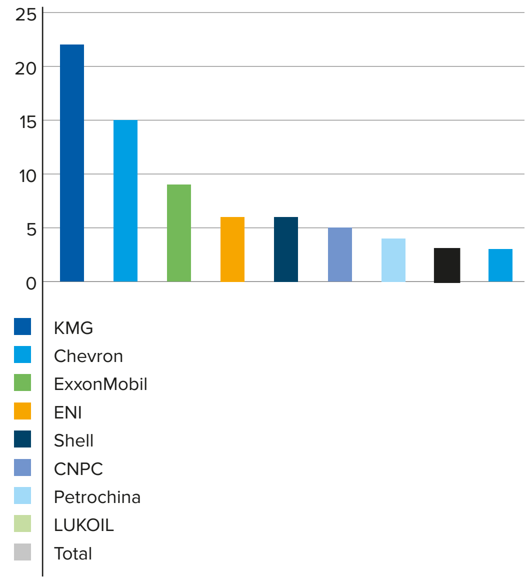
Source: Bloomberg

KMG's market share by segment in Kazakhstan in 2020, %



Source: Company estimates, Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan

Estimated oil and condensate output in 2020 in Kazakhstan, mln tonnes



Source: Company estimates, Information and Analytical Centre of Oil and Gas of the Ministry of Energy of the Republic of Kazakhstan

KAZAKHSTAN'S INVOLVEMENT IN THE OPEC+ AGREEMENT

In April 2020, OPEC+ countries decided to cut oil production but gradually ease curbs on oil supply later. From May to June 2020, the production cuts totalled 9.7 million bbl per day from October 2018. Output increments for specific countries are reviewed and agreed at regular ministerial meetings of OPEC+.

As a member of OPEC+, the Kazakhstan Government introduced temporary restrictions on oil production as of 1 May 2020. The Resolution of the Government of the Republic of Kazakhstan On Introduction of Temporary Restrictions on the Use of Subsoils for Exploration, Production and Extraction of Hydrocarbons, imposed restrictions on certain fields of KMG until the end of 2020.

STRATEGIC DIRECTION

Despite OPEC+ restrictions, we were able to maintain basic output across our operations and, given low oil prices, focused on shutting down unprofitable assets. In 2020, KMG's output was 21.7 mln tonnes, down from 23.6 mln tonnes in 2019. In 2021, our oil output will depend on the terms of the OPEC+ agreement.

For more details see the Operating Review section.

KAZAKHSTAN'S NEW ENVIRONMENTAL CODE

On 2 January 2021, the President of the Republic of Kazakhstan, Kassym-Jomart Tokayev, signed the new Environmental Code of the Republic of Kazakhstan. The new Environmental Code is based on the polluter pays and fixes principle, which implies that major industrial businesses take measures to prevent pollution and introduce best available technology. The new Environmental Code provides for new approaches to environmental impact assessment, charges for emissions and improved industrial and consumer waste management, significantly contributing to environmental improvements. During the first phase, the 50 largest enterprises, including the oil and gas sector, will begin an orderly transition to best available technologies (BAT). The new Environmental Code, actively discussed by KMG during 2020, will become effective in Kazakhstan as of 1 July 2021.

STRATEGIC DIRECTION

KMG supports the government's ongoing environmental reform. The Company prioritises measures to minimise its environmental footprint.

As part of the Environmental Code of Kazakhstan, our subsidiaries and dependent companies were among the first, together with experts from International Green Technologies and Investment Projects Centre to launch comprehensive process audits to analyse the current state of our production facilities. The results of the comprehensive process audits will be used to draw up sectoral guides on best available techniques (BAT), which will serve as the basis for BAT implementation.

As part of its Development Strategy until 2028, KMG implements strategic initiatives to promote greater environmental responsibility. The Company's environmental priorities include management of greenhouse gas emissions, water resources and production waste, flaring reduction and land reclamation.

In 2020, the Board of Directors approved the corporate Environmental Policy. Management teams of KMG and its subsidiaries and dependent companies take a zero tolerance approach to losses and harm caused by environmental pollution.

For more details see the Ensuring sustainable development section

STATE GEOLOGICAL EXPLORATION PROGRAMME FOR 2021–2025

Kazakhstan has 15 sedimentary oil and gas basins, some of which have been poorly explored but have good prospects for discovering new fields, according to the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan (the "Ministry of Ecology, Geology and Natural Resources").

According to the official website of Kazakhstan's Prime Minister, the State Geological Exploration Programme for 2021–2025, currently under development, will be aimed at ensuring the geological exploration of the country's territory, replenishing the mineral resource base, providing scientific support for the geological exploration of mineral resources, driving automation and digitalisation, developing the infrastructure and staffing the geological industry, as well as ensuring the socio-economic well-being of the country's population.

In mid-February, the Ministry of Ecology, Geology and Natural Resources announced that the draft State Geological Exploration Programme for 2021–2025 would be transformed into a national project.

STRATEGIC DIRECTION

KMG's Geology and Exploration team was actively involved in the development of the State Geological Exploration Programme for 2021–2025, including in the analysis and simulation of the oil and gas systems in Kazakhstan's key sedimentary basins.

For more details see the Reserves section.

KAZAKHSTAN'S ECONOMY

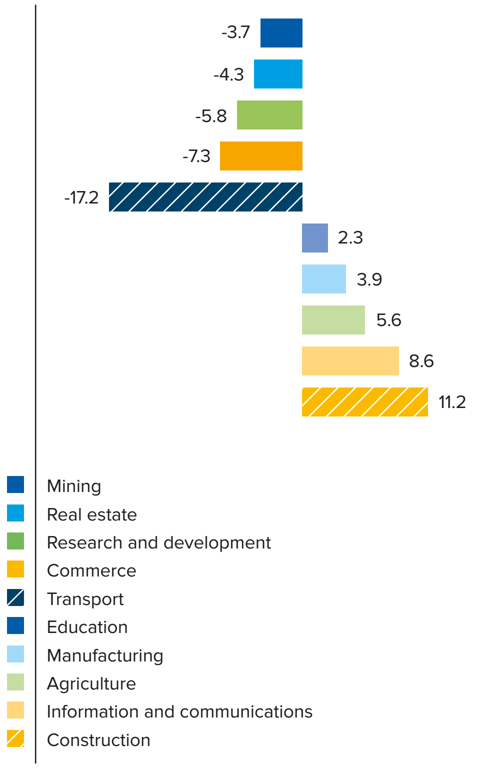
Kazakhstan's economy has also been affected by the global COVID-19 pandemic. For example, the lockdown imposed to curb the spread of the virus, along with lower oil prices and reduced oil output, have put pressure on the country's economic growth.

However, the Government of Kazakhstan took measures to contain the spread of COVID-19 at early stages. Thanks to the government's support for households and businesses, Kazakhstan's economy has remained resilient as evidenced by the growth in the production sector within its GDP, specifically in construction, ICT, agriculture, manufacturing and education. 2020 also saw a trade surplus, increased lending and investment activity in non-extractive sectors.

GDP declined by 2.6%, reflecting lower commodity prices and weakened trade and economic activity due to the lockdown restrictions. GDP mainly declined due to a downturn in the mining, commerce and transportation sectors. The decline in the mining industry was driven by a lower oil and condensate output. Reduced freight and passenger traffic contributed to the decline in transportation. The negative trends in commerce are associated with the continuing lockdown restrictions and suppressed demand.

The exchange rate flexibility absorbed external shocks. The tenge depreciated by 8.0% year-on-year against USD, but was supported by a number of measures such as sale of 50% of revenues in foreign currencies by state-owned enterprises and direct sales of foreign currency by the National Bank of Kazakhstan in February-March, and September-October 2020.

Year-on-year growth in key sectors of the economy in 2020, %



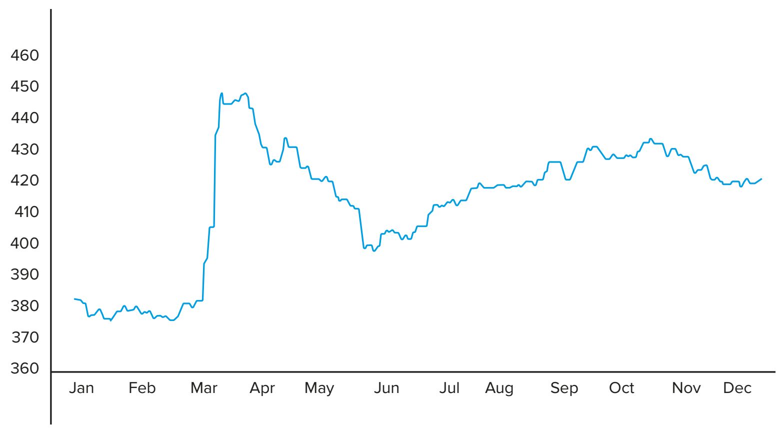
Source: Ministry of National Economy

The tenge's depreciation led to a rise in inflation. Inflation rose above the upper limit of the target range set by the National Bank of Kazakhstan (4–6%) to 7.5% year-on-year in December 2020. In 2020, the National Bank of Kazakhstan adjusted its monetary policy to support liquidity for companies and households. Due to the rising inflation and the tenge's depreciation against the US dollar, the National Bank of Kazakhstan made an unscheduled increase in its policy rate from 9.25% to 12% in mid-March 2020. In early April 2020, given the renewed market expectations for a longer economic impact from the pandemic, the National Bank of Kazakhstan adjusted its monetary policy by cutting its policy rate to 9.5% and widening the corridor to +/-2 p.p. to support the economy. On 20 July 2020, NBK decided to cut the base rate to 9.0% with tightening the corridor to +/- 1.5 p.p. in response to the weakened inflationary risks and stronger economic contraction in the first half of 2020 than expected. On 14 December 2020, NBK decided to keep the base rate at 9.0% with tightening the corridor to +/- 1.0 p.p.

STRATEGIC DIRECTION

In its operations, KMG focuses on achieving the key strategic objectives of the government in developing the country's oil and gas industry. The Company is guided by Kazakhstan's strategic documents and implements development programmes to support the country's economy and social initiatives.

USDKZT rate in 2020



Source: National Bank of Kazakhstan

STRATEGIC PRIORITIES

The existing KMG 2018–2028 Development Strategy focuses on creating value and reinforcing financial stability.

MISSION

ENSURING MAXIMUM SHAREHOLDER BENEFITS FROM THEIR INVOLVEMENT IN THE DEVELOPMENT OF THE NATIONAL OIL AND GAS SECTOR

VISION

A HIGHLY EFFECTIVE, VERTICALLY INTEGRATED NATIONAL COMPANY THAT MEETS THE HIGHEST SAFETY AND CORPORATE GOVERNANCE STANDARDS

STRATEGIC GOALS

1. CREATE VALUE AND IMPROVE FINANCIAL STABILITY
2. STREAMLINE THE BUSINESS AND MANAGEMENT MODELS
3. EMBED BEST PRACTICES IN CORPORATE GOVERNANCE AND SUSTAINABILITY

STRATEGIC RESULTS FOR KMG

- IMPROVED FREE CASH FLOWS AND BETTER INVESTMENT RETURNS
- A STREAMLINED BUSINESS AND MANAGEMENT MODEL
- ETHICS, COMPLIANCE AND CORPORATE CULTURE
- SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL RESPONSIBILITY

STRATEGIC RESULTS FOR SHAREHOLDERS

INCREASE IN SHAREHOLDER DIVIDENDS

PRIORITIES OF THE KMG 2018–2028 DEVELOPMENT STRATEGY

CREATE VALUE AND IMPROVE FINANCIAL STABILITY

As part of this priority, KMG focuses on its core operations seeking to drive organic growth and improve operations across all key segments.

The Company plans to expand opportunities for oil production and improve production from existing assets while continuing to adopt advanced technology and implementing digitalisation projects across its fields. We are also intending to expand our oil and gas resource base to ramp up our international and domestic supplies of hydrocarbons and oil products. To effectively leverage its oil and gas transportation potential and enhance its exports and transit businesses, the Company is committed to optimising the use of its oil and gas pipeline networks.

As a result, KMG has achieved a strategic milestone for Kazakhstan fully meeting the domestic demand for oil products through the upgrade of its local refineries. Moreover, our production capacities allow us to export a part of our oil products. The upgrade also facilitated our sales of greener fuels resulting in lower emissions by end consumers.

The Company carefully selects and prioritises investment projects, considering only highly effective strategic projects for investments.

The Company is committed to prudent capital allocation policy and focuses on maximisation of shareholder return through the cycle. Value creation remains a priority development area for KMG.

We also embrace the need for accelerated digital transformation to address global challenges faced by the oil and gas industry. In 2020, net benefits from the Transformation programme came at KZT 9.3 bln, outstripping the targets by close to 127%.

KMG has chosen a pragmatic approach focusing on specific production targets in Exploration and Production, Transportation and Refining to improve operational efficiency, equipment reliability, health and safety and environmental performance as well as digital skills of KMG employees. In 2021, the Company will continue initiatives launched in 2020.

The 2020 crisis had a significant impact on KMG's performance. To respond promptly, the Company developed and launched its crisis response strategy for 2020–2021. The initiatives partially offset the negative impact while enabling the Company to maintain its financial stability and ensure smooth operation of its subsidiaries without any cash gaps. We will continue our crisis response efforts regarding cost optimisation in 2021.

The Company seeks to adhere to a conservative financial policy maintaining a balanced debt profile and securing a strong liquidity position.

Since KMG was assigned to the red zone of credit risk, a Roadmap was drafted and approved by KMG's Board of Directors in 2020 to move KMG into the green zone through improving operational efficiency across KMG Group (by increasing EBITDA), managing debt and preventing liquidity shortages. As a result of this work, the Company was able to reduce the consolidated debt of KMG Group and maintain KMG's credit ratings from Moody's, Fitch and S&P.

STREAMLINE THE BUSINESS AND MANAGEMENT MODELS

KMG is a holding company that guides the strategic development of KMG Group, with its core operations concentrated across its subsidiaries.

KMG takes measures to improve the operating model by optimising business processes across KMG Group, including business process re-engineering and production optimisation through digital transformation tools. The optimisation has become even more pressing in view of our crisis response efforts.

To ensure effective operation of the holding company, KMG also implements the privatisation and divestment programmes to exit non-core and non-strategic businesses.

The privatisation programme is implemented by KMG under the Comprehensive Privatisation Plan for 2016–2020 approved by Resolution No. 1141 of the Government of the Republic of Kazakhstan, dated 30 December 2015, with the programme completed for 71 out of 74 assets in 2020. The rescheduling for the remaining three assets to 2021 has been agreed with the State Commission on the Modernisation of the Economy of Kazakhstan. The key causes for the delay include the COVID-19 pandemic and lengthy administrative procedures for liquidation of companies. The Government of the Republic of Kazakhstan, by its Resolution No. 908 dated 29 December 2020, approved a new Comprehensive Privatisation Plan for 2021–2025 stipulating the divestment of 58 companies, 27 of which are also included in the Divestment Plan.

The Divestment Plan covers 58 assets, with 10 out of them successfully divested and 48 assets remaining to be divested in 2028.

EMBED BEST PRACTICES IN CORPORATE GOVERNANCE AND SUSTAINABLE DEVELOPMENT

KMG is committed to aligning its operations with sustainability principles and economic, environmental and social goals. The Company seeks to be in the top quartile across all ESG metrics and integrated ESG goals within the framework of strategic and medium-term KPIs for executives. The Company recognises its important social commitments inspired by principles of partnership with its employees and trade unions.

KMG's Code of Business Ethics approved in 2020 outlines the Company's corporate values and defines the key principles and rules of business conduct as well as requirements of corporate ethics binding on all employees. KMG focuses on improving transparency of its operations and adhering to high corporate governance standards. The Company is intending to continue monitoring the evolution of global standards to further improve its corporate governance framework while catering to the interests of all stakeholders.

As part of implementing best practices in sustainability, KMG has received its first international rating from Sustainalytics. The high rating assigned by the agency confirms KMG's strategic commitment and responsibility to present and future generations in environmental and social sustainability matters, as well as its continuous improvements to corporate governance.

KMG continues to work actively on its commitment to the 17 global Sustainable Development Goals (SDGs). In 2020, we started integrating the SDGs into our business processes.

For more details see the Ensuring Sustainable Development section.

IMPACT OF COVID-19 AND ANTI-CRISIS RESPONSE

IMPACT OF COVID-19

In 2020, the planet faced a major challenge from the COVID-19 pandemic, which has had a devastating impact on human health, entire economies and the current order of modern life in general. Moreover, the global fight against the virus and its aftermath is still ongoing. The scale of the impact is yet difficult to assess yet objectively, but an analysis of the 2020 indicators clearly shows a major decline in our financial and operational performance, and, most importantly, the lost human lives.

The negative effects of the pandemic on KMG's performance include the following changes in actual performance compared to 2019:

- Oil prices dropping by 34.8% due to a weaker global demand due to the pandemic
- Oil and condensate production reduced by 1.3 mln tonnes compared to the original plan for 2020 under the OPEC+ agreement on production cuts to support and stabilise oil prices
- Reduced demand for oil products, resulting in an overall decrease in refining throughput by 12.2% in the Republic of Kazakhstan and at the facilities of KMG International (KMGI) in Romania
- The decline in oil production in the Republic of Kazakhstan was one of the drivers behind the decrease in the amount of oil delivered by consignors to the oil pipeline system, leading to a 6.3% decline in KMG's oil transportation compared to 2019
- The reduced gas consumption in China was one of the causes for a 17% decrease in transit gas transportation through KMG's gas pipelines towards China

Despite prompt response, KMG's annual financial performance has weakened year-on-year:

Indicator	2019	2020	Change, %
Revenue, KZT bln	6,859	4,556	–33.6
EBITDA, KZT bln	1,963	1,151	–41.3
Net profit, KZT bln	1,158	172	–85.2
Free cash flow, KZT bln	592	88	–85.1

Unfortunately, some KMG Group employees lost their lives to COVID-19. In 2020, 3,623 cases of COVID-19 were identified. As at 31 December 2020:

- 3,387 people recovered
- 122 employees were sick
- There were 114 fatalities (11 people died of coronavirus infection, 103 – of pneumonia)

ANTI-CRISIS RESPONSE

The COVID-19 pandemic directly and indirectly caused a number of challenges for KMG, which needed to be addressed comprehensively and as quickly as possible. Importantly, unlike the 2014–2015 crisis, the Company approached this crisis more prepared and financially stable, thanks to prior consistent and structured work on financial stability, improvements to corporate governance and other measures. In developing our crisis response, we considered KMG's role as the flagship of the country's oil and gas industry representing the interests of the government in the industry and holding considerable social commitments towards our operating regions. The Company's crisis response focused on its effective adaptation to low oil prices while retaining the maximum production and human resources. This in turn involves two aspects: ensuring stable day-to-day operations and maintaining and accumulating resources for post-crisis development. As a result, KMG has developed and is implementing its crisis response strategy for 2020–2021 across five key areas, which has significantly mitigated the crisis' impact on the Company:

- Operating model
- Operational efficiency
- Financial stability
- Investment
- Digital transformation

Measure 1. Operating model

Measures applied to the operating model focused on:

- Business process optimisation
- Changes to the organisational structure and downsizing at the KMG Corporate Centre
- Applying to operational staff downtime mode payment rates

2020 results

- The organisational structure of the headquarters has been revised: its staff was cut by 34% from 729 to 480 and positions of all 22 managing directors made redundant while the number of departments was reduced by three times. Bonuses and company cars for the management were cancelled while remuneration of top managers was cut by 30%
- In some cases, KMG paid compensation for the forced downtime to employees of oil service companies as their workloads fell amid the decline in production
- The outplacement project was implemented to help departing employees find a new job or transition to a new career. As a result, 25% of employees involved found jobs within six months after the launch of the project; 12% changed their careers and started their own businesses; 93% of members of the outplacement plan are satisfied with its results
- As part of the efforts to streamline, cut red tape and improving business processes at KMG and its engagements with subsidiaries and associates, the Company:
  - introduced a new procurement and contract signing procedure
  - drafted Standard Competences for Management Bodies of Subsidiaries and Associates. Currently, our subsidiaries and associates make amendments to their Articles of Association in line with the Standard Competences.

Measure 2. Operational efficiency

Improvements to operational efficiency include:

- reducing output primarily through closing economically unviable wells
- reducing rates/prices and the scope of work for contractors/suppliers across KMG Group.

2020 results

- The Company prevented the shutdown of operations across KMG Group during the pandemic
- KMG delivered on all its production cut commitments under the OPEC+ agreement

Measure 3. Financial stability

KMG supports its financial stability through:

- optimising controllable costs within the cost of goods sold
- reducing the proportion of permanent costs
- streamlining capital expenses (CAPEX)
- maintaining leverage at an acceptable level subject to the need to cover potential cash gaps and investment requirements.

2020 results

- In 2020, KMG Group's debt was reduced by USD 341 mln, including early repayment. We also reduced our debt at the level of joint ventures by over USD 1.1 bln, with North Caspian Operating Company N.V. accounting for over half of this amount
- KMG Eurobonds were successfully refinanced for USD 907 mln, smoothing the repayment schedule, with the next large lump-sum repayment pushed out to as far as 2025
- We were able to retain our credit ratings from Moody's, Fitch and S&P without relying on the government's support thanks to our debt management and reduction programme of 2017–2019, timely refinancing of large repayments, an improved covenant package, better liquidity control, cost optimisation and solid financial performance
- Our crisis response programme reduced our expenses by KZT 147 bln (CAPEX by KZT 103 bln, OPEX by KZT 27 bln and administrative expenses by KZT 17 bln)

Measure 4. Investment

Our investments were streamlined in two key areas:

- The list for asset divestment was expanded
- The priority in the investment project portfolio was given to the highest-margin projects that are aligned with the Company's strategic goals

2020 results
- Unprofitable and low-margin projects were excluded from KMG's investment portfolio
- Investment project CAPEX were reduced, with development costs reduced by KZT 29 bln

Measure 5. Digital transformation

As part of the crisis response agenda, digital transformation also serves to prioritise our project portfolio.

2020 results
- Net benefits for 2020 totaled KZT 9.3 bln, exceeding the target by 127% thanks to our post monitoring projects: Merger between JSC KazMunayGas Exploration Production and JSC National Company KazMunayGas, and Category-Based Procurement Management
- Four projects were launched: Adopting the ABAI Information System, Adopting an Engineering Simulation System at Kazakhstan Refineries, Establishing the Multifunctional KMG Shared Service Centre, and Trip Management. The benefits from the project is expected to total KZT 72.4 bln

Importantly, with the onset of the COVID-19 pandemic, we implemented necessary comprehensive measures, drafted and adopted relevant guidelines and policies, and developed and approved specific action plans to reduce the virus incidence rate and spread as well as to mitigate its impact on production processes.

Results of the anti-crisis programme

As a result of our crisis response efforts, we exceeded our initial, pre-COVID financial guidance, which did not factor in any crisis response.

Results of the crisis response programme, KZT bln

Indicator	Initial downside guidance for 2020	Crisis response in 2020 (actual)	Change
Revenue	2,955	4,556	54.2%
Net profit	65	172	164.6%

With the onset of the COVID-19 pandemic, we implemented necessary comprehensive measures, drafted and adopted relevant guidelines and policies, and developed and approved specific action plans to reduce the virus incidence rate and spread as well as to mitigate its impact on production processes.

KPI SYSTEM

The Company's performance evaluation system breaks down strategic goals and key success drivers into key performance indicators and cascading them on a top-down basis.

The Company's KPI system includes:

- corporate KPIs that are common to the Company's leadership and are based on strategic targets and strategic objectives revised as the external environment changes
- functional KPIs based on strategic objectives set for a specific leader.

KPIs and targets for members of KMG's Management Board are set by the Board of Directors. The list of KPIs for members of the Management Board for 2020 was drafted to reflect the crisis response measures taken, such as OPEX and CAPEX optimisation, and financial stability targets, and supplemented by a target ESG Rating. Our KPIs are based on key financial, economic and sector targets set out in the Company's consolidated Business Plan and division-level targets.

Performance evaluation for awarding bonuses to the leadership is carried out after the Company's performance has been summed up.

Final performance against individual financial targets is assessed using normalised KPIs with a breakdown into controllable and uncontrollable factors, such as FX rates and oil prices, in order to determine the employee's impact on the Company's performance.

Performance against corporate KPIs in 2020

No.	KPI	Unit	2018	2019	2020[5]	Comment on performance in 2020
1	ROACE[1]	%	8.1	11.5	2.9	Higher than approved targets
2	OPEX and CAPEX reduction2[2]	KZT bln	n/a	n/a	173	
3	Debt/EBITDA[3]	Ratio	2.5	2.1	3.8	
4	Reserves (A, B, C1)	Mln tonnes	668.14	680.66	666	Targets met
5	ESG Rating	Rating	n/a	n/a	69	Targets met
6	Meeting local content targets across KMG Group[4]	%	n/a	n/a	125	Targets met

Distribution of corporate and functional KPIs across the final performance by members of the Management Board

Employee status	Corporate KPIs, %	Functional KPIs, %
Chairman of the Management Board	100	0
Executive (other than the Chairman of the Management Board)	70	30

1. ROACE = (profit for the year + compensation costs adjusted for tax payments)/average capital employed.
2. Reflects the reduction in controlled OPEX and CAPEX against the approved Business Plan of the Company for 2020.
3. As per approved methodology of Samruk-Kazyna.
4. A composite indicator reflecting performance against local content targets set across KMG Group.
5. The final approval by the KMG Board of Directors of the actual values of the indicators for 2020 is expected in June 2021, and therefore the values indicated in the table may be slightly adjusted.

PERFORMANCE UNDER INVESTMENT PROJECTS

TRANSITION TO PORTFOLIO AND PROJECT MANAGEMENT

Aimed at effectively achieving strategic goals under KMG's Development strategy the Company started a transition to portfolio-based investment management in 2019. Respective guidelines were developed in 2020, with the process for embedding portfolio and project management approaches successfully launched during the year.

Portfolios are managed by ranking projects and prioritising high-impact strategic projects to efficiently allocate the financial resources available to the Company and increase competition for investment opportunities among businesses.

The project management process aims to improve the quality of planning and implementation of investment projects by applying best practices in project management from the global oil and gas industry.

The Company is phasing in Stage Gate Process projects and the Value Assurance Review to assess projects in line with the industry's best practices. Key project roles were also introduced, and their functions and responsibilities assigned.

More than 1,000 employees of KMG Group were trained to handle the new project management system and underwent a basic project management course. Training in project management methods and tools is ongoing.

A project management solution based on Microsoft Project Server 2019 was launched to generate the register of projects run by KMG and its subsidiaries and associates.

In 2021, we plan to further develop project management, including through drafting guidelines for individual subject areas of project management and establishing project offices at KMG and its subsidiaries and associates while upskilling and accrediting project teams.

INVESTMENT PORTFOLIO OVERVIEW

In 2020, KMG's investment activity was substantially affected by the COVID-19 crisis. The lockdown and closed borders put pressure on some investment projects, with their completion postponed as a result. The tenge's depreciation against other currencies has led to an increase in project costs, which, together with the pessimistic revenue forecasts, has negatively affected project payback and decisions to launch new projects.

As oil prices were declining, KMG took crisis response measures across the board to maintain its own stability. As a result, decisions were approved to continue the most promising projects involving domestic or foreign partners to share the risks.

Responding to the crisis required a more careful and balanced approach to our investment projects. Like many large companies around the world, KMG took measures to cut its CAPEX. Development CAPEX budgeted for 2020 were reduced by KZT 29 bln, with relevant cost optimisation for 2020–2024 planned to total KZT 65 bln.

UPSTREAM

A considerable portion of KMG's investment portfolio relates to oil and gas exploration and production projects. These projects are funded both directly by KMG and in conjunction with strategic partners on a parity basis. For example, several offshore projects are implemented on the basis of carry financing (Abay, Isatay, Zhenis, I-P-2, Bekturly Vostochny), where capital investments at the exploration stage are borne only by KMG's strategic partners. In the event of hydrocarbons discovery, KMG and its partners finance production at subsequent stages of the project implementation.

Al-Farabi (I-P-2) is one of such projects. In October 2020, KMG and PJSC LUKOIL ("LUKOIL"), its strategic partner, signed an agreement on the Al-Farabi project, which defines the rights and obligations of KMG and LUKOIL regarding the operations of the future subsoil user under the project. The agreement will enter into force after KMG obtains the subsoil use right by entering into a subsoil use contract and completing the planned transaction between KMG and LUKOIL to create a joint venture with the following participatory interests: KMG – 50.01%, LUKOIL – 49.99%.

As part of its crisis response strategy, KMG optimised its exploration portfolio by exiting certain projects.

In December 2020, two wells were brought into pilot operation at the East Urikhtau field in the Aktobe Region as part of the Urikhtau project. This phase provides for bringing into operation two wells at the East Urikhtau field and five wells at the Central Urikhtau field in December 2021. If the wells prove successful at the first phase, and if the market conditions are favourable, the Company will consider moving on to the second phase, under which 58 wells will operate at the Urikhtau group of fields and a number of production facilities will be constructed. The Urikhtau group of fields is located in the Mugalzhar District of the Aktobe Region and includes the Central Urikhtau, East Urikhtau and South Urikhtau. JSC NC KazMunayGas is a founder and the only member of Urikhtau Operating LLP.

In November 2020, the facilities of the Construction of an APG Desulphuriser for the Prorva Group of Fields project was officially commissioned, offering an additional capacity of 150 mln m3 per year. The project was implemented under the Programme for 100% utilisation of associated petroleum gas. The unit is designed to recover APG from the Prorva group of fields (S. Nurzhanov, West Prorva, Aktobe, Dosmukhambetovskoye) in the Zhylyoi District (Atyrau Region). Once commissioned, the unit will produce commercial gas, commercial granulated sulphur and stable gas condensate. More than 500 temporary jobs were created by the contractor during the construction.

KMG has interests in joint ventures developing large oil and gas fields such as Tengiz (20%), Karachaganak (10%) and Kashagan (8.44%):

- At Tengiz it is implementing the Future Growth Project – TCO Wellhead Pressure Maintenance Project, which will increase production capacity to 12 mtpa, bringing TCO's total oil output to around 39 mtpa.
- Projects at Kashagan aim to ramp up oil production through increased raw gas reinjection and redistribution of the gas injection zone to other drilling islands.
- Karachaganak's ongoing projects aim to maintain the liquid hydrocarbon production plateau at 10–11 mtpa, by increasing existing gas treatment and reinjection systems and drilling new production and injection wells.

OIL AND GAS TRANSPORTATION

Oil transportation

Oil transportation is a strategic segment in KMG's asset portfolio to maintain access to oil markets. We have built a diversified oil transportation system with a high transit and export capacity.
In 2020, the Company was implementing two projects:

- The flow reversal project at the Kenkiyak–Atyrau oil pipeline (reversing the flow to carry oil from Atyrau to Kenkiyak and beyond). The first start-up complex has been commissioned. In December 2020, a mechanical completion report of the facilities of the second start-up complex was signed.

  The project is part of the construction and development of the Kazakhstan–China oil pipeline system. Its commissioning will enable the reverse transportation of up to 6 mln tonnes of oil per year from Western Kazakhstan fields to Pavlodar and Shymkent refineries, as well as for export to China.

- A project to remove bottlenecks in Caspian Pipeline Consortium's ("CPC") oil pipeline system, approved by shareholders in July 2019. The project will increase the capacity of the Kazakhstan section within the Tengiz–Astrakhan–Novorossiysk pipeline to 72.5 mtpa, with a view to expected higher oil production from Tengiz and Kashagan. The project is slated for completion before the end of 2023.

Gas transportation and marketing

In 2020, the construction of the Beineu–Bozoi–Shymkent gas pipeline achieved its major goal – to transport up to 15 bln m3 of gas per year from the western fields of Kazakhstan, supply gas to the southern regions of Kazakhstan and diversify gas exports. As part of this objective, a number of related projects were completed in 2020:

- Construction of four compressor stations at the Beineu–Bozoi–Shymkent gas pipeline. In April 2020, the last compressor station, Ustyurt (KS-1A), in the Baiganin District of the Aktobe Region was commissioned as part of the project. The commissioning of the Ustyurt compressor station brings the number of compressor stations installed along the gas pipeline to four. With the completion of this particular project, the annual capacity of the Beineu–Shymkent gas pipeline has

increased to 15 bln m3, enabling uninterrupted supply of natural gas to the southern regions of the country during winter peak periods as well as increased gas exports
- Increased gas storage capacity at the Bozoi underground gas storage facility. The project aims to increase gas storage capacity at the Bozoi underground gas storage facility from 2.2 bln m^3 to 4 bln m^3 and comprised two phases:
  - The completion of Phase 1 reached a storage capacity of 3 bln m^3 as at year-end of 2017 and accelerated gas injection to 150 days from 270 days and gas withdrawal period to 180 days
  - Implementation of Phase 2 involved revamping five gathering stations and constructing two new gathering stations as well as bringing annual gas storage capacity to 4 bln m^3. The project was commissioned in December 2020.

Once the Beineu-Shymkent gas pipeline was commissioned, the Bozoi underground gas storage facility became an important element in the supply of natural gas to consumers in the Turkestan, Zhambyl and Almaty Regions.

Under the Development of the Amangeldinskaya Group of Fields project, further progress was made on the Barkhannaya–Sultankuduk exploration cluster in 2020, with the seismic programme scheduled for completion in 2021.

REFINING AND MARKETING OF OIL PRODUCTS

The Kazakh-Romanian Fund KMG International N.V. continues the construction of 25 filling stations (Phase 1) in Romania to build a retail network for the sale of oil products. 10 out of 25 filling stations were already commissioned under the project, with the rest planned to be launched in 2021.

Kazakhstan refineries are also engaged in a number of relevant projects.

Pavlodar Refinery completed a feasibility study for its ERTIS project, which allow producing winter diesel fuels with a cloud point of –28 °C or lower.

As a socially responsible company and in line with its commitments to environmental transparency, Atyrau Refinery, a wholly-owned subsidiary of KMG, started the upgrade of its wastewater treatment facilities as part of the Tazalyq project in 2020. The treatment facilities are planned to be upgraded in three phases: upgrade and renovation of the first mechanical wastewater treatment train in 2019–2022, renovation of the biological wastewater treatment facility and construction of an advanced treatment facility, and land reclamation in 2019–2023.

The project will halve discharges to evaporation fields through recirculating of treated water back into the refinery's processes by 50%, with water withdrawal from the Ural River cut by 30%.

SERVICE PROJECTS

KMG's service projects are not capital heavy, offer quick returns and are mainly focused on enhancing oilfield services provided to major oil and gas assets.

TRANSFORMATION AND DIGITALISATION

The global COVID-19 crisis sped up our transformation and digitalisation. Digital technology offers new opportunities for the oil and gas sector in the current environment. For example, as soon as the lockdown began, digital solutions enabled us to quickly shift KMG employees to work from home without affecting performance.

Digital transformation is integrated in KMG's Development Strategy until 2028 and crisis response in 2020–2021. We will continue the digitalisation of KMG, but in a targeted and smart way to ensure a tangible financial impact and improve industrial safety. KMG will use established technologies with proven effectiveness.

A new approach to digital transformation is outlined in our 2021 priorities:
- Transformation is clearly aligned with KMG's Development Strategy and crisis response plan
- Focus on a maximum of 10 projects with an emphasis on oil exploration and production to achieve direct financial benefits
- Active involvement of subsidiaries in identifying business challenges and initiating projects to address them
- Promotion of a change culture at KMG

KMG's current portfolio of Digital Transformation projects and activities comprises 13 projects and activities and is aimed at reducing costs, increasing the transparency of business processes, developing a culture of continuous improvement, and implementing digital solutions at production facilities.

In 2020, seven projects and activities were completed or embedded in KMG's operational activities: ERP system implementation, IT cost optimisation, information security management system implementation, new procurement model, and three HR activities. In the reporting period, all of these projects and activities yielded certain results. Specifically, as part of the project to introduce an information security management system (ISMS) at KMG Group, information security management processes at KMG's corporate centre were updated and guidelines on the functioning of ISMS at KMG and subsidiaries were developed.

Activities aimed at developing guidelines on procurement management at KMG and performing diagnostics implied the development and approval of KMG's Procurement Management Rules.

In line with the new approach, a new project, ABAI (Advanced Base Artificial Intelligence) Information System Development, was added to the digital transformation portfolio. The ABAI system will integrate all production data from KMG's upstream unit with the possibility to analyse these data using artificial intelligence, instantly visualise them, and continuously manage production operations remotely.

In 2020, we resumed the large-scale project to establish KMG's Multifunctional Shared Services Centre, providing for the transfer of a number of support functions (HR management, accounting and tax accounting, procurement, administration and maintenance, and others) to a single service centre. Thus, we will be able to significantly reduce the load on the corporate centre and subsidiaries, and focus on core production activities. Function standardisation and automation will drive cost reduction and improve transparency.

Transformation of business processes and introduction of digital technologies call for changes in people, their mindset and behaviour. Accordingly, several projects in our current portfolio are aimed at introducing a new corporate culture, improving employees' digital literacy, and enhancing the ability to work in the new environment.

As part of our HR activities in 2020, we held several strategic sessions with the management of KMG and subsidiaries, that resulted in the elaboration of a roadmap to develop the corporate culture and an action plan to improve the Social Stability Index and enhance industrial relations at KMG Group. On top of that, based on the diagnostics results, HR specialists approved a new transitional (interim) organisational structure of the HR unit of KMG's corporate centre, and detailed the processes and roles within the new structure.

A large-scale campaign to train employees of the corporate centre and subsidiaries was launched as part of the initiative to implement a project management system at KMG. The system, based on Stage Gate Process principles, has been functioning at KMG Group since October 2020 and is expected to ensure project management transparency and eliminate unprofitable projects thanks to comprehensive feasibility studies to back up investment decisions. In addition, clear responsibilities for project implementation were established, and specific requirements for the qualifications of participants in project management were defined. It is expected that project management trainings for KMG employees will be conducted on a continuous basis.

A project to introduce a training and certification framework for operational staff of Kazakhstan refineries through the introduction of computer simulators was implemented across the oil refining business segment. Operators use virtual simulators to practice normal and abnormal situations. In addition, young professionals can study industrial machines and production processes before starting relevant work. This project is an element of the "digital employee" concept. It will help minimise production disruptions caused by human error and thus increase the reliability of refineries thanks to proper and uninterrupted equipment operation.

KMG has been successfully running the project to implement the Lean 6 Sigma (LSS) programme in its exploration, production and refining business for several years. The project is also aimed at training employees in a project-based approach. The programme stipulates conditions to motivate employees to put forward initiatives to improve business processes and optimise enterprises' performance. LSS projects do not typically require major investments, while ensuring immediate economic impacts. In general, the programme promotes a culture of lean production and involves people in delivering continuous improvements to the production process.

By focusing on personnel retention and safety, and business continuity, the Company has been able to confirm its status as No. 1 oil and gas company in Kazakhstan.

OPERATING OVERVIEW

RESERVES

According to the reserves audit report prepared by the international independent consulting firm DeGolyer and MacNaughton in accordance with international standard PRMS, KMG's proved plus probable hydrocarbon reserves (2P) were 635 mln toe (4,894 mln boe) as at 31 December 2020. 2P reserves decreased by 6.1% year-on-year, driven mainly by technical (natural decline in production from mature fields) as well as macroeconomic reasons (lower oil price and FX volatility).

The proved reserves (1P) life is 16 years, far exceeding the average for global oil majors (about 11 years).

Net reserves[1] under PRMS (as at 31 December 2020)

	Hydrocarbon reserves, mln boe		Hydrocarbon reserves, mln toe	
Reserves	2019	2020	2019	2020
Proved (1P)	3,860	3,550	499	459
Proved plus Probable (2P)	5,220	4,894	676	635
Proved plus Probable plus Possible (3P)	6,089	5,832	790	757

[1] Net Reserves are defined as the portion of the gross reserves attributable to (1) the interest held by KMG after deducting all interests held by others, as well as (2) interests that are not held by KMG, but which KMG controls.

EXPLORATION

KMG pursues its previously developed strategy for exploration and growth in reserve

Reserve replacement through organic and inorganic growth

- Exploration at current contract areas
- Further exploration of producing assets
- Prospect evaluation and acquisition

Finding strategic partners for joint exploration projects

- Foreign investments
- Knowledge and technology transfer
- Risk optimisation

Improvement of exploration performance

- Improvement of available technologies and deployment of new technologies
- Process digitalisation
- Implementation of a project management system in exploration

Exploration costs totalled KZT 18 bn (excluding shares) in 2020, down KZT 29 bn year-on-year. However, the funds were sufficient to maintain the current production level and replenish reserves in the medium term. The cost reduction was mostly driven by CAPEX optimisation as part of COVID-19 crisis response initiatives.

In 2020, hydrocarbon reserves increased by 16 mln tonnes, primarily due to further exploration and re-appraisal of the fields operated by Embamunaigas, OzenMunaiGas, Kazakhturkmunay, and others.

A major highlight of 2020 in our ongoing exploration projects was a natural flow of up to 85 tonnes per day of water-free Jurassic oil produced from an exploration well on the Bekturly Vostochny block.

The highlight in further exploration of existing projects in 2020 was a natural flow of 70 tonnes per day of water-free Triassic oil produced from NSV-11 well in the north-west flank of Embamunaigas's Sagidulla Nurzhanov field.

The coastal areas of the Caspian may hold large potential discoveries, with about 90% of Kazakhstan's total hydrocarbon reserves concentrated in the region. In 2020, KMG's portfolio was comprised of 15 exploration projects (8 offshore and 7 onshore), of which six projects are carried out under carry financing arrangements.

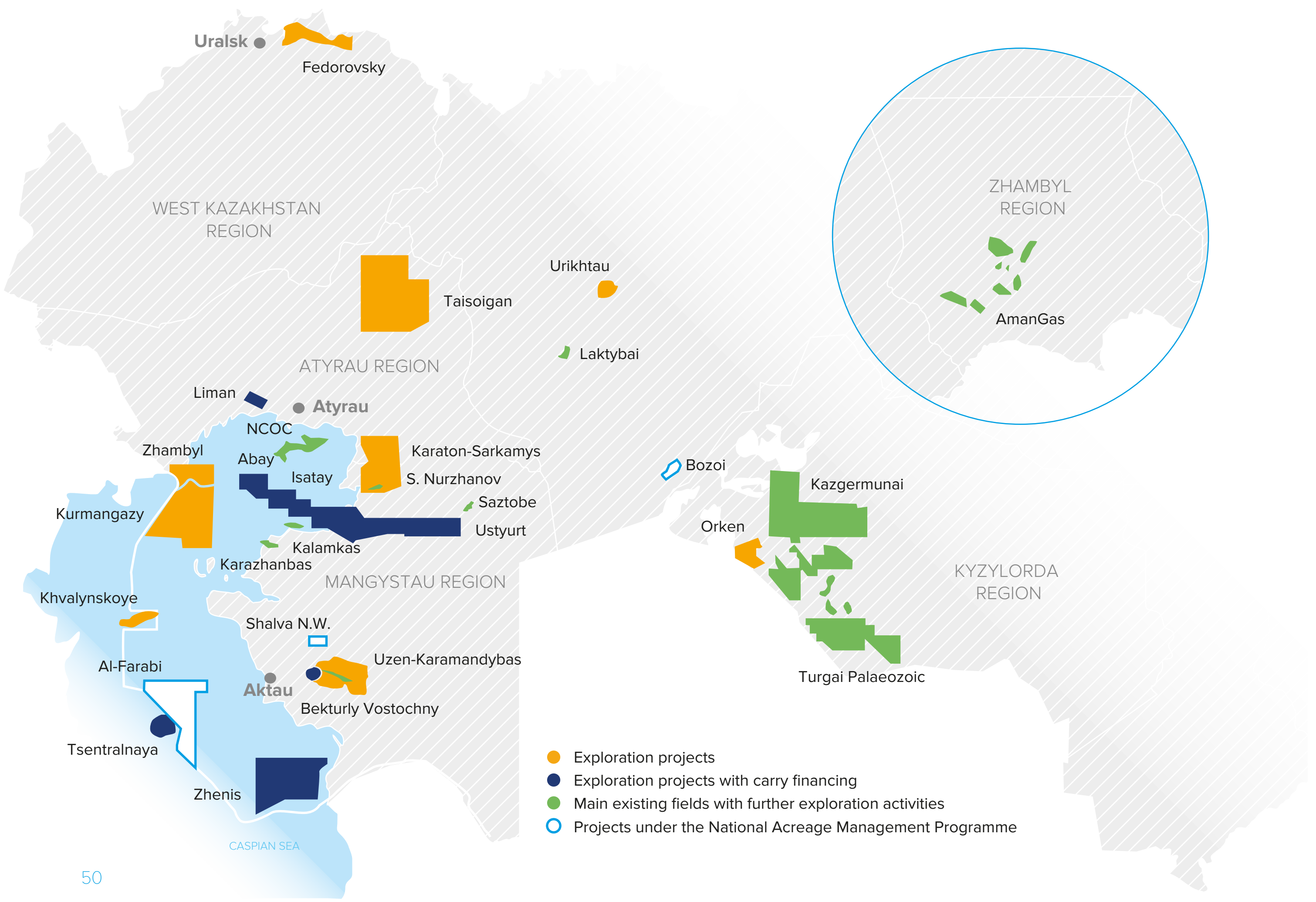
Processing and interpretation of seismic data in 2020 led to an estimate of total petroleum in place for six projects of more than 2 bn toe. Seismic acquisition for these projects commenced in 2019.

KMG is routinely conducting comprehensive studies of Kazakhstan's sedimentary basins to assess their oil and gas potential and build a portfolio of promising blocks for subsoil use. In 2020, geologic evaluation of more than 15 projects was completed.

The Company also continues building and updating models of sedimentary basins. Basin modelling includes a comprehensive prospect analysis using all available historical data, which significantly mitigates the risks related to decision-making on further exploration. In 2020, KMG updated the models of the Ustyurt-Bozashin basin, Mangyshlak basin and the flanks (norther, eastern and southern) of the Caspian sedimentary basin and built models for the South Turgai and Shu-Sarysu sedimentary basins.

In early 2020, as part of its exploration cooperation with the government, KMG initiated a process to include 16 exploration projects in the National Acreage Management Programme and seven areas in the scope of state geological surveys in accordance with the Kazakhstan's Subsoil and Subsoil Use Code. However, the list of projects had to be optimised due to the fall in global energy prices and as part of the crisis response strategy developed by the Company, with only three projects eventually included in the National Acreage Management Programme in 2020.

Exploration	2018	2019	2020
2D seismic, linear km	1,000	240	–
3D seismic, sq km	1,253	6,928	347
Number of wells drilled.	55	39	19

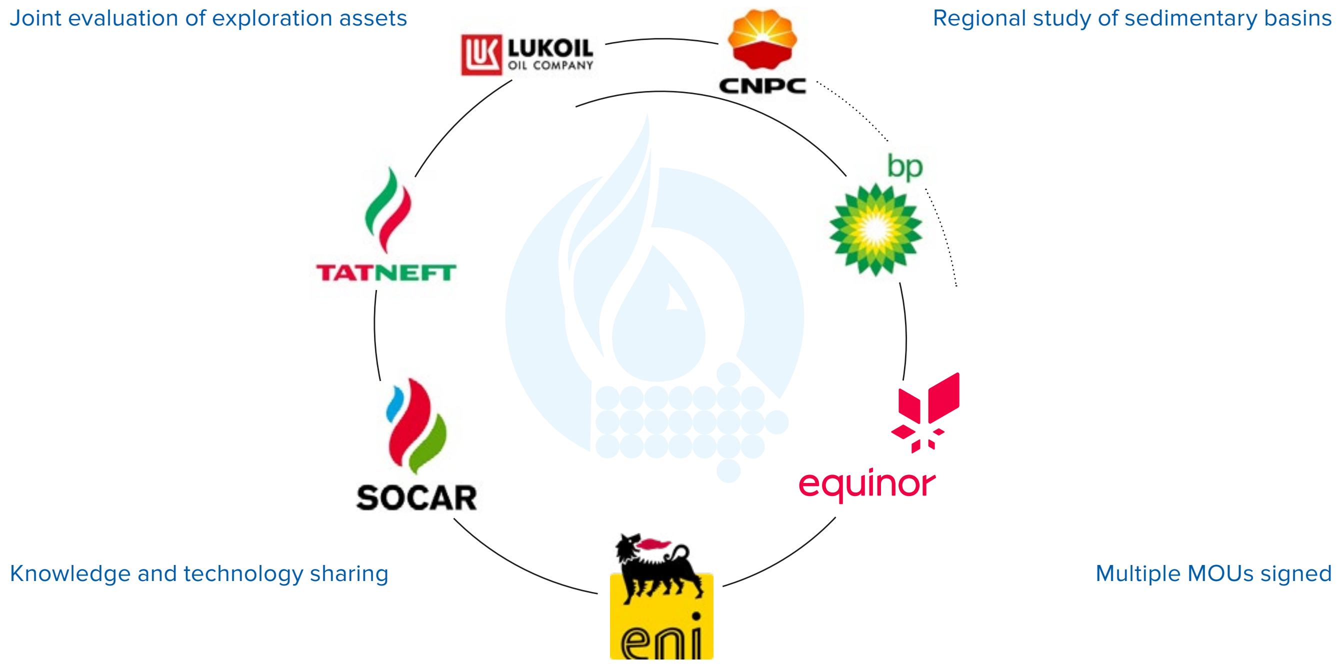


EXPANSION OF PARTNERSHIP PROJECTS

In 2020, KMG continued to strongly focus on expanding its cooperation in exploration with international oil and gas companies:

- A virtual data room was successfully launched to provide remote access to geological and geophysical information on exploration projects to attract strategic partners. Over 15 companies were granted access to the virtual data room in 2020, including Chevron, CNOOC, CNPC, BP, Equinor, Eni, LUKOIL, and Tatneft
- As part of a review of available process data from existing assets conducted jointly by KMG and British Petroleum, the two companies evaluated the Zhambyl block
- KMG and its partners Equinor, Tatneft and LUKOIL have continued activities under an agreement on joint regional studies
- On 7 October 2020, KMG and LUKOIL signed an agreement to further their cooperation under the Al-Farabi project (previously I-P-2, renamed in August 2020). The Al-Farabi license block is located in Kazakhstan's sector of the Caspian Sea. The next step will be the signing of a hydrocarbon exploration and production contract
- KMG, LLC RN-Exploration (a Rosneft subsidiary) and the Ministry of Energy of the Republic of Kazakhstan are negotiating a transfer of subsoil use rights and extension of exploration period from 2021 to 2026 for the expanded contract area in the Kurmangazy block.
- 2020 saw the completion of a pilot project to process 3D seismic data on the Urikhtau field with Eni and a joint project with ExxonMobil to reprocess 3D seismic on Kashagan (East).

TECHNICAL COOPERATION WITH INTERNATIONAL PLAYERS



UPSTREAM

In 2020, KMG, like all oil and gas companies around the world, faced a sharp decline in oil prices due to the global crisis caused by the COVID-19 pandemic, as well as output cuts as part of Kazakhstan's commitment under the OPEC+ agreement. Despite the uncertainty and instability, KMG was able to maintain continuous operations and adapt to the new business situation.

Oil and gas are produced at KMG's operating assets, as well as from megaprojects where KMG has non-operating interests.

KMG participates in all major oil and condensate production projects in Kazakhstan, with interests of 20%, 10% and 8.44% in Tengiz, Karachaganak and Kashagan, respectively.

KMG is partnering with the world's major oil giants on oil production megaprojects: Chevron Corporation, Exxon Mobil Corporation, Royal Dutch Shell plc, Eni S.p.A., TOTAL S.A., INPEX CORPORATION, China National Petroleum Corporation (CNPC) and LUKOIL.

Assets	KMG's interest, %
Operating assets	
JSC OzenMunaiGas[1]	100
JSC Embamunaigas	100
JSC Mangistaumunaigaz	50
JSC Karazhanbasmunai	50
JV Kazgermunai LLP	50
JSC PetroKazakhstan Inc.	33
Kazakhturkmunay LLP	100
Kazakhoil Aktobe LLP	50
Amangeldy Gas LLP (condensate)	100
Non-operating assets (megaprojects)	
Tengiz (Tengizchevroil LLP)	20
Kashagan (North Caspian Operating Company N.V.)	8.44
Karachaganak (Karachaganak Petroleum Operating B.V.)	10

[1] Also includes KazGPZ LLP (condensate).

OIL PRODUCTION

Oil and gas condensate production (ths tonnes)

	2018	2019	2020
Oil and gas condensate production	**23,607**	**23,618**	**21,752**
Operating assets	**15,694**	**15,476**	**14,113**
JSC OzenMunaiGas	5,488	5,586	5,347
JSC Embamunaigas	2,895	2,900	2,601
JSC Mangistaumunaigaz (50%)	3,187	3,204	2,977
JV Kazgermunai LLP (50%)	1,354	1,114	778
JSC Karazhanbasmunai (50%)	1,081	1,082	1,001
JSC PetroKazakhstan Inc. (33%)	998	844	661
Kazakhoil Aktobe LLP (50%)	296	320	295
Kazakhturkmunay LLP	376	409	432
Amangeldy Gas LLP (KTG)	19	17	15
Urikhtau Operating LLP	0	0	6
Megaprojects	**7,913**	**8,142**	**7,639**
Tengiz	5,724	5,958	5,292
Kashagan	1,094	1,169	1,253
Karachaganak	1,095	1,015	1,094

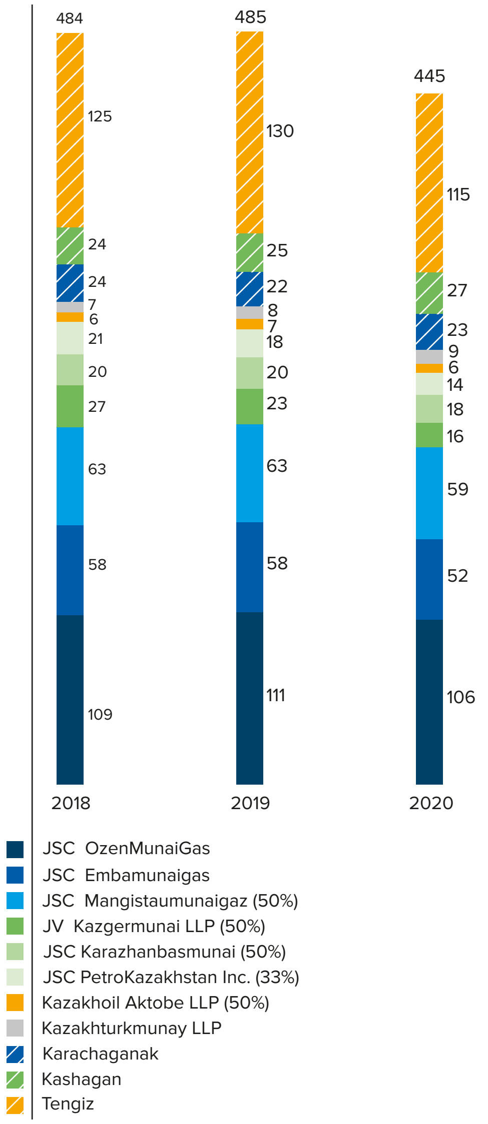
In 2020, as part of commitments of the Republic of Kazakhstan to cut oil supply under the OPEC+ agreement, KMG reduced its oil and condensate output by 1.3 mln tonnes as compared to previous annual targets. KMG's total output was 21.8 mln tonnes or 445 ths bbl per day, down 8% year-on-year. Nevertheless, KMG remains the national leader in Kazakhstan's oil and gas industry, accounting for a quarter of the country's oil and condensate output.

KMG has a balanced portfolio of upstream assets with a significant growth potential. The share of operating and megaprojects in its total oil and condensate production was 65% (14.1 mln tonnes) and 35% (7.6 mln tonnes), respectively.

Planned and actual production levels including OPEC+ cuts

Indicator	2020		
	Production targets	Actual output	Variance
Oil and gas condensate production (ths tonnes)	**23,043**	**21,752**	**–1,291**
Operating assets	14,649	14,113	–536
Megaprojects	8,394	7,639	–755

Oil and gas condensate production (ths bbl per day) [1]



KMG remains the national leader in Kazakhstan's oil and gas industry, accounting for a quarter of the country's oil and condensate output.

[1] Assuming individual average weighted bbl/tonne conversion rates used for each asset.

MEGAPROJECTS

KMG develops global-scale projects through partnerships with international oil and gas companies.

TENGIZ

The largest gem in Kazakhstan's oil and gas industry, a world-unique supergiant oil field

The agreement for the Tengizchevroil LLP project was signed between the Republic of Kazakhstan and Chevron Corporation on 2 April 1993, with a 40-year hydrocarbon exploration and production licence granted to Tengizchevroil in 1993. Tengizchevroil focuses on the exploration, production and sales of hydrocarbons from the Tengiz and Korolevskoye fields in the Atyrau Region.

Tengizchevroil LLP (TCO) operates a license that includes the unique, supergiant Tengiz field and the adjacent, smaller but still significant, Korolevskoye field. The Tengiz oil field was discovered in 1979, and it is the world's deepest supergiant oil field.

Currently, oil production and processing are carried out at modern, highly reliable operating facilities: complex technology lines (CTL, throughput: 12.41 mln tonnes of processed oil in 2020), Second-Generation Plant (SGP, throughput: 14.05 mln tonnes of processed oil in 2020) and sour gas injection (SGI, 3.07 bln m³ in 2020). The well stock currently comprises 160 production wells and 8 gas injection wells.

Highlights:

Oil production (total)

26,457 ths tonnes (576 ths bbl per day)

Oil production (net to KMG) (20%)

5,292 ths tonnes (115 ths bbl per day)

Development perspective

The implementation of the USD 45.2 bln Future Growth Project/Wellhead Pressure Maintenance Project will boost oil production from the Tengiz field by 12 mtpa

2P oil reserves life

Over 20 years

Associated gas production (total). Includes gas consumed in operations and gas reinjection

14,75 bln m³

Interests

KMG (20%), Chevron (50%), ExxonMobil (25%), LUKOIL (5%)

Operatorship

Tengizchevroil LLP

Tengizchevroil's operational highlights

Year	Oil production, ths tonnes	Associated gas production, mln м³	Dry gas production, mln m³	Liquefied petroleum gas (LPG) production, ths tonnes	Sulphur production, ths tonnes	Gas injection, mln m³
2018	28,622	15,625	9,186	1,343	2,574	3,186
2019	29,791	16,290	9,471	1,348	2,589	3,655
2020	26,457	14,748	8,674	1,482	2,451	3,069

In 2020, oil output fell by 11.19% year-on-year to 26,457 ths tonnes (including KMG's share of 5,292 ths tonnes) while gas output was down 9.47% year-on-year to 14.75 bln m³ (including KMG's share of 2.95 bln m³). The production decline was primarily driven by commitments under the OPEC+ agreement.

Progress on the Future Growth Project and the Wellhead Pressure Maintenance Project

Tengizchevroil is implementing two integrated projects – the Future Growth Project (FGP) and the Wellhead Pressure Management Project (WPMP). The two projects make a significant contribution to the national economy: the FGP–WPMP has already created about 48 thousand jobs in Kazakhstan, with about 1,000 more permanent jobs to be added to support the operation of the FGP–WPMP. The implementation of the projects will boost oil production from the Tengiz field by 12 mtpa.

A technical inspection of the FGP/WPMP facilities was conducted in February–April 2020, resulting in proposals sent to TCO to optimise the project cost and recommendations on improvements to its project management practices. The additional cost optimisation for the project confirmed by TCO is about USD 1 bln.

At the end of 2020, the cost of the FGP/WPMP project was USD 34.3 bln, with the overall project progress at about 80.6%.

On 28 October 2020, the last module with process equipment arrived at the site of the Tengiz field, marking the end of the project's offshore transportation.

COVID-19

Between March and June 2020, about 27 thousand people were demobilised from the Tengiz field. As of 1 September, TCO began mobilising its personnel back to the FGP/WPMP construction sites in monthly increments of 4,500 to 5,000 employees, bringing the Tengiz workforce to 34 thousand employees by the end of 2020.

TCO set up an Emergency Response Team, developed tactical plans for a range of scenarios and the Tengiz Field Security Plan. A list of critical personnel at the Tengiz field was drawn up to ensure its uninterrupted operation.

1,131 employees of Tengizchevroil were asked to work from home. A fly-in fly-out (FIFO) plan was prepared and approved by the Akimat of the Atyrau Region and the Kazakhstan Government, with workers allowed to work only after a certain period of isolation and a negative PCR test.

TCO allocated USD 8 mln to the Atyrau Region to support its fight against COVID-19 and also started the construction of a 200-bed USD 14 mln modular hospital in Kulsary.

KASHAGAN

The giant Kashagan field is the largest discovery in the last four decades and one of the most complex offshore deposits globally.

The Production Sharing Agreement in respect of the North Caspian Sea (NCSPSA) was signed by the Republic of Kazakhstan and an international consortium on 18 November 1997. North Caspian Operating Company N.V. is the project operator, acting on behalf of the project contractors.

NCOC's operational highlights

Year	Oil production, ths tonnes	Natural and associated gas production, mln m^3	Sulphur production, ths tonnes	Gas injection, mln m^3
2018	13,219	7,697	1,340	2,235
2019	14,127	8,453	1,323	3,148
2020	15,141	9,152	1,228	3,807

The North Caspian project is the first major offshore oil and gas project in Kazakhstan. It includes five fields: Kashagan, Kalamkas-Sea, Kairan, Aktoty and Kashagan South-West. The Kalamkas-Sea field was returned to the Republic of Kazakhstan in November 2020.

The Kashagan field lies in an offshore location 75 km from Atyrau at water depths of 3 to 4 m. The field reservoir lies at a depth of over 4 km and is characterised by high pressures (over 700 bar) and high hydrogen sulphide (H_2S) concentration. At the same time, sour gas reinjection at high pressure improves oil recovery.

Kashagan is one of the most challenging industry projects globally due to harsh environmental conditions at sea and significant design, logistics and safety challenges. Located in the subarctic climate, the North Caspian Sea is covered with ice for about five months a year, requiring innovative technical solutions. KMG, together with international partners, is successfully implementing the project, having achieved sustainable production rates with further growth potential.

Highlights:

Oil and condensate production in 2020 (total)

15,141 mln tonnes (328 kbopd)

Oil and condensate production net to KMG (8.44%)

1,253 ths tonnes (27 kbopd)

Outlook

Oil production from Kashagan can reach 700 kbopd within the next decade, provided a number of investment projects are approved and carried out.

2P oil and condensate reserves life[1]

Over 120 years

Natural gas production (total)

9,152 bln m^3

Interests

KMG Kashagan B.V. (16.88%), Eni (16.81%), ExxonMobil (16.81%), Shell (16.81%), TOTAL SA (16.81%), CNPC (8.33%), and INPEX North Caspian Sea (7.56%)

Operatorship

North Caspian Operating Company N.V. (NCOC)

The Kashagan field infrastructure comprises onshore and offshore facilities. Onshore facilities include the Bolashak Onshore Processing Facility (an integrated oil and gas treatment plant) while the offshore facilities comprise a range of manmade structures including an operations and process complex on Island D, Island A, and early production islands EPC-2, EPC-3 and EPC-4. A total of 40 wells were drilled on the Kashagan field, 6 of which are injection wells and 34 are production wells.

Currently, KMG (through Cooperative KazMunayGaz U.A.[1]) jointly with JSC Samruk-Kazyna on a parity basis (50%/50%) owns KMG Kashagan B.V. which, in turn, has a 16.88% interest in the North Caspian project. Thus KMG indirectly owns 8.44% of the project. KMG also has an option to acquire another 50% in KMG Kashagan B.V. between 2020 and 2022.

Oil production from the North Caspian project was 15.141 mln tonnes of oil and 9,152 mln m^3 of natural and associated gas in 2020. KMG's share in Kashagan production grew by 7% year-on-year to 1,253 ths tonnes of oil and 758 mln m^3 of gas. Oil and gas production increased as a result of the overhaul carried out in 2019 (which boosted the operational efficiency of offshore and onshore facilities), an increase in the number of injection wells from four to six, and installation of additional reboilers on oil processing lines. Kashagan's targeted 2020 annual production of 1,332 ths tonnes of oil was not achieved due to OPEC+ restrictions.

[1] Reflects the current relatively low oil production level, which has an upside potential.

The produced oil is mostly exported to Europe, East Asia and India via Novorossiysk, where the oil is delivered by the CPC pipeline. During the period of very low oil prices, between March and June 2020, CPC Blend crude's liquidity dropped, with discount as large as USD 10 per bbl. In that environment, rapid action was taken to redirect exports to a destination offering the most attractive margins – for sale FOB Ust-Luga. The Company has alternative destinations to sell its crude in the event such situations happen again in the future.

KazTransGas (KTG) is the sole buyer of gas from all contractors at the Kashagan field, with whom a single gas purchase and sale contract has been signed.

Outlook for Kashagan

Once sustainable production rates are achieved, two projects are under consideration in phase 1 to ramp up to plateau production with the potential to grow oil and condensate production to 450 kbopd in the medium term.

- Bundle 1
- Project to supply raw gas to a third party

Two separate projects, A and B, are considered for phase 2 to increase oil and condensate production to 700 kbopd over the next 10 years.

- Phase 2A
- Phase 2B

Bundle 1

The project will enable oil production increase by 15–20 kbopd (1,900–2,500 tonnes per day) by upgrading existing injection compressors and expanding their capacity. Bundle 1 was split into two phases: raw gas injection compressor upgrade (to be completed in 2022) and an ultra-high pressure pipeline with well conversion (2026). A final investment decision (FID) for the raw gas injection compressor upgrade project was taken in July 2020, with the project estimated at approximately USD 207 mln scheduled for completion in 2022.

Project to supply raw gas to a third party

The project will provide for increasing oil production by 17–20 kbopd (2,100–2,500 tonnes per day) by delivering additional volumes of associated raw gas to KazTransGas's planned new gas processing plant (GPP) with raw gas processing capacity of 1 bln m^3 per year. Key gas supply terms were agreed with KazTransGas, and with the FID taken in December 2020, the project was moved into the implementation phase. The project is scheduled for completion in 2023.

Phase 2A

The project aims to increase oil production to 500 kbopd (63,000 tonnes per day), with the selected supply option providing for an additional annual supply of 2 bln m^3 of raw gas to KazTransGas's gas processing plant. Currently, this option undergoes technical review and optimisation as part of a pre-FEED study. An FID is expected in 2023, with the project start-up in 2026.

Phase 2B

The project aims to increase oil production to 700 kbopd (88,000 tonnes per day). An option to build a multi-phase pipeline and a new onshore plant and to supply 6 bln m^3 per year of raw gas to Tengizchevroil or KazTransGas was selected in Q3 2020. Currently, this option undergoes technical review and optimisation as part of a pre-FEED study. An FID is expected in 2024, with the project start-up in 2030.

COVID-19

As part of its COVID-19 response, the operator of the North-Caspian project has been implementing an effective COVID-19 prevention and control programme in order to protect operational staff while taking steps to minimise impact on operations and curb further spread of the virus.

Quarantine facilities compliant with all applicable sanitary requirements have been rolled out. Only a skeleton staff has been operating, with 28- and 56-day FIFO schedules introduced in August 2020. Extra contact-free operation measures were put in place to reduce interaction between independent work areas, with 10- or 14-day quarantine and PCR-testing across several stages introduced before starting work at production sites.

[1] A wholly-owned subsidiary of KMG, with the direct ownership of 99.7440256% and indirect ownership via KMG Kumkol LLP of 0.2559744%.

KARACHAGANAK

One of the world's largest gas and condensate fields

The Final Production Sharing Agreement (FPSA) in respect of the Karachaganak oil and condensate project was signed by the Republic of Kazakhstan and an international consortium on 18 November 1997. Royal Dutch Shell and Eni are the joint operators of the Karachaganak project (development via Karachaganak Petroleum Operating B.V.).

Karachaganak Petroleum Operating B.V.'s operational highlights

Year	Gas production, mln m^3	Liquid hydrocarbon production, ths tonnes	Gas injection, mln m^3
2018	18,913	10,953	8,589
2019	18,615	10,147	8,711
2020	20,214	10,941	10,362

Karachaganak oil and condensate field is one of the largest oil and condensate fields in the world, located in the West Kazakhstan Region and covering an area of over 280 sq km. The field was discovered in 1979, with pilot development started in 1984.

The Karachaganak project has three core process facilities, comprising a single system of interrelated and interdependent process units within the Karachaganak field's production process:

- KPC – the Karachaganak Processing Complex, located in the northwestern part of the field and processing liquid hydrocarbons coming from wells as well as feedstock transported from Unit 2
- Unit 2 – a gas treatment unit located in the southeastern part of the field, which separates and reinjects raw gas at high pressure and feeds liquid hydrocarbons to the KPC for stabilisation before shipment for export
- Unit 3 – a gas treatment unit located in the northeastern part of the field, which separates and partially stabilises liquid hydrocarbons and gas before shipment for export

Highlights:

Production of liquid hydrocarbons (stab.) (total)

10.9 mln tonnes (235 kbopd)

Production of liquid hydrocarbon (stab.) net to KMG (10%)

1,094 ths tonnes (23 kbopd)

Outlook

The implementation of investment projects to maintain the achieved liquid hydrocarbon production plateau levels

2P oil and condensate reserves life

Over 20 years

Gas production (total)

20.2 bln m^3

Interests

KMG (10%), Eni (29.25%), Shell (29.25%), Chevron (18.00%) and LUKOIL (13.5%)

Operatorship

Royal Dutch Shell and Eni are the joint operators of the Karachaganak field (Karachaganak Petroleum Operating B.V.)

During 2020, three new wells were added to the field's operating well stock, which now includes 158 producing wells and 19 injection wells.

Liquid hydrocarbon production from Karachaganak increased by 7.8% year-on-year to 10,941 ths tonnes in 2020, including KMG's share at 1,094 ths tonnes. Gas production was up 8.6% year-on-year at 20,214 mln m^3 in total, with KMG's share at 2,021 mln m^3. The increase in production was due to higher operating performance of KPC, Unit 2 and Unit 3 following preventive maintenance in September and October 2019, as well as an increase in gas injection volumes in the summer after new gas injection wells came online along the 5th Trunk Line.

Outlook for Karachaganak

The Karachaganak oil and condensate field is in Phase 2 commercial development (phase 2M), which includes a number of major capex projects (Production Plateau Extension Projects and the Karachaganak Expansion Project) aimed at increasing raw gas treatment and reinjection capacity to extend the duration of the liquid hydrocarbon production plateau at the achieved rates.

[1] A conversion factor of 0.9 is applied to total oil and condensate production to estimate stable liquid hydrocarbons.

Production Plateau Extension Projects (phase 2M)

- Installation of the additional 5th Trunk Line (5TL) – the project will increase the annual volume of gas injection to 10 bln m^3 in order to maintain reservoir pressure and add 2.6 mln tonnes of liquid hydrocarbons in incremental production over the remaining life of the FPSA
- KPC Gas Debottlenecking (KGDBN) – the project envisages commissioning of new glycol gas-dehydration and low-temperature gas separation units with a total capacity of 4.0 bln m^3 per year to increase the volume of gas treatment for reinjection and/or export to the Orenburg Gas Processing Plant (OGPP), as well as add 9.1 mln tonnes of liquid hydrocarbons in incremental production over the remaining life of the FPSA
- Installation of Unit 2 4th Injection Compressor (4ICP) – the project will install a network of process pipelines to maintain reservoir pressure and the liquid hydrocarbon production plateau by increasing annual gas injection volumes from 10 bln m^3 to 13 bln m^3, as well as add 6.8 mln tonnes of liquid hydrocarbons in incremental production over the remaining life of the FPSA
- Installation of the additional 6th Trunk Line (6TL) – the project will optimise the injection process by shifting gas to new parts of the field while adding 2.2 mln tonnes of liquid hydrocarbons in incremental production over the remaining life of the FPSA

The 5TL project was commissioned in 2019, with the KGDBN and 4ICP projects scheduled for start-up in Q4 2021 and the 6TL project coming online in Q2 2024.

Combined, the Production Plateau Extension Projects will maximise the benefits through:

- increased gas treatment capacity
- incremental liquid hydrocarbon production
- upgrades to existing liquid hydrocarbon treatment units
- reduced rates of reservoir pressure declines.

Karachaganak expansion Project (KEP)

A major expansion of production units is an option to further extend production plateau post phase 2M. This expansion, phased in two stages – for 2025 and 2026, will be pursued through the KEP project which will enable a further boost in gas treatment and reinjection capacities through the phased commissioning of the 5th and 6th injection compressors to sustain oil production at 10 mln to 11 mtpa. The project cost is estimated at USD 1.8 bln. In December 2020, a final investment decision was taken for the 5th Injection Compressor Project (5ICP), and a FID for the 6th Injection Compressor Project (6ICP) is expected later.

Digital projects to transform operations

As part of the Digital Kazakhstan innovative development state programme, Karachaganak Petroleum Operating B.V. has developed a roadmap for a digital transformation and technology innovation. The current work streams are focused on the areas of production optimisation, well surveillance, smart plant and digital transformations for project delivery, minimisation of paper-intensive processes and maximisation of the automated workflows, warehouse management, improvement of the monitoring and intervention activities.

Digitising key field parameters will enable Karachaganak Petroleum Operating B.V. to make timely decisions maximising productivity through automated integrated data analysis tools. With progress at 47%, the project's expected completion year is 2022.

COVID-19

COVID-19 response at the Karachaganak field included the following crisis response measures implemented early on:

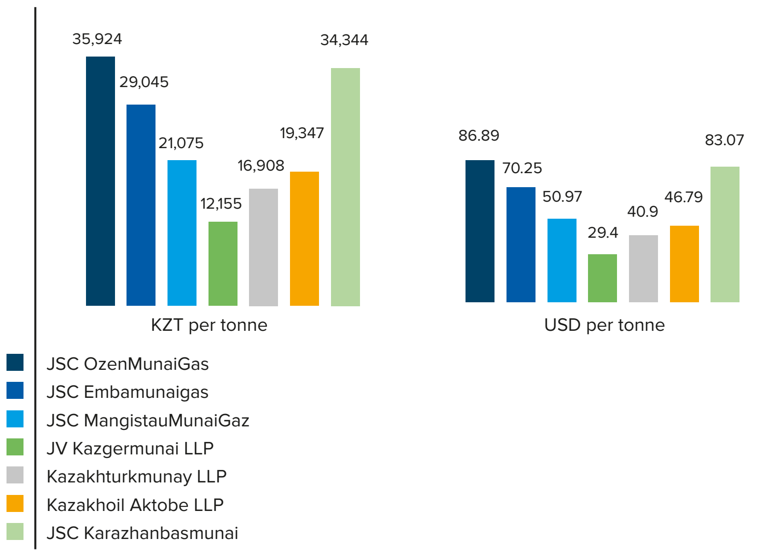
- Suspension of drilling until 2022
- Curtailing well operations not using drilling rigs, postponing non-essential well operations from 2020 to 2021
- Partially postponing preventive maintenance activities from 2020 to 2021
- Shifting employees to work from home
- Increased shifts for Karachaganak Petroleum Operating B.V. employees and contractor personnel
- Regular PCR tests for Karachaganak Petroleum Operating B.V. employees and contractor personnel
- Frequent cleaning and sanitation protocols, etc.

OIL PRODUCTION AT OPERATING ASSETS

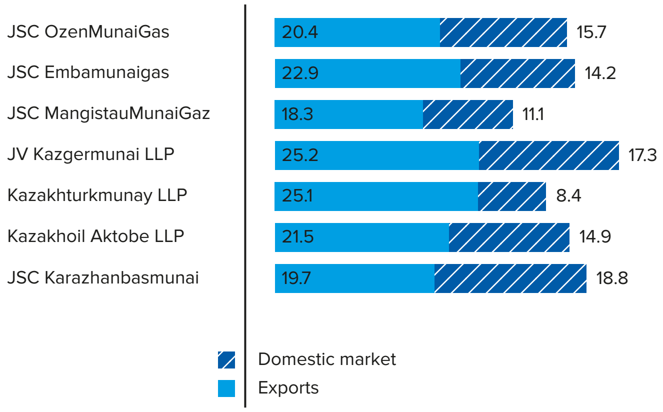
Number of wells at KMG-operated assets

Indicator	2018	2019	2020
New wells	604	581	518
Current declining well stock,	11,667	12,235	11,961
including idle wells	495	462	616
Injection wells	3,495	3,748	3,338
Total for KMG-operated assets	**15,766**	**16,564**	**15,817**

Lifting costs



Netbacks



As a legacy of more than a hundred years in the oil and gas industry, KMG's producing asset portfolio consists mostly of mature fields. Therefore, the Company prioritises measures to improve production efficiency at mature fields and is committed to energy saving across operations while also maintaining a strong focus on continuous operating process optimisations and improvements and driving higher oil recovery rates.

Today about 85% of total oil production at the Company's operating assets comes from seven key fields: Uzen and Karamandybas (JSC OzenMunaiGas), Kalamkas and Zhetybai (JSC MangistauMunaiGaz), S. Nurzhanov and East Moldabek (JSC Embamunaigas) and Karazhanbas (JSC Karazhanbasmunai).

On 11 December 2020, two wells were brought into pilot operation at the East Urikhtau field. If the wells prove successful at the first phase, and if the market conditions are favourable, the Company will consider moving on to the second phase, under which 58 wells will operate at the Urikhtau group of fields and a number of production facilities will be constructed. If we carry out the full-scale implementation of the project, the expected production may reach 1.5 bln m³ of gas and 500,000 tonnes of oil annually.

In 2020, KMG's share in oil production from operating assets decreased by 1,363 ths tonnes to 14,113 ths tonnes (279 kbopd), reflecting natural decline in production from mature fields and OPEC+ agreement.

A total of 15,817 wells were in operation in 2020, of which 11,961 were classified as the current declining well stock, which accounts for the bulk of oil and condensate production.

GAS PRODUCTION

Natural and associated gas production decreased by 3.1% to 8,192 mln m³ in 2020. Operating assets produced 2,463 mln m³ (30% of the total), and 5,729 mln m³ (70%) came from megaprojects, with the Tengiz and Karachaganak megaprojects accounting for the bulk of production.

Commercial gas production from KMG-operated assets, mln m³

Indicator	2018	2019	2020
JSC OzenMunaiGas + KazGPZ[1]	558	680	751
JSC MangistauMunaiGaz (PD Zhetybaimunaigaz)[1]	207	116	161
JV Kazgermunai LLP	205	184	150
Amangeldy Gas LLP	345	346	326
Kazakhoil Aktobe LLP	173	157	185
JSC Embamunaigas	154	135	152
Kazakhturkmunay LLP	143	163	103
JSC PetroKazakhstan Inc.	68	43	49.5
JSC Karazhanbasmunai	0	0	0
Total for operating assets	**1,853**	**1,823**	**1,877**

Commercial gas production from megaprojects (net to KMG), mln m³

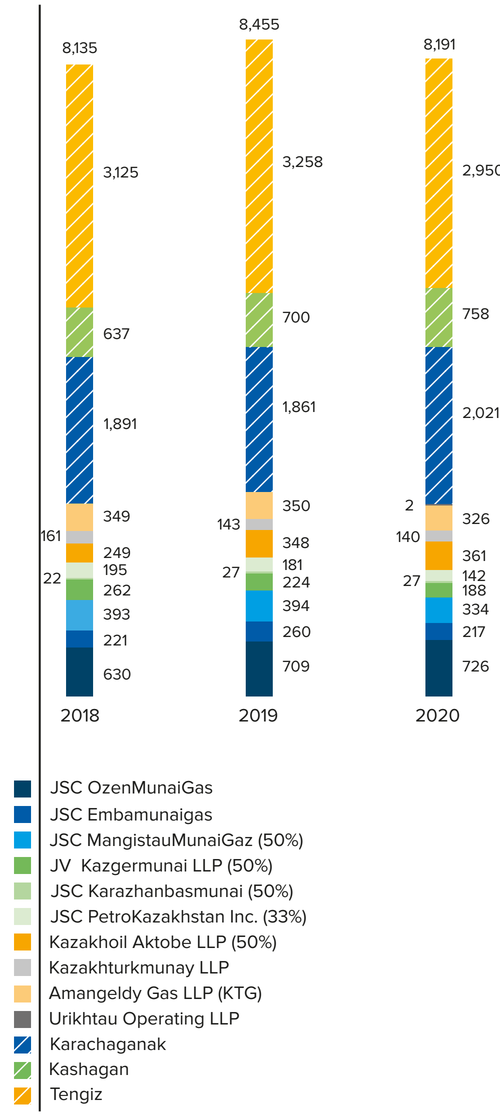
Indicator	2018	2019	2020
Tengiz	1,837	1,894	1,735
Karachaganak[2]	949	911	899
Kashagan	301	293	287
Total for megaprojects	**3,087**	**3,099**	**2,921**

Gas production values are the actual volume of gas produced, including gas reinjected for own needs. Gas reinjection is used to maintain reservoir pressure, which is essential for sustaining high oil production rates.

Commercial gas production in 2020 was 4,798 mln m³, of which 1,877 mln m³ were produced from operating assets and 2,921 mln m³ from megaprojects. Year-on-year, commercial gas production decreased by cumulative 124 mln m³, or 2.5%.

Along with processing own feedstock, the KazGPZ plant produces commercial gas using feedstocks supplied by KMG's other operating assets that do not produce commercial gas themselves.

Natural and associated gas production by asset (net to KMG), mln m³



1. Raw gas from JSC OzenMunaiGas and JSC MangistauMunaiGaz's PD Zhetybaimunaigaz is supplied to the KazGPZ plant.
2. Raw gas supplies to the Orenburg Gas Processing Plant .

OIL TRANSPORTATION

KMG completed the construction of an oil transportation infrastructure to supply hydrocarbons to export markets. Medium-term priorities:

- Increase existing capacity utilisation by making KMG's oil transportation systems more attractive and competitive
- Improved operating-cost control

The two oil transportation modes at KMG are trunk pipelines and the marine fleet

Indicator	Trunk pipeline transportation				Marine fleet transportation
Management company	**KazTransOil (KTO)**	**Kazakhstan–China Pipeline (KCP)**	**MunayTas (MT)**	**Caspian Pipeline Consortium (CPC)**	**Kazmortransflot (KMTF)**
Interest	KMG: 90%[1]	KTO: 50%	KTO: 51%	KMG: 20.75%	KMG: 100%
Key destinations	Exports to Europe and China, domestic market	Exports to China, domestic market	Exports to China, domestic market	Exports to Europe	Exports to Europe
Key routes	Kazakhstan's refineries Uzen–Atyrau–Samara Port of Aktau Oil transshipment to the CPC and Atasu–Alashankou pipelines	Atasu–Alashankou Kenkiyak–Kumkol	Kenkiyak–Atyrau	Tengiz–Novorossiysk	Black Sea Mediterranean Sea Caspian Sea
Total length, km	5,372	1,759	449	1,510	n/a
Capacity, mtpa	17.5[2] 5.2[3]	20	6	67	n/a

1. 10% of shares are owned by minority shareholders who acquired them under the People's IPO programme.
2. Capacity of the Atyrau–Samara section.
3. Capacity of the Port of Aktau (large-capacity vessel berths, oil loading).

PIPELINE INFRASTRUCTURE

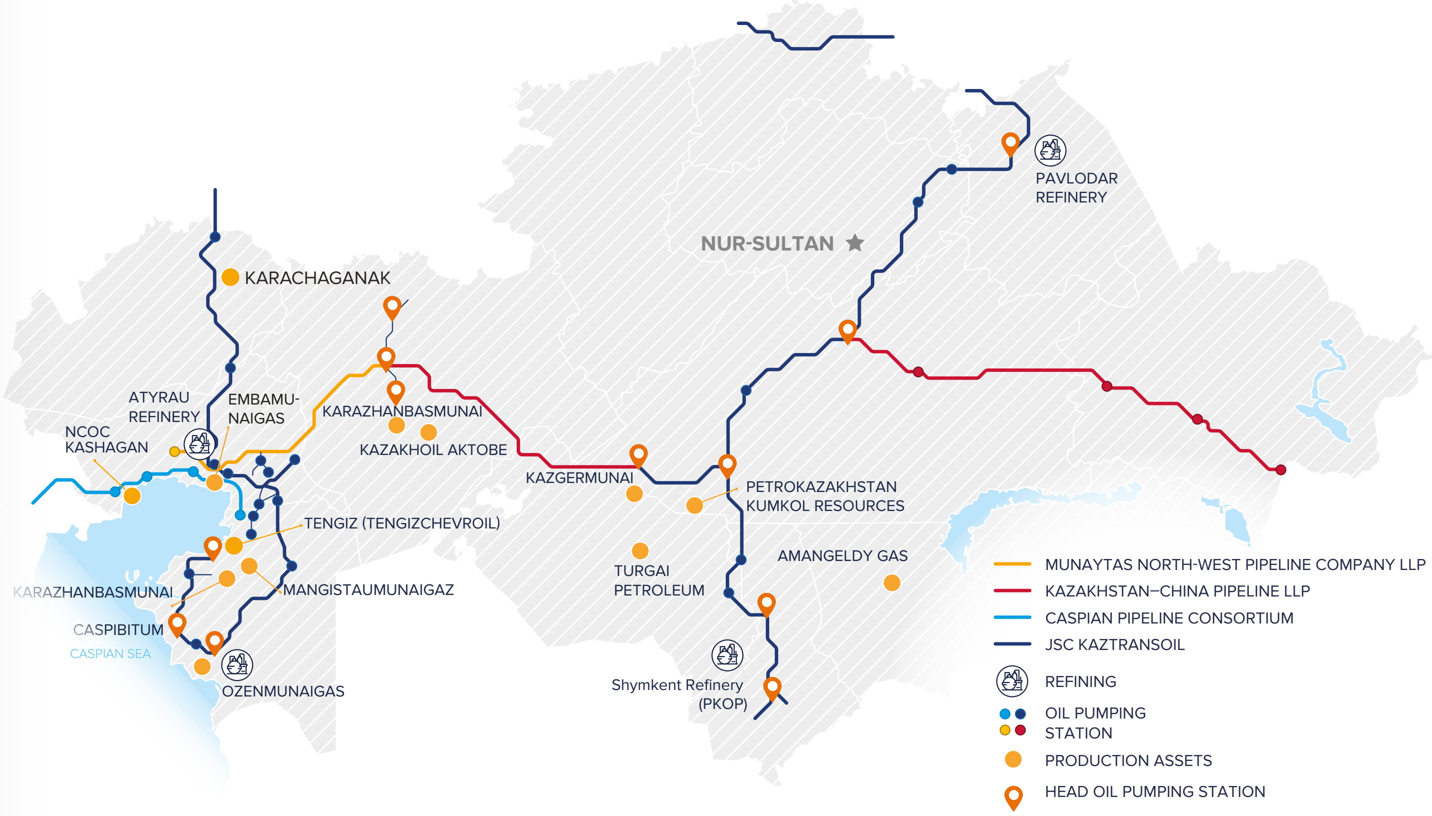
Kazakhstan's pipeline infrastructure is owned by JSC KazTransOil – the national oil pipeline operator, its two joint ventures (Kazakhstan–China Pipeline LLP and MunayTas North-West Pipeline Company LLP) and Caspian Pipeline Consortium. The existing pipeline infrastructure in Kazakhstan has adequate potential to support increased oil transportation volumes from promising projects.

JSC KazTransOil (KTO) is the national oil pipeline operator of the Republic of Kazakhstan. The company owns an extensive network of trunk oil pipelines with a total length of 5,372 km, to which virtually all oil fields in Kazakhstan are connected. The Company transports oil to Kazakhstan's four major refineries, pumps oil for export via the Atyrau–Samara pipeline, transships oil to the CPC and Atasu–Alashankou export pipelines, and ships oil to tankers in the Port of Aktau and by rail. Oil transportation via trunk oil pipelines is supported by 36 oil pumping stations, 67 heaters, and a tank farm for oil storage with a total capacity of 1.4 mln m^3. JSC KazTransOil also provides operation and maintenance services for the trunk oil pipelines of Kazakhstan–China Pipeline LLP, MunayTas North-West Pipeline Company LLP, Karachaganak Petroleum Operating B.V., JSC Caspian Pipeline Consortium-K, and JSC Turgai Petroleum, as well as for the trunk water line of Main Waterline LLP.

Kazakhstan–China Pipeline LLP is the owner of the Atasu–Alashankou (965 km) and Kenkiyak–Kumkol (794 km) oil pipelines. The company transports Kazakhstan's oil and transit Russian oil to China and to the domestic market.

MunayTas North-West Pipeline Company LLP (MT) is the owner of the 449 km Kenkiyak–Atyrau oil trunk pipeline. In 2018, the company started implementing the Kenkiyak–Atyrau pipeline reverse project to support supplies of West Kazakhstan's oil to domestic refineries and to compensate production declines in the Aktobe and Kyzylorda Regions, as well as to support exports to China totalling up to 6 mtpa. The project cost is KZT 28.6 bln. Within the project, the first start-up complex has been commissioned, and the construction of the second start-up complex is now complete. The project's completion is slated for Q2 2021.

Caspian Pipeline Consortium (CPC) is an international oil transportation project involving Russia, Kazakhstan and the world's leading industry players. It was established for the construction and operation of a 1,510 km trunk pipeline (452 km are within Kazakhstan). The CPC oil pipeline is a priority export route for Kazakhstan's oil supplies, connecting Kazakhstan's Tengiz oil field with the Yuzhnaya Ozereyevka oil terminal on the Black Sea (near the Port of Novorossiysk). Oil transportation via the CPC pipeline is supported by 15 oil pumping stations, an oil storage tank farm with a total capacity of 1.3 mln m^3 and three single-point moorings.



In view of the anticipated increases in oil production from Tengiz and Kashagan, in 2019 CPC shareholders resolved to launch a debottlenecking project for the pipeline system, which is expected to increase the volume of Kazakhstan's oil transportation to 72.5 mtpa. The project timeframe is 2019–2023, and its cost is USD 600 mln. The project will be financed using CPC's own funds.

Trunk pipeline oil transportation

Volume of oil transportation, ths tonnes[1]

Company	2018	2019	2020
KazTransOil (100%)	**45,309**	**44,463**	**42,298**
export	19,135	17,591	16,699
transit	10,025	9,989	9,989
domestic market	16,149	16,883	15,610
Kazakhstan–China Pipeline (100%)	**15,997**	**16,200**	**15,883**
export	1,506	859	571
transit	9,979	9,979	9,979
domestic market	4,512	5,362	5,333
MunayTas (100%)	**3,878**	**3,232**	**3,321**
export	2,697	1,998	1,595
domestic market	1,181	1,234	1,726
Caspian Pipeline Consortium (100%), export	**61,084**	**63,256**	**59,027**

Oil transportation turnover, mt*km

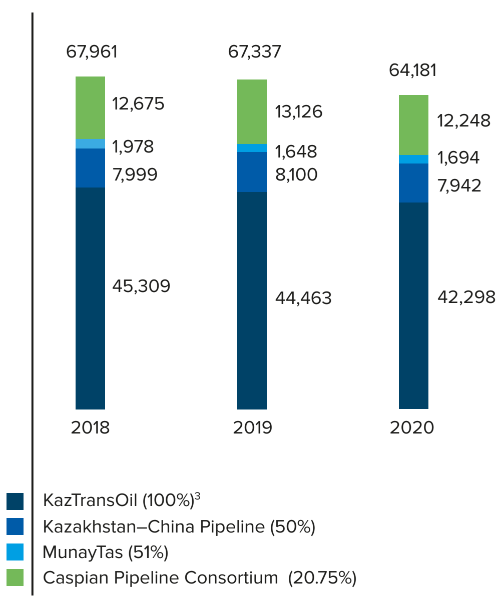
Company	2018	2019	2020
KazTransOil (100%)	38,040	37,658	35,899
Kazakhstan–China Pipeline (100%)	14,607	14,590	14,368
MunayTas (100%)	1,522	1,232	1,322
Caspian Pipeline Consortium (100%)	80,549	82,997	77,207

Oil transportation turnover (net to KMG), mt*km

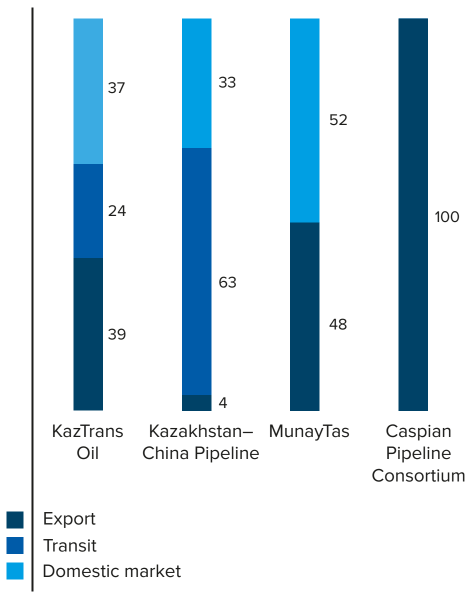
Company	2018	2019	2020
KazTransOil (100%)	38,040	37,658	35,899
Kazakhstan–China Pipeline (50%)	7,304	7,296	7,185
MunayTas (51%)	776	628	674
Caspian Pipeline Consortium (20.75%)	16,714	17,222	16,020

In 2020, KMG's share in the consolidated volume of trunk pipeline oil transportation was down by 3,156 ths tonnes to 64,181 ths tonnes. The decline was driven by the limited oil supply from JSC CNPC International Aktobe Petroleum, after a critical excess of organochlorine compounds was discovered in their oil supply in January 2020, compounded by an overall decline in oil supply amid a drop in oil production from other companies due to natural decline in production from the Kumkol group of fields and OPEC+ restrictions.

Volume of oil transportation (net to KMG), ths tonnes[2]



Structure of oil transportation by destination in 2020, %



1. Consolidated volume of oil transported includes the transportation volume of each individual pipeline company, including the operating share of KMG (excluding KTO). Part of the oil volumes can be transported by two or three pipeline companies, and these volumes are accordingly counted more than once in the consolidated volume of oil transportation.
2. Consolidated volume of oil transported includes the transportation volume of each individual pipeline company, including the operating share of KMG (excluding KTO). Part of the oil volumes can be transported by two or three pipeline companies, and these volumes are accordingly counted more than once in the consolidated volume of oil transportation.
3. Since KTO is fully operated by KMG, transportation volumes are reported as 100%.

Tariff policy

Tariffs for oil transportation to the domestic market, KZT per tonne per 1,000 km

Company	2018	2019	2020
KazTransOil	4,292	4,722 (01.01.2019–31.08.2019) 4,717 (01.09.2019–31.12.2019)	4,110
Kazakhstan–China Pipeline	6,507	7,158	6,456 (01.01.2020–31.01.2020) 7,158 (01.02.2020–31.12.2020)
MunayTas	5,698 (01.01.2018–30.06.2018) 5,724 (01.07.2018–31.12.2018)	5,724 (01.01.2019–30.06.2019) 5,912 (01.07.2019–24.12.2019) 5,457 (25.12.2019–31.12.2019)	5,457 (c 01.01.2020–24.12.2020) 5,912 (c 25.12.2020–31.12.2020)

Tariffs for oil transportation for export

Company	2018	2019	2020
KazTransOil, KZT per tonne per 1,000 km	6,399	6,399	6,399 (01.01.2020–29.02.2020) 7,359 (01.03.2020–31.12.2020)
Kazakhstan–China Pipeline, KZT per tonne per 1,000 km	6,799	6,799	6,799
MunayTas, KZT per tonne per 1,000 km	5,912	5,912	5,912
Caspian Pipeline Consortium, USD per tonne	38	38	38

Tariffs for transit to China, USD per tonne

Company	2018	2019	2020
KazTransOil	3.11	4.23	4.23
Kazakhstan–China Pipeline	8.25	10.77	10.77

The tariffs for crude oil transportation to Kazakhstan's domestic market are regulated by the government.

According to Law of the Republic of Kazakhstan No. 204-VI on Natural Monopolies dated 27 December 2018, oil transportation services to support transit via the territory of the Republic of Kazakhstan and exports outside the Republic of Kazakhstan are beyond the scope of natural monopolies.

OIL TRANSPORTATION BY SEA

Transport assets

NMSC Kazmortransflot LLP (KMTF) is the National Sea Carrier. Its assets include:

- merchant fleet: owned oil tankers: Astana, Almaty and Aktau, each with a deadweight of 12,000 tonnes; and Aframax oil tankers – Alatau and Altai, each with a deadweight of 115,000 tonnes
- marine support fleet: 8 barge platforms of KMG series with a capacity of 3,600 tonnes each
- fleet to support Tengizchevroil's Future Growth Project: 3 Caspian-class barges (MCV) – Barys, Berkut and Sunkar with a capacity of 5,200 tonnes each, and 3 tugboats – Talas, Emba and Irgiz with a bollard pull of 40 tonnes-force each.

The main current routes for oil transportation by sea:

- Routes in the Caspian Sea waters
- Routes in the Black Sea and Mediterranean Sea waters

Performance highlights

In 2020, the total volume of oil transportation by sea decreased significantly by 16.2% year-on-year to 8,990 ths tonnes, mainly due to lower volumes of transportation in the Mediterranean Sea as a result of downtime while waiting for loading, as well as unfavourable weather conditions.

Transportation volumes, ths tonnes

Sea	2018	2019	2020
Black Sea and Mediterranean Sea	4,339	10,186	8,361
Caspian Sea	2,738	543	629
Total	**7,077**	**10,729**	**8,990**

Oil transportation turnover, mt*km

Sea	2018	2019	2020
Black Sea and Mediterranean Sea	4,122	9,676	7,942
Caspian Sea	887	165	197

In March 2020, KMG provided support to KMTF in concluding an agreement with COSCO Shipping for transporting outsized cargoes from South-East Asia to Kazakhstan.

From April to June 2020, a total of 25 outsized cargoes weighing about 3,600 tonnes in total were successfully transported from the Port of Constanța in Romania to the Port of Atyrau in Kazakhstan for KPI Inc.'s petrochemical project under construction in Atyrau. KMTF engaged a total of 42 vessels (both owned and leased), including 6 barges, 24 river and 12 sea tugboats.

Under Tengizchevroil's Future Growth Project (FGP), KMTF transported about 90 outsized cargoes (57,000 tonnes in total) during the navigation seasons of 2018–2020. With KMTF's withdrawal from the project in 2020, an MCV ship Barys will be converted into a container ship. The conversion started in Q3 2020; the ship is planned to be used for container shipping services along the Aktau–Baku–Aktau feeder line.

GAS TRANSPORTATION AND MARKETING

The Company's key strategic focus in gas transportation and marketing development is on growing gas exports to China, producing high value-added gas products for domestic and export sales, ensuring efficient gas consumption in the domestic market, and enhancing transit capabilities.

KMG prioritises meeting the consumer needs reliably and efficiently while diversifying gas sales markets. The throughput capacity of the gas transportation infrastructure has been aligned with the potential growth in domestic gas production. With timely investments into the gas transportation system, KMG has been able to supply the country's regions with natural gas and grow the potential of export supply routes. JSC KazTransGas, KMG's wholly-owned subsidiary, is the operator of our gas transportation system.

GAS PIPELINE INFRASTRUCTURE

JSC KazTransGas (KTG) is Kazakhstan's national gas and gas supply operator. KTG operates the centralised infrastructure for commercial gas transportation via trunk pipelines and gas distribution networks, supports international transit and marketing of gas on the domestic and foreign markets, as well as designs, finances, builds and operates gas pipelines and gas storage facilities.

KTG operates the largest trunk gas pipeline network in Kazakhstan with a total length of 20,000 km, including 1,900 km of pipeline branches, as well as gas distribution networks with a total length of over 56,000 km. Gas transportation is supported by 42 compressor stations and 238 compressor units.

Intergas Central Asia (ICA) is the national gas pipeline operator and a wholly-owned subsidiary of KTG.
Today, ICA carries out export, internal transportation and transit of natural gas within the territory of Kazakhstan through gas pipelines with a total length of 12,481 km and a 164 bln m^3 per year capacity.
ICA operates three underground gas storages (UGS):

- Bozoyskoye UGS in the Aktobe Region
- Poltoratskoe UGS in the South Kazakhstan Region
- Akyrtobinskoye UGS in the Zhambyl Region

Asia Gas Pipeline LLP is a 50/50 joint venture between JSC KazTransGas and Trans-Asia Gas Pipeline Company Ltd. (shareholder – CNODC, a subsidiary of CNPC), launched to finance, build and operate the Kazakhstan–China gas pipeline. The purpose of the project is to facilitate the transit of Turkmen and Uzbek gas to China, exports of Kazakh gas to China, as well as uninterrupted gas supply to southern regions of Kazakhstan. The pipeline comprises three strings: A and B, with a total length of 2,612 km and throughput capacity of 30 bln m^3 per year, and the 1,304 km String C with a throughput capacity of 25 bln m^3 per year.

Beineu-Shymkent Gas Pipeline LLP is a 50/50 joint venture between JSC KazTransGas and Trans-Asia Gas Pipeline Company Ltd. (shareholder – CNODC, a subsidiary of CNPC). The project is of paramount strategic importance to the Republic of Kazakhstan, as it supplies the natural gas needs of Kazakhstan's southern regions, enables diversification of Kazakhstan's gas exports, ensures energy security of the country, and builds a unified gas transportation system.

Management company	JSC Intergas Central Asia (ICA)	Asia Gas Pipeline LLP	Beineu–Shymkent Gas Pipeline LLP	JSC KazTransGas Aimak (KTGA))
Interest	KTG: 100%	KTG: 50%	KTG: 50%	KTG: 100%
Key destinations	Exports, domestic market and transit	Exports and transit to China, domestic market	Exports to China, domestic market	Trunk pipeline gas transportation to the domestic market, transportation via gas distribution systems
Key routes	Kazakhstan, Russia, Uzbekistan and Turkmenistan	Kazakhstan–China	Beineu–Bozoi–Shymkent	n/a
Total length, km	12,481	3,916	1,450	56,058 – gas distribution systems 975 – trunk pipelines
Capacity, bln m^3 per year	164	55	15	3 – trunk pipelines

The Beineu–Bozoi–Shymkent trunk gas pipeline is the second section of the Kazakhstan–China gas pipeline. The gas pipeline connects the western oil and natural gas fields with the southern regions of the country, as well as with the Bukhara gas-bearing region – Tashkent–Bishkek–Almaty gas pipeline, the Gazli–Shymkent gas pipeline and String C of the Central Asia–China gas pipeline. The actual length of the Beineu–Shymkent gas pipeline is 1,450 km, and its capacity is 15 bln m³ per year.

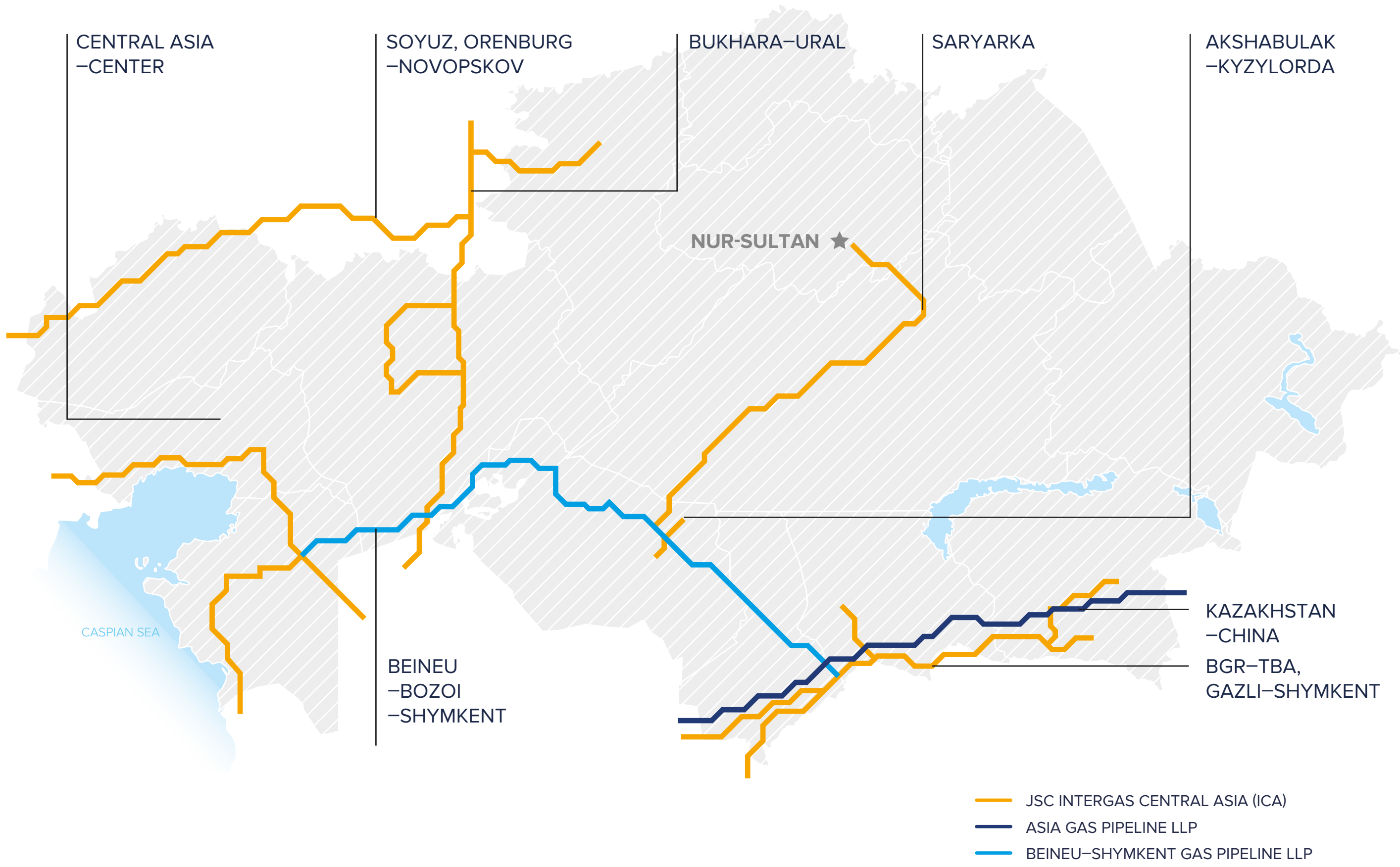
Further project development will be driven its capacity expansion to 15 bln m³ per year. To achieve this ambition, the company commissioned four compressor stations – Aral, Korkyt-Ata, Turkestan and 1A, and is advancing expansion projects for its existing compressor station No. 1 Bozoi and gas metering stations Akbulak and Beineu.

JSC KazTransGas Aimak (KTGA) is the largest gas distributor in Kazakhstan, operating 57,000 km of distribution and trunk gas pipelines across all ten regions and three cities of national significance connected to the gas grid.

KazTransGas Aimak's key objectives:

- Ensuring commercial gas supplies
- Transportation of gas via distribution networks
- Management of gas transportation assets in the regions

Company	Trunk gas pipeline/gas pipeline	Length, km	Capacity, bln m³ per year
Intergas Central Asia	Soyuz, Orenburg–Novopskov	1,147	68.4
	Central Asia–Center	5,306	50.8
	Bukhara–Ural	2,382	31.5
	BGR–TBA[1], Gazli–Shymkent	2,462	10.2
	Akshabulak–Kyzylorda	123	0.4
	Saryarka[2]	1,061	2.7[3]
Asia Gas Pipeline	Kazakhstan–China	3,916	55
Beineu–Shymkent Gas Pipeline	Beineu–Bozoi–Shymkent	1,450	15



1. The Bukhara gas-bearing region – Tashkent–Bishkek–Almaty.
2. Saryarka trunk gas pipeline was leased to ICA, but is owned by JSC AstanaGaz KMG, which has JSC Samruk-Kazyna and JSC Baiterek Venture Fund as its shareholders (50%/50%).
3. For the 1st stage of the gas pipeline, the design and actual capacity is 2.2 bln m³ per year.

TRUNK PIPELINE GAS TRANSPORTATION

Volume of gas transportation, mln m³

Company	2018	2019	2020
Intergas Central Asia (100%)	**80,134**	**72,961**	**57,753**
export	18,873	19,069	12,687
transit	47,693	40,229	30,788
domestic market	13,568	13,663	14,278
Asia Gas Pipeline (100%)	**49,270**	**45,870**	**39,776**
export	5,484	7,090	7,011
transit	42,960	38,280	31,878
domestic market	826	500	886
Beineu–Shymkent Gas Pipeline (100%)	**8,352**	**10,087**	**12,694**
export	5,255	7,091	7,011
domestic market	3,097	2,996	5,682
KazTransGas Aimak (100%), domestic market	**2,622**	**2,554**	**2,603**

Gas turnover (commodity transportation volumes), mln m³*km

Company	2018	2019	2020
Intergas Central Asia (100%)	19,543	22,325	16,302
Asia Gas Pipeline (100%)	62,167	57,470	49,337
Beineu–Shymkent Gas Pipeline (100%)	12,146	14,669	17,831

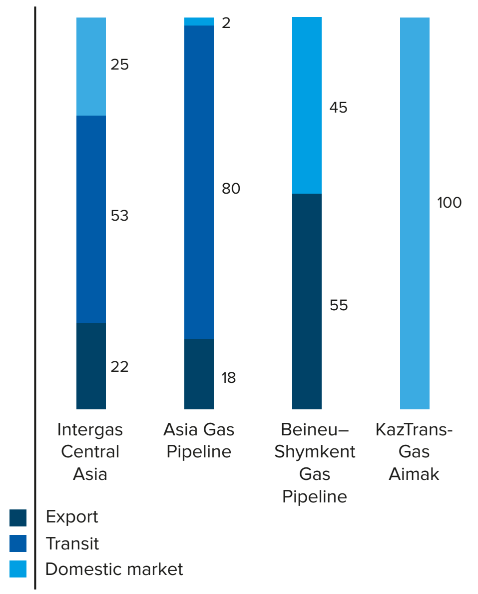
Gas turnover (commodity transportation volumes) (net to KMG), mln m³*km

Company	2018	2019	2020
Intergas Central Asia (100%)	19,543	22,325	16,302
Asia Gas Pipeline (50%)	31,084	28,735	24,669
Beineu–Shymkent Gas Pipeline (50%)	6,073	7,334	8,915

Gas transportation volumes (net to KMG), mln m³

Total trunk pipeline gas transportation	2018	2019	2020
Intergas Central Asia (100%)	80,134	72,961	57,753
Asia Gas Pipeline (50%)	24,635	22,935	19,888
Beineu–Shymkent Gas Pipeline (50%)	4,176	5,044	6,347
KazTransGas Aimak (100%)	2,622	2,554	2,603
TOTAL	111,567	103,494	86,590

Structure of oil transportation by destination in 2020, %



In 2020, volumes of KMG's trunk pipeline gas transportation were down by 16,904 mln m³ to 86,590 mln m³, mainly due to declines in Central Asian gas transit volumes to China, lower Russian transit gas flows transported by Gazprom via Kazakhstan, falling exports of the Karachaganak gas to Russia and lower gas exports from Tengiz due to declines in its production.

GAS DISTRIBUTION AND REGIONAL EXPANSION OF GAS INFRASTRUCTURE

Gas distribution and expansion of gas infrastructure in Kazakhstan's regions

Construction of the Saryarka trunk gas pipeline
Between June and December 2020, as part of preparations for Phase 2 and Phase 3 construction of the Saryarka trunk gas pipeline (the 482.8 km Nur-Sultan–Kokshetau–Petropavlovsk section), the project feasibility study was adjusted, increasing the pipeline's maximum throughput capacity from 3.6 bln m³ to 4.5 bln m³ per year. The Saryarka gas pipeline will ensure a reliable gas supply to the central regions and the capital of Kazakhstan, delivering a multiplier effect for the national economy and significantly improving the overall environmental situation in the country.

Phase 1 facilities (the 1,060.6 km Kyzylorda–Zhezkazgan–Karaganda–Temirtau–Nur-Sultan section), including automated gas distribution stations Zhezkazgan, Karaganda, Temirtau, Astana-1 and Astana-2, were commissioned in December 2019. The pipeline is owned by JSC AstanaGaz KMG, which has JSC Samruk-Kazyna and JSC Baiterek Venture Fund as its shareholders (50%/50%). In February 2020, the Saryarka gas pipeline was leased out to JSC Intergas Central Asia, the national gas pipeline operator.

Construction of the gas distribution infrastructure for the 1st and 2nd start-up complexes of Phase 2 in Nur-Sultan (residential areas Internatsionalny, Michurino and Kuygenzhar)
Pre-construction design and survey activities are in progress for the 1st and 2nd start-up complexes of Phase 2 under the integrated design and construction services contract. The 1st start-up complex will supply gas from AGDS-2 to the main gas distribution stations Vostok and Yugo-Vostok; the 2nd start-up complex will distribute gas from the Vostok station to residential areas Internatsionalny, Michurino and Kuygenzhar as well as to boiler houses. All works, including construction and installation, are scheduled for completion by 31 August 2021.

Construction of a gas supply pipeline link to five communities (Masanchi, Karakemer, Sortobe, Bular Batyr and Aukhatty) in the Korday District of the Zhambyl Region
In 2020, the construction of the 42 km high-medium pressure gas supply pipeline connecting five communities (Masanchi, Karakemer, Sortobe, Bular Batyr and Aukhatty) to the grid was completed in the Korday District of the Zhambyl Region.

As a result of the project, natural gas is now supplied to 10 locations, with over 62,000 people, 7,177 houses, 29 social infrastructure facilities and 243 SMEs. Plans for the future include expanding gas infrastructure to seven locations more.

GAS MARKETING

As the national gas and gas supply operator, KazTransGas exercises the government's preemptive right to purchase raw and/or commercial gas from subsoil users/suppliers.

In accordance with the law, subsoil users send commercial proposals to the national operator, indicating the volumes, price and delivery point for the proposed supply of raw and/or commercial gas. The national operator uses its own judgement to decide whether to exercise or waive the government's preemptive right.

Gas resources, mln m³

Indicator	2018	2019	2020
Gas purchase volumes	**23,297**	**24,200**	**23,313**
Kazakh subsoil users/suppliers	**17,209**	**16,435**	**19,879**
Companies with KMG participation	10,195	9,537	14,113
Third parties	7,014	6,898	5,766
Gas imports	**6,088**	**7,765**	**3,434**
Russia	3,216	5,054	3,434
Uzbekistan	2,872	2,710	0

Currently, the national operator exercises the government's preemptive right to acquire gas from the following companies with KMG interest:
- JSC Embamunaigas (100%)
- JV Kazgermunai LLP (50%)
- Kazakhoil Aktobe LLP (50%)
- Kazakhturkmunay LLP (100%)
- KazMunayTeniz LLP (100%).

The gas supplied by the above companies is marketed in the domestic market.

Companies with a KMG interest that are exempt from the government's preemptive right to acquire gas:

- Amangeldy Gas LLP (100%)
- KazGPZ LLP (100%)
- Tengizchevroil LLP (20%)
- Karachaganak Petroleum Operating B.V. (10%)
- North Caspian Operating Company N.V. (8.44%)

The above companies all sell gas domestically and for export.

Commercial gas sales volumes in 2020 were down by 0.5% to 22.7 bln m³, mainly due to reduced commercial gas exports to Russia and Uzbekistan. Gas exports totalled 7.9 bln m³, of which about 89% were sent to China.

Sales of commercial gas by KazTransGas, mln m³

Indicator	2018	2019	2020
Export	8,917	8,806	7,852
Russia	2,350	1,000	560
Kyrgyzstan	275	264	281
Uzbekistan	807	452	0
China	5,484	7,091	7,011
Domestic market	13,999	14,028	14,811
Total	**22,915**	**22,834**	**22,663**

DOWNSTREAM

The Company has completed a number of major modernisation projects across its oil refineries in Kazakhstan and Romania, successfully achieving higher refining depths. The Company's plans for the mid-term include:
- for Kazakhstan refineries: to drive operational excellence through cost optimisation and higher oil product output by reducing losses and fuel consumption for operational needs
- for Romania refineries: to improve performance by increasing the output of higher-margin products while cutting refining costs through streamlining and digitising production processes, optimising the product slate to achieve higher sales margins for refined products, and sustaining dividend payments to the KMG Corporate Centre
- integrated petrochemical projects: under its trusteeship agreements, KMG implements two major investment projects:

  – construction of the first integrated petrochemical complex with a capacity of 500 ths tonnes of polypropylene per year, to be commissioned in 2021
  – construction of a 1.25 mtpa polyethylene plant (currently at the design stage).

OIL AND CONDENSATE MARKETING

In 2020, sales of own oil and condensate produced by KMG amounted to 22,012 ths tonnes, including 15,161 ths tonnes of oil exports, and 6,851 ths tonnes of domestic oil supplies. Supplies to KMG refineries in Kazakhstan are fully included into domestic oil supplies: 2,925 ths tonnes to Atyrau Refinery, 2,939 ths tonnes to Pavlodar Refinery, 542 ths tonnes to Shymkent Refinery and 427 ths tonnes to CASPI BITUM. The year-on-year decline in performance was mainly due to lower oil production and consumption as a result of the COVID-19 pandemic and OPEC+ restrictions.

Sales of KMG-produced oil and condensate, ths tonnes

Assets	2018			2019			2020		
	Export	Domestic market	Total	Export	Domestic market	Total	Export	Domestic market	Total
Operating assets[1]	8,773	6,980	15,752	8,472	7,137	15,609	7,524	6,849	14,373
including subsidiaries and associates[2]	5,367	3,303	8,670	5,325	3,453	8,778	4,911	3,514	8,425
Megaprojects[3]	7,971	12	7,983	8,215	1	8,216	7,637	2	7,639
Total	**16,744**	**6,991**	**23,735**	**16,688**	**7,138**	**23,826**	**15,161**	**6,851**	**22,012**

1. JSC OzenMunaiGas, JSC Embamunaigas, JSC Karazhanbasmunai, JV Kazgermunai LLP, JSC PetroKazakhstan Inc., Kazakhturkmunay LLP, Kazakhoil Aktobe LLP, JSC MangistauMunaiGaz, Amangeldy Gas LLP, Urikhtau Operating LLP
2. JSC OzenMunaiGas, JSC Embamunaigas, Kazakhturkmunay LLP.
3. KMG Kashagan B.V., KMG Karachaganak, Tengizchevroil LPP.

KMG REFINING ASSETS

Within KMG's asset mix, four refineries in Kazakhstan and two in Romania are responsible for processing liquid hydrocarbons (primarily oil).

Prospective projects and innovations

In March 2020, Atyrau Refinery completed the roll-out of an optimised process control system at its AT-2 unit, delivering a number of positive effects such as increasing the output of straight-run petrol and diesel by 0.32% and 0.36%, respectively, reducing the percentage of light components in fuel oil by 0.2%, cutting mode switching times, and achieving overall process stabilisation. Plans for 2021 include the roll-out of the optimised process control system to the AVT-3 unit.

JV CASPI BITUM LLP started upgrading its bitumen oxidation and blending units to increase bitumen output by 50%; the upgrade projects were approved by the State review board.

The refinery builds a Digital General Plan and 3D model. The project aims to create high-precision digital general plans of oil refineries through laser scanning and 3D modelling along with a system to collect, analyse, process, store, manage and visualise integrated engineering data.

The refinery has started adopting local engineering models. The project aims to streamline refining processes and drive process debottlenecking by modelling process units, and will help to better predict equipment performance as well as cut operating expenses.

TARIFF POLICY

Kazakhstan refineries only offer oil refining services using the set tariffs (processing business scheme) and do not purchase crude for refining or sell refined products. Oil suppliers market finished products independently. The refineries focus exclusively on the operations side, streamlining refining activities and reducing operating expenses.

Oil refining tariffs at Kazakhstan refineries factor in actual production-related operating expenses and an investment component (capital expenditures to maintain current production rates, repayment of loans raised for modernisation).

Weighted average tariffs to refine 1 tonne of tolling feedstock and relevant costs, KZT

Refinery	2018	2019	2020
Atyrau Refinery	33,810	37,436	41,168
Pavlodar Refinery	17,250	19,805	20,904
Shymkent Refinery	19,579	24,485	30,783
CASPI BITUM	18,008	18,010	18,003

KMG refineries

Indicator	Kazakhstan refineries				Romania refineries	
	Atyrau Refinery	Pavlodar Refinery	Shymkent Refinery	CASPI BITUM	Petromidia Refinery	Vega Refinery
Location	Atyrau	Pavlodar	Shymkent	Aktau	Năvodari	Ploiești
Commissioning date	1945	1978	1985	2013	1979	1905
Design refining capacity, mln tonnes	5.5	6.0	6.0	1.0	6.0[1]	0.5
Hydrocarbon refining volumes in 2020, mln tonnes	5	5	4.8	0.87	4,86[2]	0.36
Refinery utilisation rate in 2020, %	91	83	80	87	81	72
KMG interest, %	99.53	100	49.72	50	54.63	54.63
Nelson Index	13.9	10.5	8.2	–	10.5	–
Light product yield in 2020, %	59	69	82	–	86.01	–
Refinery co-owners	–	–	CNPC	CITIC	Romanian Government	Romanian Government

1. Design capacity includes refining 5 mln tonnes of crude oil and 1 mln tonnes of other hydrocarbons per year.
2. Total refining volume of 4.86 mln tonnes includes 3.98 mln tonnes of crude oil and 0.88 mln tonnes of other and alternative feedstocks.

REFINING VOLUMES AT KAZAKHSTAN REFINERIES

Hydrocarbon refining and production of oil products

In 2020, hydrocarbon refining volumes at Kazakhstan refineries (net to KMG) amounted to 12,849 ths tonnes, with oil product output at 11,707 ths tonnes. Year-on-year, hydrocarbon refining and production of oil products were down by 7%, mainly due to the negative impacts of the COVID-19 pandemic which has weakened demand for fuel and led to lower refinery throughput rates, as well as scheduled maintenance and repairs at Atyrau and Pavlodar Refineries. Despite these headwinds, KMG fully covered domestic demand for light products in 2020.

Hydrocarbon refining volumes (net to KMG), ths tonnes

Refinery	2018	2019	2020
Atyrau Refinery	5,268	5,388	5,016
Pavlodar Refinery	5,340	5,290	5,004
Shymkent Refinery (50%)	2,366	2,701	2,397
CASPI BITUM (50%)	409	443	433
Total	**13,384**	**13,822**	**12,849**

Oil product output (net to KMG), ths tonnes[1]

Oil products	2018	2019	2020
Atyrau Refinery	**4,742 (100%)**	**4,892 (100%)**	**4,525 (100%)**
Light[2]	2,857 (60%)	2,998 (61%)	2,737 (60%)
Dark[3]	1,589 (33%)	1,590 (33%)	1,383 (31%)
Petrochemicals[4]	33 (1%)	166 (3%)	250 (6%)
Other	263 (6%)	138 (3%)	155 (3%)
Pavlodar Refinery	**4,854 (100%)**	**4,794 (100%)**	**4,609 (100%)**
Light	3,552 (73%)	3,600 (75%)	3,438 (75%)
Dark	1,007 (21%)	894 (19%)	896 (19%)
Other	295 (6%)	300 (6%)	275 (6%)
Shymkent Refinery (50%)	**2,151 (100%)**	**2,477 (100%)**	**2,145 (100%)**
Light	1,507 (70%)	2,028 (82%)	1,970 (92%)
Dark	643 (30%)	447 (18%)	172 (8%)
Other	1	2	3
Caspi Bitum (50%)	**405 (100%)**	**439 (100%)**	**428 (100%)**
Dark	154 (38%)	185 (42%)	185 (43%)
Other	251 (62%)	254 (58%)	243 (57%)
Total	**12,152**	**12,602**	**11,707**

Production and marketing of oil products derived from KMG's own oil

JSC OzenMunaiGas, JSC Embamunaigas, Kazakhturkmunay LLP and Urikhtau Operating LLP supply Atyrau and Pavlodar Refineries with KMG's own crude oil, and the resulting refined products are subsequently sold wholesale domestically or for export.

In 2020, OzenMunaiGas, Embamunaigas, Kazakhturkmunay and Urikhtau Operating supplied 3,517 ths tonnes of crude oil for refining, including 2,178 ths tonnes to Atyrau Refinery and 1,339 ths tonnes to Pavlodar Refinery. The two refineries' combined output for the year was 3,133 ths tonnes of refined products, including 61% of light products, 26% of dark products, 4% of petrochemicals, and 9% of other oil products.

KMG sells oil products wholesale after the oil purchased from OzenMunaiGas, Embamunaigas, Kazakhturkmunay and Urikhtau Operating is refined at Atyrau and Pavlodar Refineries. In 2020, KMG sold 3,167 ths tonnes of oil products, primarily petrols, diesel fuel and fuel oil (78%).

The bulk of oil products was sold domestically (2,160 ths out of 3,167 ths tonnes), and the remainder was exported (1,007 ths tonnes). The share of oil product exports was up 6% year-on-year, an increase of 203 ths tonnes, driven by higher exports of light products amidst weaker domestic demand.

In the domestic market, 1,217 ths tonnes of petrol and diesel fuel were shipped to the retail chain of filling stations operated by PetroRetail LLP, 198 ths tonnes of diesel fuel to agricultural producers, 46 ths tonnes of fuel oil for heating needs of social and production facilities and institutions, and 430 ths tonnes of oil products to third parties, while 134 ths tonnes of petrol, diesel fuel and jet fuel and 40 ths tonnes of fuel oil were delivered to KazMunayGas-Aero LLP to meet the needs of the single operator supplying light products and fuel oil to law enforcement agencies, airports and commercial aviation.

1. Calculation methodology adjusted, the data on oil products produced from hydrocarbon feedstocks now reflect the components that make up finished products (the data presented in the 2019 Annual Report disregarded the involved components).
2. Including petrol, diesel fuel, jet fuel and LNG.
3. Including fuel oil, vacuum gas oil and bitumen.
4. Including benzene and paraxylene.

Refinery output of oil products derived from KMG's own oil in 2020, ths tonnes

Oil products	Atyrau Refinery	Pavlodar Refinery	Total	Average oil product wholesale prices over 12M 2020, KZT per tonne
Light	1,092	817	1,909	147,341
Dark	589	234	823	66,636
Petrochemicals	110	0	110	111,740
Other	114	176	290	32,282
Total	**1,905**	**1,228**	**3,133**	**114,031**

REFINING IN ROMANIA

The core business of KMG International is hydrocarbon refining, as well as wholesale and retail sales of oil products. The KMG International-owned Petromidia Refinery is responsible for primary hydrocarbon refining, with the Vega Refinery focusing on secondary refining. The Petromidia and Vega Refineries operate according to the model where refineries purchase hydrocarbons for their own account, refine them and then sell them either wholesale or retail through an owned retail network of filling stations.

KMG International also owns a major petrochemical complex producing polypropylene and low- and high-density polyethylene (LDPE and HDPE). In addition, KazMunayGas Trading AG, the trading subsidiary of KMG International, is focused on trading in crude oil and oil products produced by KMG International refineries or by third parties.

In 2020, our refineries in Romania processed 5,228 ths tonnes of hydrocarbons and other feedstocks and produced 5,110 ths tonnes of oil products. The volumes decreased by 23% year-on-year on average, largely due to the scheduled temporary shutdown of the Petromidia Refinery for maintenance between mid-March and May 2020 (the maintenance was successfully completed within 45 days, amid a lockdown, with no incidents or COVID-19 cases), unfavourable weather in the Black Sea region and at the Port of Midia in winter, which had a negative impact on supplies of crude oil and straight-run gas oil, and lower demand for refined products as a result of the COVID-19 pandemic.

Hydrocarbon refining volumes (net to KMG), ths tonnes

Refinery	2018	2019	2020
Petromidia Refinery	5,925	6,331	4,864
Vega Refinery	406	436	364
Total	**6,331**	**6,767**	**5,228**

Oil product output (net to KMG), ths tonnes

Refinery	2018	2019	2020
Petromidia Refinery	**5,788**	**6,172**	**4,749**
Light[1]	4,903	5,225	4,009
Dark[2]	687	736	575
Other	198	211	165
Vega Refinery	**397**	**442**	**361**
Dark	102	120	123
Other	295	321	238
Total	**6,185**	**6,614**	**5,110**

As a result of the COVID-19 pandemic, the demand for crude oil and oil products dropped to all-time lows, with surplus supply of oil products to the market during the lockdown. The refining margin (the difference between the actual market prices for all oil products and actual market prices for feedstocks weighted against yield targets) remained negative since May.

Petromidia Refinery's refining margin

Unit	2018	2019	2020
USD per tonne	47.4	31.7	–5
USD per bbl[3]	6.2	4.2	–0.7

In 2020, crude oil volumes for resale marketed through KMG International's trading operations totalled 8.5 mln tonnes. The 22% reduction was due to the fall in demand amid the COVID-19 pandemic.

Crude oil for resale, ths tonnes

	2018	2019	2020
Crude oil for resale	12,535	10,911	8,522

KMG International's retail network

As demand fell during the pandemic, KMG International's performance was mostly driven by retail sales. Despite a weaker market demand, KMG International's market share in the Romanian retail market grew by 0.9% year-on-year (15.71% in the end of December 2020 vs 14.81% in December 2019) in 2020.

At year-end 2020, KMG International's retail network was comprised of the following assets:
- Romania: 284 filling stations and 779 points of sale (DOEX, RBI and Cuves) 10 CODO, 3 DODO, 13 DOEX, 11 RBI and 65 Cuves stations were opened
- Neighbouring countries: 254 filling stations and points of sale, including 60 stations in Bulgaria (new 8 DOCODO and 1 DODO), 102 stations in Georgia (6 new stations in key regions, including the first flagship COCO station in Borzhomi) and 92 stations in Moldova (5 new DOCO stations).

SERVICE PROJECTS

To deliver their optimisation programmes, KMG's oil service companies consider their leading role in maintaining social stability in operating regions. This inevitably leads to extra costs, resulting from the need to retain employees regardless of current operational needs and meet all obligations under the collective bargaining agreement: benefits, medical insurance premiums and upskilling costs.

SERVICE INFRASTRUCTURE

KMG's oil service operations are supported by 12 key companies.

Key oil services
- Drilling and developing oil and gas wells. Providing well services and workovers
- Transporting freight and passengers, providing field transportation and maintenance
- Providing maintenance, repair, set-up and testing services for electrical installations and cathode protection; commissioning and routine servicing of electrical equipment
- Operating offshore and onshore drilling rigs, oil and gas production engineering, drilling services
- Natural gas processing
- Servicing measuring equipment, automation systems and telemechanics, providing telecoms, radio, and cable or satellite TV services at oil fields; checking and repairing measuring equipment; and servicing security alarms. Servicing transport GPS monitoring systems
- Building steel and fiberglass pipelines for oil transportation, building gas pipelines and constructing oil and injection wells. Reconstructing oil pipelines, water pipelines and roads
- Producing and transporting drinking water, ensuring sea water transport
- Catering, maintaining social facilities, etc.

KMG has continued a range of efforts to achieve break-even for its oil service companies, including measures to maintain current production levels and the implementation of new development projects. Moreover, as a socially responsible business, KMG remains committed to ensuring workforce stability at these companies.

Development projects

KMG is on track with its new gas processing plant project in Zhanaozen, with further phase-specific activities carried out through joints efforts with Linde Aktiengesellschaft (Linde AG). During 2020, KMG finalised initial design data and determined the location of its new plant.

On 5 October 2020, KMG Systems & Services LLP and the international association Oil Spill Response Limited signed an oil spill response partnership for Tier 3 spills.

On 28 October 2020, TenizService LLP transshipped the last large module for the Future Growth Project at Tengiz, reaching a total of 408 modules weighing a total 279,859 ths tonnes delivered for the Project between 2018 and 2020. The overall module transshipment programme was completed six months ahead of schedule. In December 2020, the Cargo Transportation Route Project passed the milestone of 4.3 mln man-hours worked with zero accidents.

1. Including petrol, diesel fuel, jet fuel and LNG.
2. Oil coke, fuel oil, natural gasoline.
3. To convert tonnes to bbl a conversion factor of 7.6 was used.

FINANCIAL OVERVIEW

DEAR INVESTORS, SHAREHOLDERS, COLLEAGUES AND PARTNERS,

In 2020, we all witnessed dramatic changes in the modern world. The usual way of life has changed. Economic well-being and physical health have been severely tested by the pandemic. Falling oil prices, reduced oil production under the OPEC+ agreement and lower demand for oil products were the main external factors that weakened the Company's financial performance this year.

Maintaining the financial stability of the Company was one of the key objectives of KMG's crisis response strategy for 2020 and 2021. The results for the year showed that we were able to significantly mitigate the impact of the economic crisis, maintain our financial stability, and ensure sufficient conditions for our development in the long term.

Two factors have contributed to this. Firstly, over the past few years we have implemented a number of measures to improve the Company's financial position, making it prepared for possible economic crises. Secondly, we successfully implemented the crisis response strategy for 2020 and achieved better financial results than we had predicted at the start of the pandemic.

We reduced our debt from USD 16 bln in 2017 to USD 10.3 bln in 2020, including oil prepayment obligations. In 2020, we were able not only to keep our consolidated debt at the same level as last year, but even reduce it by USD 341 mln. The schedule of large repayments on the Company's Eurobonds was smoothed out this year, with the next large lump-sum repayment scheduled for as far in the future as 2025 as a result.

Optimisation of planned CAPEX and OPEX resulted in free cash flow of USD 213 mln, while at the start of the pandemic, it was expected to be negative. We also ensured that our subsidiaries operated without cash gaps.

In confirmation of our financial stability, we were able to maintain our credit ratings from Moody's, Fitch and S&P this year. We will continue our crisis response efforts in 2021 while staying committed to the Company's strategic priorities, keeping abreast of global developments as well as the domestic situation.

Dauren Karabayev,
Deputy Chairman of the Management Board
for Economics and Finance
of JSC NC KazMunayGas

KMG'S CREDIT RATINGS

KMG intends to maintain investment-grade credit ratings and a high credit profile, and ensure that KMG maintains its business image as a bona fide borrower. In 2018 and 2019, KMG's efforts to maintain its financial stability were reflected in higher ratings of the Company's stand-alone credit profile (SACP) from Fitch, Moody's and S&P. KMG was able to maintain its credit ratings in 2020 as a result of ongoing financial stability measures, despite negative external factors.

Change in KMG's ratings:
- Moody's published periodic reviews of ratings throughout 2020. In the periodic review of KMG's ratings dated 14 December 2020, Moody's points out KMG's large oil reserves and a track record of sustainable production without OPEC+ restrictions, along with robust liquidity and long-term debt maturity profile
- On 27 March 2020, Fitch Ratings affirmed KMG's long-term issuer default rating at BBB– with a stable outlook
- On 27 March 2020, S&P Global Ratings revised its outlook on KMG to negative from stable and affirmed its long-term local and foreign currency ratings at BB
- On 28 January 2021, following the revision of its risk assessment for the oil and gas exploration, production and refining sector, S&P Global Ratings affirmed KMG's credit ratings at BB with a negative outlook

KMG'S CREDIT RATINGS

MOODY'S	S&P	FITCH
Baa3 (Positive)	BBB–	BBB– (Stable)
Ba1	BB+	BB+
Ba2	BB (Negative)	BB
Ba3	BB–	BB–

KAZAKHSTAN'S SOVEREIGN RATINGS

MOODY'S	S&P	FITCH
Baa3 (Positive)	BBB– (Stable)	BBB (Stable)

For more details see the Shareholder and investor relations section.

CONSOLIDATED FINANCIAL RESULTS ACCORDING TO IFRS[1]

In 2020, revenue was KZT **4,556 BLN** (USD 11,019 mln) compared to KZT 6,859 bln in 2019

EBITDA amounted to KZT **1,151 BLN** (USD 2,785 mln) compared to KZT 1,963 bln in 2019

Free cash flow was KZT **88 BLN** (USD 213 mln) compared to KZT 592 bln in 2019

Net profit for the period was KZT **172 BLN** (USD 416 mln) compared to KZT 1,158 bln in 2019. Net profit for the period attributable to the parent company's shareholders was KZT 273 bln (USD 661 mln)

The Company's net debt as at 31 December 2020 was USD **6,162 MLN** down 0.2% from USD 6,171 mln at end-2019

Total debt as at 31 December 2020 was USD 9,690 mln, down **3.4%** year-on-year.

For more details see the Financial Statements section

Consolidated financial results according to IFRS

Indicator	Unit	2019	2020	%
Oil[2]	USD/bbl	64.21	41.84	–34.8
Average exchange rate	KZT/USD	382.87	413.46	8.0
Revenue	KZT bln	6,859	4,556	–33.6
	USD mln	17,915	11,019	–38.5
Share in profit of JVs and associates	KZT bln	828	511	–38.3
	USD mln	2,163	1,236	–42.8
Net profit	KZT bln	1,158	172	–85.2
	USD mln	3,026	416	–86.3
Net profit for the period attributable to the parent company's shareholders	KZT bln	1,197	273	–77.2
	USD mln	3,127	661	–78.9
EBITDA[3]	KZT bln	1,963	1,151	–41.3
	USD mln	5,126	2,785	–45.7
Free cash flow[4]	KZT bln	592	88	–85.1
	USD mln	1,537	213	–86.2
Net debt[5]	KZT bln	2,361	2,594	9.9
	USD mln	6,171	6,162	–0.2
Total debt[6]	KZT bln	3,838	4,078	6.3
	USD mln	10,030	9,690	–3.4

1. For reader convenience, amounts in USD were converted at the average exchange rate for the applicable period (average exchange rates for 2020 and 2019 were 413.46 and 382.87 KZT/USD, respectively; period-end exchange rates as at 31 December 2020 and 31 December 2019 were 420.91 and 382.59 KZT/USD, respectively).
2. Source: S&P Global Platts.
3. EBITDA = revenue plus share in profit from JVs and associates, net, minus cost of purchased oil, gas, oil products and other materials minus production expenses minus G&A expenses minus transportation and selling expenses minus taxes other than income tax.
4. Free cash flow (FCF) = cash flow from operating activities (net of net movement in TCO prepayments) minus acquisition of property, plant and equipment, intangible assets, investment properties, exploration and evaluation assets plus proceeds from the loan previously provided to the Caspian Pipeline Consortium.
5. Net debt = non-current borrowings plus current borrowings minus cash and cash equivalents minus short-term bank deposits minus long-term bank deposits. Guarantees issued are not included in the calculation.
6. Total debt = non-current borrowings plus current borrowings. Guarantees issued are not included in the calculation.

Statement of profit or loss[1]

KZT mln	2019[1]	2020	Change	%
Revenue and other income				
Revenue	6,858,856	4,556,037	–2,302,819	–33.6
Share in profit from joint ventures and associates, net	827,979	511,195	–316,784	–38.3
Finance income	240,880	109,753	–131,127	–54.4
Gain on sale of subsidiaries	17,481	519	–16,962	–97.0
Other operating income	24,936	24,576	–360	–1.4
Total revenue and other income	**7,970,132**	**5,202,080**	**–2,768,052**	**–34.7**
Costs and expenses				
Cost of purchased oil, gas, oil products and other materials	–3,913,744	–2,277,066	1,636,678	–41.8
Production expenses	–721,693	–740,786	–19,093	2.6
Taxes other than income tax	–454,295	–269,559	184,736	–40.7
Depreciation, depletion and amortization	–337,424	–360,283	–22,859	6.8
Transportation and selling expenses	–420,402	–458,186	–37,784	9.0
General and administrative expenses	–213,967	–170,208	43,759	–20.5
Impairment of property, plant and equipment, intangible assets, exploration and evaluation assets	–150,751	–243,694	–92,943	61.7
Exploration expenses	–57,068	–19,807	37,261	–65.3
Impairment of investments in joint ventures and associate	–	–30,654	–	–
Finance costs	–317,433	–297,551	19,882	–6.3
Other expenses	–7,203	–32,151	–24,948	346.4
Net foreign exchange (loss)/gain	8,479	–23,935	–32,414	–382.3
Total costs and expenses	**–6,585,501**	**–4,923,880**	**1,661,621**	**–25.2**
Profit before income tax	**1,384,631**	**278,200**	**–1,106,431**	**–79.9**
Income tax expenses	–226,180	–106,303	119,877	–53.0
Profit for the year from continuing operations	**1,158,451**	**171,897**	**–986,554**	**–85.2**
Discontinued operations				
Profit after income tax for the year from discontinued operations	6	–	–	–
Net profit for the year	**1,158,457**	**171,897**	**–986,560**	**–85.2**
Net profit/(loss) for the year attributable to:				
the parent company's shareholders	1,197,157	273,237	–923,920	–77.2
the non-controlling interest	–38,700	–101,340	–62,640	161.9
	1,158,457	**171,897**	**–986,560**	**–85.2**

[1] Certain amounts shown in this column do not correspond to the amounts shown in the consolidated financial statements as at 31 December 2019 because they reflect reclassifications made.

Profit

Revenue for 2020 was KZT 4,556 bln (USD 11,019 mln), down 33.6% year-on-year. The downtrend was mainly attributable to a 34.8% year-on-year decrease in the average Dated Brent oil price, lower oil sales due to production cuts at certain fields in accordance with the OPEC+ deal, as well as lower volumes of oil trading and sales of oil products by KMG International. The decrease in revenue was partially offset by the tenge's depreciation against US dollar by 8.0%.

Share in profit from joint ventures and associates

The share in profit from joint ventures and associates in 2020 decreased by 38.3% year-on-year to KZT 511 bln (USD 1,236 mln) mainly due to a decrease in the profit from Tengizchevroil LLP (TCO), JSC Mangistaumunaigaz (MMG) and Kashagan. The share in the profit from TCO and MMG decreased by 58.2% and 79.6% in the reporting period, to KZT 173 bln (USD 420 mln) and KZT 17 bln (USD 41 mln), respectively, due to lower average oil prices and production decline. The share in Kashagan's loss in 2020 was KZT 7 bln (USD 17 mln) as a result of lower oil prices. At the same time, Kashagan's free cash flow was positive at USD 463 mln. In 2020, Ural Group Limited (UGL), PetroKazakhstan Inc. (PKI) and Valsera Holdings B.V. (Valsera) also made a loss of KZT 10 bln (USD 25 mln), KZT 9 bln (USD 21 mln) and KZT 6 bln (USD 15 mln) in terms of KMG's share, respectively.

Costs

In the reporting period, the cost of purchased oil, gas, oil products and other materials amounted to KZT 2,277 bln (USD 5,507 mln), reflecting a decrease of 41.8% year-on-year, due to lower cost of purchased crude oil and oil for refining, as well as lower global oil prices, which was partly offset by the tenge's depreciation against US dollar. Purchases of oil for resale decreased by 46.4% year-on-year to KZT 1,311 bln (USD 3,171 mln). The cost of oil for refining fell by 50.9% year-on-year to KZT 314 bln (USD 758 mln).

Other expenses

In 2020, production expenses increased slightly year-on-year to KZT 741 bln (USD 1,792 mln).

General and administrative expenses decreased by 20.5% to KZT 170 bln (USD 412 mln).

Taxes other than income tax decreased by 40.7% to KZT 270 bln (USD 652 mln) mainly as a result of lower expenses on rent tax, export customs duty and MET as a result of lower oil prices.

Payroll expenses in 2020 amounted to KZT 427 bln (USD 1,034 mln), showing a 0.3% year-on-year decrease, and were reflected in production expenses, transportation and selling expenses, and general and administrative expenses in the consolidated statement of comprehensive income.

Finance costs in 2020 were KZT 298 bln (USD 720 mln), down 6.3% year-on-year, mainly due to early settlement of TCO prepayment facilities in 2019.

Impairment of assets

As a result of significant changes in market prices amid concerns over the COVID-19 pandemic and its impact on the economy in 2020, assumptions on oil prices, projected refinery margins, production volumes, exchange rates and inflation were revised in impairment testing. In 2020, KMG recognised impairment of assets in the amount of KZT 244 bln (USD 589 mln) in its consolidated statement of comprehensive income, including KZT 162 bln (USD 393 mln) for KMG International, KZT 60 bln (USD 146 mln) for JSC Embamunaigas, KZT 10 bln (USD 25 mln) for Sunkar, Barys and Berkut self-propelled barges, and KZT 11 bln (USD 25 mln) for other assets.

Net profit

The Company's net profit fell 85.2% year-on-year to KZT 172 bln (USD 416 mln) due to lower average oil prices, lower revenue and income attributable to the share in profit from joint ventures and associates, and recognition of impairment of assets, which was partly offset by lower costs and taxes other than income tax.

Net profit for the period attributable to the parent company's shareholders was KZT 273 bln (USD 661 mln).

CAPEX

In 2020, the Company's CAPEX on an accrual basis (disclosed in the segment reporting) was KZT 454 bln (USD 1,098 mln), down 10.1% year-on-year. The main impact came from a 35% year-on-year decrease in CAPEX in the Oil and Gas Exploration and Production segment to KZT 168 bln (USD 405 mln). CAPEX on a cash basis amounted to KZT 396 bln (USD 959 mln) in 2020 compared to KZT 444 bln (USD 1,160 mln) in 2019.

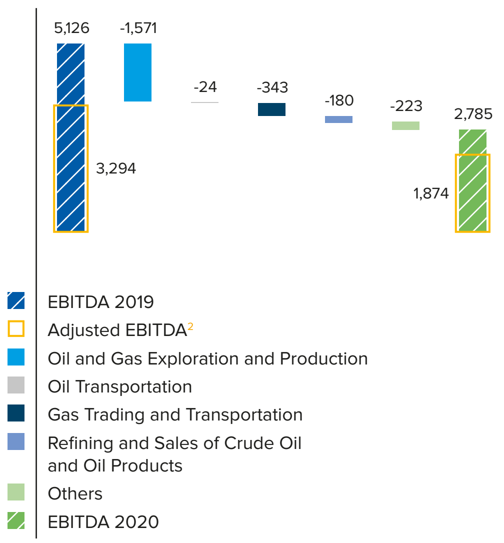
EBITDA structure

We analyse segmented information according to IFRS. Segment performance is evaluated based on revenues and net profit. The Group's operating segments have their own structure and management according to the type of produced goods and provided services. Moreover, all segments are strategic directions of the business, which offer different types of goods and services in different markets. The Company's activity consist of four main operating segments: oil and gas exploration and production, oil transportation, gas trading and transportation, refining and sales of crude oil and refined products, NC KMG's Corporate Centre, etc. (oilfield service companies and other insignificant companies). KMG presents the Corporate Centre's activities separately, since NC KMG not only performs the functions of the parent company, but also carries out operational activities (processing of crude oil at Atyrau and Pavlodar refineries, and further sale of oil products to both domestic and export markets).

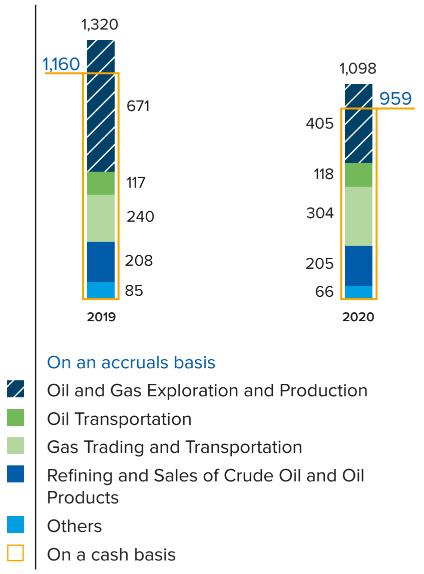
Key factors that affected changes in EBITDA by segment in 2020:

- Oil and gas exploration and production segment's EBITDA decreased by USD 1,571 mln due to lower oil prices and decreased sales of crude oil
- Gas trading and transportation segment's EBITDA decreased by USD 343 mln due to a decrease in revenues from gas exports and international transit
- Refining and sales of crude oil and oil products segment's EBITDA decreased by USD 180 mln mainly due to lower sales by KMG International

EBITDA[1] by segment, million USD[3]



CAPEX, USD mln[3]



1. EBITDA = revenue plus share in profit from JVs and associates, net, minus cost of purchased oil, gas, oil products and other materials minus production expenses minus G&A expenses minus transportation and selling expenses minus taxes other than income tax.
2. Adjusted EBITDA = revenue plus dividends received from joint ventures and associates minus cost of purchased oil, gas, oil products and other materials minus production costs minus G&A expenses minus transportation and selling expenses minus taxes other than income tax.
3. Numbers may not add up due to rounding.

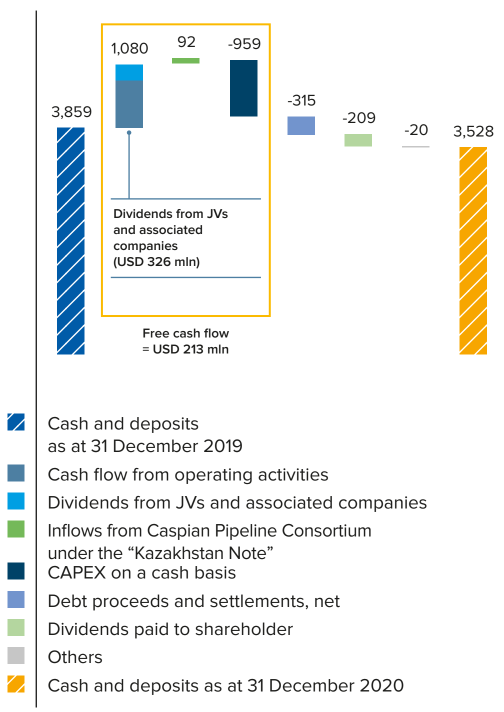
Segments	Unit	2019	2020	%
Oil and gas exploration and production	KZT mln	962,778	390,221	–59
	USD mln	2,515	944	–62
	% of EBITDA	49	34	–15 pp
Oil transportation	KZT mln	219,204	226,838	3
	USD mln	573	549	–4
	% of EBITDA	11	20	9 pp
Gas trading and transportation	KZT mln	457,829	352,565	–23
	USD mln	1,196	853	–29
	% of EBITDA	23	30	7 pp
Refining and sales of crude oil and oil products	KZT mln	268,013	214,839	–20
	USD mln	700	520	–26
	% of EBITDA	14	19	5 pp
Corporate Centre	KZT mln	42,345	–25,077	–159
	USD mln	111	–61	–155
	% of EBITDA	2	–2	–4 pp
Others[1]	KZT mln	12,565	–7,959	–163
	USD mln	33	–19	–159
	% of EBITDA	1	–1	–2 pp
EBITDA	KZT mln	1,962,734	1,151,427	–41
	USD mln	5,126	2,785	–46
	% of EBITDA	100	100	0 pp

1. Including eliminations, which represent exclusion of intra-group turnovers. Inter-segment transactions were made on terms agreed to between the segments, i.e. not necessarily at market rates, except for certain regulated services, which are provided based on the tariffs available to related and third parties.

Statement of cash flows, KZT mln

	2019	2020	Change	%
Net cash flows from operating activities	123,801	446,533	322,732	261
Adjusted cash flows from operating activities[1]	**988,251**	**446,533**	**–541,718**	**–55**
Net cash flows used in investing activities	–319,562	–205,611	113,951	–36
Net cash flows used in financing activities	–270,371	–245,227	25,144	–9
Effects of exchange rate changes	–14,985	85,341	100,326	–670
Change in allowance for expected credit losses	–279	376	655	–235
Net change in cash and cash equivalents	**–481,396**	**81,412**	**562,808**	**–117**
Net change in cash and cash equivalents, USD mln	**–1,257**	**197**	**1,454**	**–116**

Cash sources and uses, USD mln [2]



[1] Adjusted cash flows from operating activities = Net cash flows from operating activities minus TCO prepayments, net.
[2] Numbers may not add up due to rounding.

Cash and cash equivalents

Consolidated cash and cash equivalents, including cash on deposit, increased marginally by 0.6% year-on-year to KZT 1,485 bln (USD 3,528 mln) as at 31 December 2020. The increase in cash and cash equivalents is mainly due to a positive net cash flow from operating activities in the amount of KZT 447 bln (USD 1,080 mln) and the effect of exchange rate changes on cash and cash equivalents in the amount of KZT 85 bln (USD 206 mln). US dollar-denominated consolidated cash and cash equivalents decreased by 8.6% to USD 3,528 mln compared to USD 3,859 mln as at 31 December 2019.

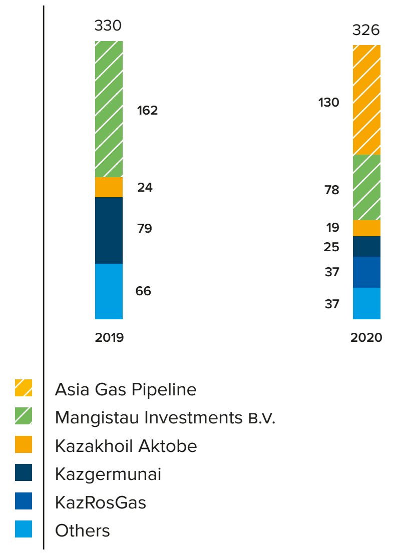
Dividends received

The Company is a parent company of the Group and receives dividends from its subsidiaries, JVs and associated companies. The Company received dividends in the amount of KZT 135 bln (USD 326 mln) and KZT 126 bln (USD 330 mln) in 2020 and 2019, respectively. In 2020, dividends from Asia Gas Pipeline LLP (AGP) amounted to KZT 54 bln (USD 130 mln), from Mangistau Investments B.V. (MIBV) – KZT 32 bln (USD 78 mln), and from KazRosGas LLP – KZT 15 bln (USD 37 mln).

Dividends paid

In May 2020, KMG paid dividends in the amount of KZT 82 bln (USD 198 mln), including KZT 74 bln (USD 178 mln) paid to Samruk-Kazyna and KZT 8 bln (USD 19 mln) paid to the National Bank of the Republic of Kazakhstan in line with Samruk-Kazyna's resolution.

Dividends from JVs and associates, USD mln[1]



[1] Numbers may not add up due to rounding.

Statement of financial position

	2020	2019	Change	%
Assets				
Property, plant and equipment	4,369,745	4,484,271	–114,526	–2.6
Long-term bank deposits	56,528	52,526	4,002	7.6
Investments in joint ventures and associates	6,471,021	5,590,384	880,637	15.8
Other non-current assets	1,279,570	1,314,823	–35,253	–2.7
Short-term bank deposits	282,472	359,504	–77,032	–21.4
Cash and cash equivalents	1,145,864	1,064,452	81,412	7.6
Other current assets	1,001,569	1,208,351	–206,782	–17.1
Assets classified as held for sale	46,518	7,604	38,914	511.8
Total assets	**14,653,287**	**14,081,915**	**571,372**	**4.1**
Total assets, USD mln	**34,813**	**36,807**	**–1,993**	**–5.4**
Equity and liabilities				
Total equity	**8,636,679**	**8,196,656**	**440,023**	**5.4**
Total equity, USD mln	**20,519**	**21,424**	**–905**	**–4.2**
Non-current borrowings	3,716,892	3,584,076	132,816	3.7
Other non-current liabilities	966,341	862,741	103,600	12.0
Current borrowings	361,556	253,428	108,128	42.7
Other current liabilities	971,819	1,185,014	–213,195	–18.0
Total liabilities	**6,016,608**	**5,885,259**	**131,349**	**2.2**
Total liabilities, USD mln	**14,294**	**15,383**	**–1,088**	**–7.1**
Total equity and liabilities	**14,653,287**	**14,081,915**	**571,372**	**4.1**
Total equity and liabilities, USD mln	**34,813**	**36,807**	**–1,993**	**–5.4**

DEBT MANAGEMENT

KMG's gross debt is represented by bonds and loans. The debt portfolio is mainly formed in US dollars – the currency of principal incomes. Accordingly, the "organic" hedging of currency risk is achieved without the need to use derivative financial instruments.

Total debt

Total debt as at 31 December 2020 was KZT 4,078 bln (USD 9,690 mln), up 6.3% year-on-year in tenge terms (down 3.4% in US dollars). Total debt including guarantees[1] as at 31 December 2020 was KZT 4,308 bln (USD 10,234 mln), up 5.0% year-on-year in tenge (down 4.5% in US dollars).

The increase in total debt by KZT 241 bln is mainly driven by the impact of foreign currency exchange rates on US dollar-denominated bonds and loans. At the same time, total debt in US dollar terms decreased by 3.4% to USD 9,690 mln as at 31 December 2020 compared to USD 10,030 mln as at 31 December 2019. In January 2020, Atyrau Refinery received a tenge-denominated long-term loan from the Development Bank of Kazakhstan in the amount of KZT 46 bln to refinance a foreign currency loan received from The Export-Import Bank of China to finance new refining facilities. In May 2020, KazTransGas made an early partial redemption of its bonds at par value in the amount of USD 43.68 mln (KZT 18 bln), paying USD 41 mln (KZT 17 bln) in cash at a discounted price.

In October 2020, the Company issued Eurobonds for a total amount of USD 750 mln (KZT 322 bln) with a coupon rate of 3.5% per annum maturing in 2033 with a simultaneous full early redemption of the Eurobonds for a total amount of USD 906.6 mln (KZT 392 bln) maturing in 2022 and 2023. Significant demand from international investors allowed for the lowest yield in US dollars in KazMunayGas' history. In addition, the yield on the latest issue was the lowest among CIS issuers for new Eurobond issues with a maturity of more than 10 years at the time of the transaction.

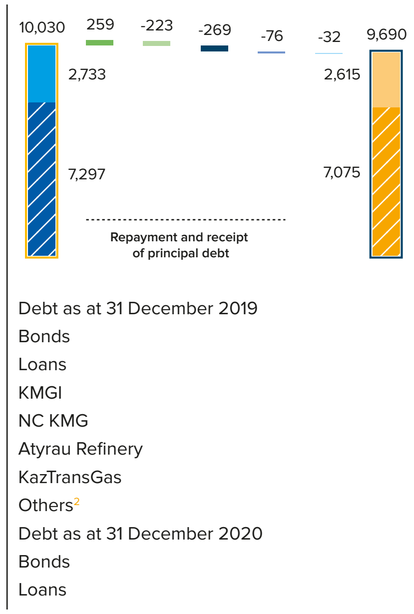
As a result:
- The debt maturity profile of KMG's debt was smoothed out
- The Company currently has no large lump-sum external repayments until 2025
- The debt burden is at a controlled level with a predominance of longer-term borrowings
- The weighted average cost of borrowing for KMG has been reduced
- The covenant package has been improved

Net debt

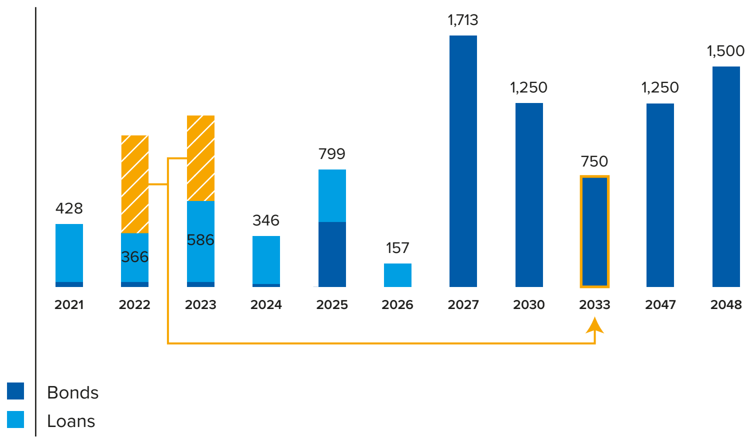
KMG's net debt as at 31 December 2020 was KZT 2,594 bln (USD 6,162 mln), up 9.9% year-on-year in tenge terms (down 0.2% in US dollars).

[1] It includes nominal amounts of guaranteed obligations on a syndicated loan of Beineu-Shymkent Gas Pipeline (BSGP) in the amount of 227 bln tenge (USD 540 mln), guaranteed obligation on a loan of JSC "AstanaGas KMG" in the amount of 1.9 bln tenge (USD 4.4 mln) and lease liabilities in the amount of 62 bln tenge (USD 148 mln).

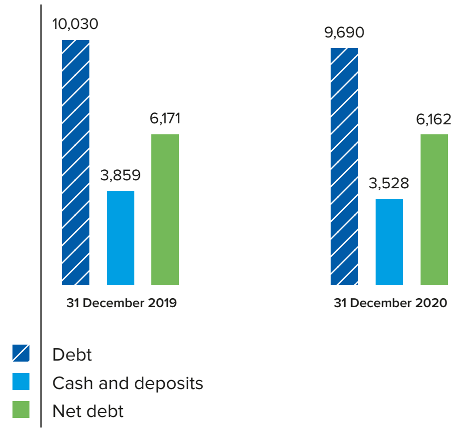
Total debt change, USD mln[1]



Debt repayment schedule at par value, USD mln[3]

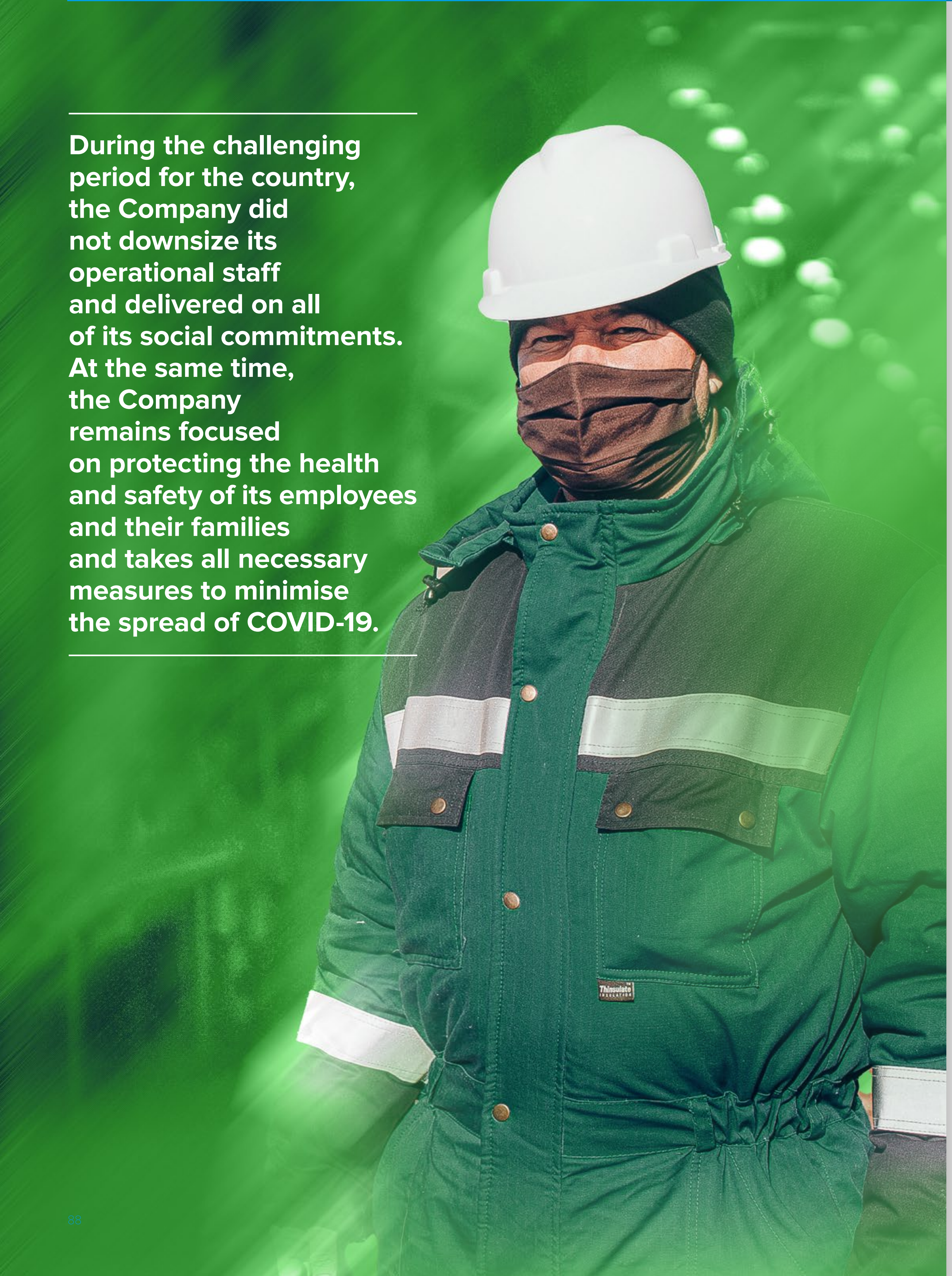


Net debt, USD mln[1]

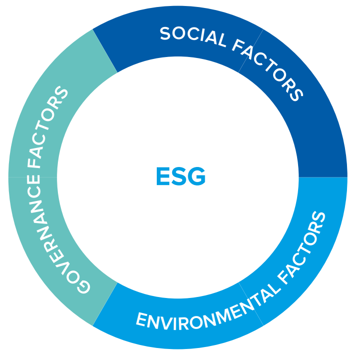


[1] Numbers may not add up due to rounding.
[2] Others include currency translation, foreign exchange gain/loss, accrual of interest, capitalisation of interest, repayment of, and increase in, the principal debt of other subsidiaries.
[3] Does not include credit facilities, overdrafts and commitments on advances from KMG International.

During the challenging period for the country, the Company did not downsize its operational staff and delivered on all of its social commitments. At the same time, the Company remains focused on protecting the health and safety of its employees and their families and takes all necessary measures to minimise the spread of COVID-19.



ENSURING SUSTAINABLE DEVELOPMENT



We lay a special emphasis on sustainability and embedding ESG factors throughout our operations. KMG's Development Strategy until 2028 defined sustainability as one of our strategic goals. KMG's Board of Directors approved a corporate KPI for 2020 – threshold ESG score of 60.

In 2020, the Sustainalytics international rating agency scored KMG at 69 out of 100. KMG's ESG aspects were rated as follows: environmental aspect scored 69, social aspect scored 70, and governance aspect scored 67.

On top of that, KMG's ESG risk rating was assessed at 34.5, which attests to a high level of unmanageable ESG risk. The Company was placed in category four out of five based on the level of risk[1]. Sustainalytics analysts assessed KMG's ESG risk management as "strong" while initial exposure to risks was assessed as "high". KMG's high score is due mainly to industry risks which are beyond the management team's control.

KMG's key ESG challenges are carbon emissions from operating activities and emissions from using the Company's products, as well as community relations in our operating regions.

Without prejudice to the focus on implementing and embedding sustainability principles throughout key business processes and operating activities, KMG continues to act on its commitment to the UNGC's ten principles and the United Nations' 17 Sustainable Development Goals (SDGs). In 2020, we started integrating the SDGs into our business processes. Six priority SDGs were identified until 2025 and key sub-tasks were defined within these goals:

KMG's ESG risk rating is featured on Sustainalytics' website at https://www.sustainalytics.com/esg-ratings/

KMG's 2019 Sustainability Report is available on the Company's website at https://www.kmg.kz/eng/ustoichivoe_razvitie/reports/.

The Company's annual Sustainability Report also serves as Communication on Progress for the UN Global Compact: https://www.unglobalcompact.org/what-is-gc/participants/6810.

[1] ESG risk rating measures the extent to which a company's economic value is exposed to risk associated with ESG factors.

Sustainable Development Goals	Priority targets	KMG's contribution
Ensure healthy lives and promote well-being for all at all ages	3.6. By 2020, halve the number of global deaths and injuries from road traffic accidents	The Company implements the Travel Management project aimed at improving transport safety. KMG Group's Regulations on Safe Operation of Land Vehicles and Policy on Safe Operation of Land Vehicles have been updated and approved.
	3.8. Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all	KMG employees have been covered by medical health insurance for many years. Medical examinations and vaccination of employees are carried out on a regular basis, free of charge. A set of measures to improve working conditions and prevent occupational diseases at production facilities is being implemented. We are tracking and monitoring the implementation of the 10 Steps to Better Health initiative and KMG Group's standard on emergency medical response setting unified requirements to emergency treatment procedures, medical centres equipment, and the emergency medical response action plan.
	3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.	Occupational health and safety procedures and initiatives are reviewed and enhanced on a regular basis. The Code of Employees' HSE Leadership and Commitment has been introduced and is being implemented. A near miss reporting programme is being implemented. The Korgau card is used to define the procedure for identifying and reporting an unsafe condition/unsafe behaviour/unsafe action/hazardous factor. For more details see the Risk Management and Internal Control section and the HSE section.
Ensure access to affordable, reliable, sustainable and modern energy for all	7.1. By 2030, ensure universal access to affordable, reliable and modern energy services.	Since 2017, KMG has had in place a roadmap for its subsidiaries and associates, including jointly controlled entities and joint ventures, to save energy and improve energy efficiency in 2017–2020. Objectives set out in KMG's energy saving roadmap: • Increasing senior management's accountability, introducing energy efficiency KPIs for managers responsible for energy saving and energy efficiency • Promoting efficient use of energy • Reducing energy payments by enhancing energy efficiency and energy saving efforts KMG Group's key strategic energy saving and energy efficiency initiatives include process equipment upgrades, deployment of energy saving technologies, optimisation of heat generation and consumption, and the development of the Group's own generation assets including APG-fired generation. In 2017–2020, 263 energy saving and energy efficiency initiatives were implemented. In 2019–2020, energy audits were conducted at KMG enterprises; based on their results, energy saving and energy efficiency improvement measures to be implemented in the next five years will be proposed.

Sustainable Development Goals	Priority targets	KMG's contribution
	7.b. By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing states and landlocked developing countries, in accordance with their respective programmes of support.	KMG explores opportunities to introduce renewable energy sources (RES) at its production facilities. For more details see the HSE section.
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.5. By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.	KMG is consistently focused on providing continuous employee training and increasing employee satisfaction and productivity, including through the Reservoir Engineer, Professional Foreman and other technical competency development programmes.
	8.6. By 2020, substantially reduce the proportion of youth not in employment, education or training.	We are implementing the Leadership programme and the Mentoring, Coaching, Training programme along with plans to strengthen corporate culture and enhance social stability and industrial relations. KMG Group participates in the Zhas Orken programme of young talent rotation, aimed at providing development opportunities to talented youth in Kazakhstan. To help talented youth improve their skills in digital technologies and digitalisation, the Digital Summer programme was launched in 2018. Its objective is to involve young talents in digitalisation projects.
	8.8. Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.	Social support for employees of KMG subsidiaries and associates is set out in their collective bargaining agreements and the Rules for Rendering Social Support. To unify the types and standards of social support across all enterprises of KMG Group, the Standard Rules for Rendering Social Support to Employees of KMG Subsidiaries and Associates were adopted. Best practices in applying the OHS management system are actively implemented. For more details see the Personnel Development section and the HSE section.
Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	9.1. Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.	KGM carries out construction and overhaul of industrial (bases, workshops, etc.) and non-industrial (dormitory, canteen) facilities to improve working and living conditions for employees with an emphasis on the development of infrastructure in our operating regions.
	9.b. Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.	KMG's digital transformation programme promotes the expansion of scientific research and development of technological capabilities across industrial sectors. KMG invests heavily in relevant scientific research and local capacity building. The development of domestic technological capacities to ensure industrial diversification will also have a positive impact on the climate situation in the country. For more details see the Personnel Development and Digital Transformation sections.

Sustainable Development Goals	Priority targets	KMG's contribution
13 CLIMATE ACTION Take urgent action to combat climate change and its impacts	13.2. Integrate climate change measures into national policies, strategies and planning.	KMG is committed to managing the climate risk by reducing emissions, launching an energy efficiency CAPEX programme, tracking its progress and sharing best practices with other global players. KMG Group's Emissions Management Policy has been approved. The Policy comprises eight key principles, six of which directly address climate change, and is aimed at complete elimination of routine flaring. KMG calculates its carbon footprint and water footprint; as from 2019, KMG calculates its carbon footprint and posts its Climate Questionnaire on the website of the Carbon Disclosure Project (CDP). In 2020, a water footprint was calculated for KMG Group and a Water Security Questionnaire was posted as part of its international reporting for the first time. Company-wide green initiatives are being actively promoted, and the Green Office principles, including the introduction of separate waste collection, water and energy saving in the office, etc., are being gradually implemented.
	13.3. Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	In August 2020, KMG issued its 2019 Greenhouse Gas Emissions Report as part of the CDP Climate Change Questionnaire, disclosing data on direct and indirect GHG emissions across all KMG's assets, including its subsidiaries and associates in Romania and Georgia. KMG made an official commitment to contribute to water conservation efforts in Kazakhstan. In 2020, data on water management were posted on the CDP's website as part of the 2019 Water Security Questionnaire. For more details see the Environmental Protection section.
15 LIFE ON LAND Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	15.3. By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.	KMG implements projects aimed at curbing discharges and reducing fresh water withdrawal from natural sources: ◆ The Tazalyq project at Atyrau Refinery to curb discharges and enhance water conservation ◆ Construction of a desalination plant at KBM Measures are taken to recycle and reuse water. Historical pollution is addressed and projects to remediate oil contaminated soils are being implemented.
	15.5. Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.	Priorities have been identified in maintaining biodiversity across our operating regions. Measures are taken to reduce the possible negative impact on fauna and flora. For more details see the Environmental Protection section.

In 2021, we plan to engage in a focused effort to approve and implement sustainability initiatives aimed at ensuring systematic improvement in sustainability performance.

To further the shaping of the sustainable development management system, in 2020, KMG's Board of Directors approved KMG Group's Sustainability Management Guidelines. The Guidelines will enable the implementation of sustainability elements and principles as well as systematic evaluation of the effectiveness of sustainability measures taken at the Company. Along with building a sustainability system, particular attention is paid to enhancing the sustainability culture. Sustainability training courses are held on a regular basis for employees of the Corporate centre and subsidiaries and associates.

KMG strives to ensure a high level of openness and transparency of its activities by maintaining an active dialogue with stakeholders. Every year we disclose information on all material aspects of the Company's performance in our Sustainability Report prepared in accordance with GRI standards, which enables us to maintain a healthy balance between economic, social and environmental aspects of our operations.

GRI Empowering Sustainable Decisions

The Company's annual Sustainability Report also serves as Communication on Progress for the UN Global Compact: https://www.unglobalcompact.org/what-is-gc/participants/6810.

KMG's 2019 Sustainability Report is available on the Company's website at https://www.kmg.kz/eng/ustoichivoe_razvitie/reports/.

HEALTH, SAFETY AND ENVIRONMENT (HSE)

INDUSTRIAL SAFETY, OCCUPATIONAL HEALTH AND ENVIRONMENTAL PROTECTION

Advanced corporate governance framework and commitment to sustainability principles

KMG is committed to environmental sustainability and social stability and recognises its responsibility to current and future generations.

Performance highlights

Social highlights

Indicator	2018	2019	2020
Lost Time Incident Rate (LTIR)	0.32	0.31	0.22
Fatal Accident Rate (FAR)	0.65	1.28	0.00
Fatalities	1	2	0

Environmental highlights

Indicator	2018	2019	2020
NO_x emissions, tonnes per 1,000 tonnes of produced hydrocarbons	0.20	0.21	0.22
SO_x emissions, tonnes per 1,000 tonnes of produced hydrocarbons	0.25	0.20	0.23
APG flaring rate, tonnes per 1,000 tonnes of produced hydrocarbons	6.00	2.95	2.2

Participation in initiatives and programmes

THE WORLD BANK IBRD • IDA | WORLD BANK GROUP

The World Bank's Zero Routine Flaring by 2030 initiative

SUSTAINABLE DEVELOPMENT GOALS

UN 17 Sustainable Development Goals initiative

CDP

CDP climate programme

Global Methane Initiative

Global Methane Initiative

Caspian Environmental Protection Initiative – CEPI

International Association of Oil & Gas Producers

HEALTH, SAFETY AND ENVIRONMENT MANAGEMENT SYSTEM (HSE MS)

KMG's health, safety and environment management system is designed to Kazakhstan's statutory requirements, international industry standards ISO 14000 and ISO 45001, global best practices and guidelines, and recommendations of the International Association of Oil & Gas Producers (IOGP). The System covers ten areas and relies on four pillars: leadership, goal achievement, risk management and continuous improvement.

Since 2006, KMG operates an integrated quality, environmental, and occupational health and safety management system compliant with ISO 9001, ISO 14001, and OHSAS 18001. KMG's significant energy users are certified to ISO 50001. The effectiveness of HSE MS is verified by independent auditors on a regular basis.

To improve its management system, KMG started certifying HSE MS to ISO 45001. The process is expected to be completed in Q1 2021.

The Company has in place a 3-tier system of committees which incorporates best HSE management practices to enhance commitment and involvement in HSE management of managers and employees at all levels:

- First tier – the Health, Safety, Environment and Sustainable Development Committee (HSE & SD Com)
- Second tier – the Health, Safety and Environment Committee at KMG level
- Third level – HSE committees at subsidiaries

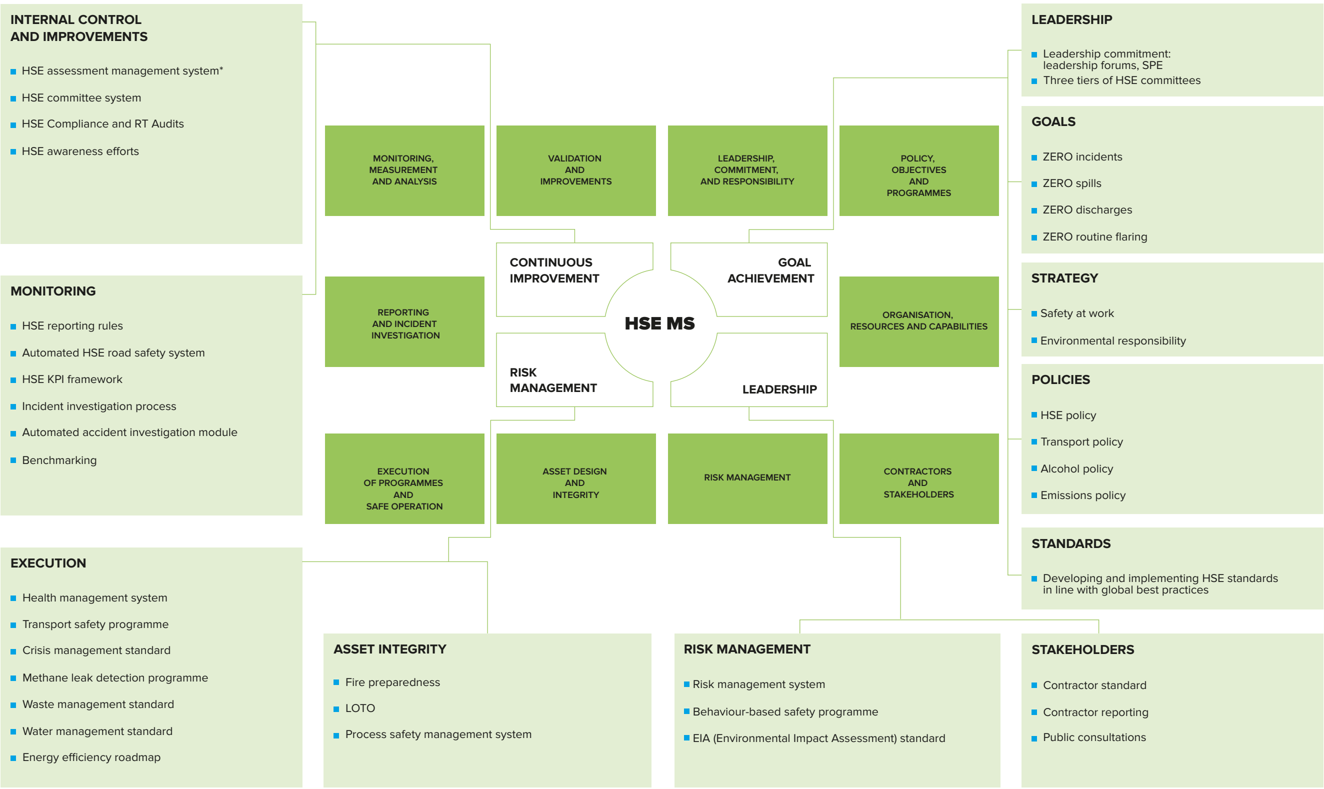
In 2019, the Health, Safety and Environment Committee was launched at JSC Samruk-Kazyna. During 2020, KMG was involved in the Committee's and its Expert Group's work. The Committee and its Expert Group unites the Fund's portfolio companies to exchange best practices and develop single approaches to ensure occupational health and safety, including measures to prevent the COVID-19 pandemic. Many of KMG's HSE approaches and pandemic response measures were adopted by other portfolio companies as best practices.

Safety, health and environmental protection reports are presented monthly at the meetings of KMG's Board of Directors, and detailed, informative reports are presented at the meetings of the Health, Safety, Environment and Sustainable Development Committee. In 2020, the Committee held five meetings to discuss in detail the following key matters:

- Increasing APG utilisation rates
- KMG's position in the Environmental Transparency Rating of Oil and Gas Companies
- Biodiversity conservation
- Water management
- Climate change

Quarterly HSE risk monitoring covers environmental, climate and water shortage risks. KMG conducts regular reviews of environmental protection metrics, comparing

HSE MS structure and implementation of industry best practices



1. HSE – Health, Safety and Environment.

them with the performance of global oil and gas associations (IOGP, IPIECA, CDP), along with audits of production facilities. The Company focuses on environmental aspects and environmental risks, assessing the environmental impact of planned activities, surveying public opinion as well as implementing environmental projects.

In 2020, KMG has considerably improved its HSE management system and adopted a number of industry global best practices. As a result, new corporate documents were developed and approved. In line with the KMG Strategy priorities, its HSE Policy was divided into separate policies: the Occupational Health and Safety Policy and the Environmental Policy, which are available on the corporate website.

As part of improving the corporate HSE management system, in 2020, KMG developed or updated and approved the following internal documents:

- KMG Group's Plan of Communication and Awareness of Risks in Health, Safety and Environment
- KMG Group's Corporate Unified Occupational Health Management System Standard
- KMG Group's Corporate Industrial Safety Standard
- KMG Group's Corporate Standard for Engaging Contractors on HSE
- KMG Group's Regulations on the Application of Korgau Card
- KMG Group's Corporate Standard for Building HSE Capabilities
- KMG Group's Corporate Standard for Assessing the Environmental Impact of Planned Activities
- KazMunayGas' Occupational Health and Safety Policy
- KazMunayGas' Environmental Policy
- KazMunayGas' Policy on Safe Operation of Land Vehicles
- KazMunayGas' Policy on Alcohol, Narcotic Drugs, Psychotropic Substances and Their Analogues
- KMG Group's Regulations on Safe Operation of Land Vehicles
- KazMunayGas' Instruction on the Fire Safety in Office Buildings

ENVIRONMENTAL RESPONSIBILITY AND SAFETY

2020 HIGHLIGHTS

SO_x emissions intensity

0.23[1]

(IOGP — 0,20[2])

NO_x emissions intensity

0.22

(IOGP — 0.32)

Associated petroleum gas (APG) flaring rate

2.2

(IOGP — 10.6[3])

APG utilisation rate

98%

Historical waste and oil contaminated soils treatment

558,400 TONNES

(target: 558,400 tonnes)

Reduction in energy consumption (from the 2019 baseline)

14%

CDP score

«C»

Environmental performance indicators, tonnes per 1,000 toe of produced hydrocarbons

Year	SO_x emissions intensity	NO_x emissions intensity	APG flaring rate	APG utilisation rate, %
2016	0.39	0.24	12	86
2017	0.32	0.25	11	85
2018	0.25	0.20	6	93
2019	0.20	0.21	2.95	97
2020	0.23	0.22	2.2	98

1. Previously published figures contained in the Company's press releases were calculated based on preliminary data.
2. Available data on the International Association of Oil & Gas Producers (IOGP) performance indicators for 2019 (https://www.iogp.org/).
3. Available data on the International Association of Oil & Gas Producers (IOGP) performance indicators for 2019 (https://www.iogp.org/).

The Company's goals in HSE management are directly related to its Development Strategy. KMG's Development Strategy until 2028 (the Strategy) covers strategic initiatives to promote greater environmental responsibility. The Company's environmental priorities include management of greenhouse gas emissions, water resources and production waste, flaring reduction, land reclamation, and energy efficiency improvement.

In line with the Strategy priorities, its HSE Policy was divided into separate policies: the Occupational Health and Safety Policy and the Environmental Policy which were approved by the Board of Directors in 2020. Management teams at KMG and its subsidiaries and associates take a zero tolerance approach to losses and harm caused by environmental pollution.

In 2015, KMG supported the World Bank's Zero Routine Flaring by 2030 initiative. KMG's Emissions Management Policy was approved in 2019 as part of this initiative. The Policy is aimed at complete elimination of routine flaring and is comprised of eight key principles, six of which directly address climate change.

The first Corporate Environmental Impact Assessment Standard was developed and approved in 2020 as part of KMG Group's Health, Safety and Environmental Management Guidance. The Standard defines the Company's principles for assessing the environmental impact of planned activities and regulates the activities of KMG

Group, its employees and contractors, including engineering and design organisations involved in the development of technical documents and materials of environmental impact assessment, surveying and documenting public opinion on environmental impact assessment materials as well as obtaining emission permits.

As a result of its efforts to improve environmental performance and ensure openness and transparency in this area, KMG has topped, for the fourth consecutive year, the Environmental Transparency Rating of Oil and Gas Companies compiled by independent experts from WWF Russia, the National Rating Agency, and CREON Group.

The rating methodology was tested for corporate use, and KMG subsidiaries and associates have been rated internally for the second year running, with Intergas Central Asia topping the rating and followed by JSC Embamunaigas and KazTransOil.

KMG remains committed to being an environmentally responsible business, further enhancing its environmental protection management system, maintaining dialogue with all stakeholders on this matter, and thus delivering on its commitments as stated in the Company's Environmental Policy.

On 14 September 2020, in Baku, KazMunayGas signed a memorandum of understanding with the State Oil Company of the Azerbaijan Republic, BP Exploration (Caspian Sea) Limited, Equinor Apsheron AS, and TOTAL E&P Absheron B.V. The Memorandum stipulates the establishment of the Caspian Environmental Protection Initiative (CEPI). As declared, the main goals of the Initiative are the establishment of the first platform to protect the environment and conduct joint research by international oil companies operating in the region. The participating companies will take active joint efforts to address climate change threatening the sustainability of the Caspian region and prevent the emissions of greenhouse gases and hazardous substances into the environment. In addition, cooperation under CEPI implies researching and promoting best practice, standards and technologies in environmental protection, developing and implementing joint preventive measures to fight climate change, arranging awareness-raising and advocacy campaigns, involving regional stakeholders and regulators in addressing environmental protection, and pursuing other efforts.

GREEN OFFICE AT KMG

The Green Office principles promote economic use of all resources and care for the environment. KMG is adopting the Green Office standards, including the continuous improvement of working conditions, comfort levels, productivity, design and architecture, greening, living environment, and recreation facilities.

The following has been implemented so far:
- Installation of ecobins in offices, corridors, lobbies and parking spaces for separate collection of waste: paper, plastic, glass and metal
- Showing a video on separate waste collection highlighting the results for each month on displays installed in lifts and in the lobby of Emerald Tower business centre hosting KMG's headquarters
- Pop-up window on employees' computer screens reminding them to turn off computers and other equipment at the end of the working day
- Stickers with slogans highlighting the need to save trees, minimise printouts, print out in black and white on both sides of paper, and print out unofficial documents on the reverse side of nonconfidential drafts
- Pop-up window at 11:00 a.m. and 4:30 p.m. reminding to take a 5-minute break to exercise in order to protect employees from harmful health effects of exposure to personal computer screens
- Pop-up window on employees' computer screens at 10:00 a.m. and 3:00 p.m. with a reminder message – "Wear a face mask. Maintain social distance. Wash and sanitise your hands more often"
- A 2021 environmental calendar was designed for KMG employees
- A campaign is underway to inform and raise awareness, with internal circulation of Green Office posters, booklets, videos and presentations.
- Slides on ecobins for separate waste collection, etc. were added to the Induction Briefing employee onboarding programme

In 2020, the Green Office initiative in the KMG Corporate Centre's building helped collect 920 kg of waste paper (including 561 kg by KMG), 844 kg of plastic (555 kg by KMG), 32 kg of glass and 45 kg of polyethylene, which saved 8 trees, 16,870 l of water, 844 kW of electricity and avoided 1,434 kg of CO_2 emissions.

THE PLANET'S RESOURCES SAVED THROUGH WASTE PAPER COLLECTION

8 TREES
saved

16,870 L
Water saved

844 KW
of Electricity saved

1,434 KG
CO_2 emissions avoided, kg

Priority environmental projects

- Elimination of historical pollution, as well as sources of negative environmental impact (idle wells, wastewater reservoirs, landfills and other production facilities)
- Reduction in emissions through improved technology solutions, e.g. replacing fuel oil with fuel gas/natural gas (as a process furnace fuel), using next-generation additives, tree planting and land improvement at production facilities, replacing equipment, expanding gas processing capacity, installation of gas processing units, etc.
- Reduction in discharges: wastewater treatment facilities upgrade at Atyrau Refinery and reclamation of the Tukhlaya Balka evaporation fields, construction of desalination plants (the Tazalyq project)
- Further implementation of the Green Office principles and improvement of a positive environmental culture and awareness

EMPLOYEE TRAINING IN ENVIRONMENTAL MANAGEMENT

People are our most important asset, so HSE training remains top of mind for KMG Group. Therefore, mandatory staff education, training and upskilling in occupational health, industrial and fire safety and environmental protection are priority training areas for KMG.

In 2020, KMG Group spent a total of KZT 671,341 to train 100,172 employees, including HSE training in the following key business segments: KZT 255,728 in the upstream business; KZT 161,670 in the midstream business; KZT 44,039 in the downstream business; KZT 182,341 in the service business, and KZT 27,565 in the Corporate Centre.

Employee training expenses

Indicator	2018	2019	2020
Employees trained	114,971	130,615	100,172
Amount in KZT '000	1,097,877	1,179,877	671,341

HSE training by key business segment

Business segment	Number of employees	Amount in KZT '000
Upstream	36,263	255,728
Midstream	23,840	161,670
Downstream	7,599	44,039
Service	31,686	182,341
KMG Corporate Centre	784	27,565

Under the "70/20/10 – on-the-job training/internal training/external training" model rolled out across KMG Group, occupational health and safety and industrial and fire safety trainings are conducted at KMG's existing six training facilities/centres. The bulk of training was done online due to COVID-related restrictions.

JSC OzenMunaiGas (Zhanaozen), JSC KazTransOil (Aktau), JSC Intergas Central Asia (Atyrau, Shymkent), JSC Pavlodar Refinery (Pavlodar) and Oil Services Company LLP (Aktau) have their own training facilities/centres.

In addition to the tenured faculty, line managers and highly qualified specialists from among KMG long-serving operational staff are engaged by training centres to deliver trainings and upskilling courses for KMG employees.

Long-serving employees are also engaged in the mentor and internal trainer programmes run by KMG, along with master classes, trainings and various contests held to recognise best performers, enhance internal communications, and motivate employees to excel in their jobs.

7 AFFORDABLE AND CLEAN ENERGY

13 CLIMATE ACTION

ENERGY SAVING AND ENERGY EFFICIENCY PROGRAMMES

KMG has continued its group-wide energy saving and energy efficiency programme, with the Corporate Centre collecting and analysing energy consumption and energy efficiency-related data, monitoring the dynamics, identifying opportunities for improvement, and conducting year-on-year and peer benchmarking.

KMG's energy saving and energy efficiency efforts are based on the methodology set out in ISO 50001 Energy management systems, an internationally recognised best-practice framework for systemic energy management.

Energy saving and energy efficiency programme performance

In 2020, total energy consumption amounted to 156.6 mln GJ, down 14% year-on-year, including 13.2 mln GJ in electricity, 4.2 mln GJ in heat, 1.5 mln GJ in motor fuel, and 137.7 mln GJ in boiler and heating fuel. KMG's total energy consumption is divided between three business segments: Upstream, Midstream and Downstream.

The year-on-year energy consumption decrease was mainly due to reduced gas transportation and lower hydrocarbon production because of the pandemic. In 2020, KMG Group's self-generated energy amounted to 406.0 mln kWh in electricity and 4,096 ths Gcal in heat.

The use of innovative technologies and renewable energy sources is a relatively new yet promising trend in the oil and gas industry.

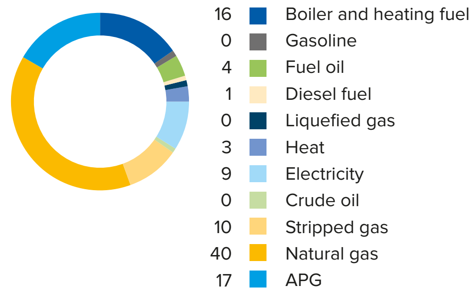
We benefit from a range of renewable energy technologies deployed in previous years at KazTransGas, namely in its subsidiaries Asia Gas Pipeline and Intergas Central Asia, including compressor units driven by DLE turbines; reactive power compensation in electric grids; Waterkotte geothermal heat pumps; monocrystalline solar cells (panels); thermal electric generators (closed cycle vapour turbogenerators) and Capstone modular package power plants; end-to-end automated energy accounting systems, and energy-saving lights.

Total renewable energy generation by the KazTransGas Group in 2020 broken down by source:

- Geothermal energy (heat) generation by heat pumps: 625.8 Gcal
- Electricity generation by solar panels: 111,352 kWh
- Electricity generation by thermal power generating units (TPGU, Rankine cycle): 1,154,510 kWh

In 2020, PKOP solar panels generated 211,000 kWh of electricity for street lighting.

Energy consumption by resource type, %



Energy intensity

In 2020, KMG Group's energy consumption in the upstream sector averaged at 2.2 GJ per tonne of hydrocarbon production, still 46% above the International Association of Oil & Gas Producers (IOGP) average for 2018, i.e., 1.5 GJ per tonne of hydrocarbon production. In oil production, specific energy consumption increase was primarily due to a higher water cut at mature fields, which caused a higher density of the fluid produced and, accordingly, a higher energy consumption for artificial lift.

KMG Group's key strategic energy saving and energy efficiency initiatives include process equipment upgrades, deployment of energy saving technologies, optimisation of heat generation and consumption, and the development of the Group's own generation assets, including APG-fired generation.

In 2020, 55 energy saving and energy efficiency initiatives were implemented. The target annual fuel and energy savings amounted to 0.9 mln GJ, which in physical terms corresponds to 6.9 mln kWh of electricity, 10,300 tonnes of fuel gas, and 11,803,000 m^3 of natural gas.

CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

Management

KMG's long-term Development Strategy prioritises the following climate-related initiatives:

- Greenhouse gas (GHG) emissions management
- Reduction of routine flaring
- Improvement of GHG emissions intensity per unit of production and overall energy efficiency.

KMG fully supports the government's decarbonisation commitment. Climate change issues are closely monitored at a strategic level: KMG's Board of Directors and its Health, Safety, Environment and Sustainable Development Committee.

The Committee meetings in 2020 reviewed in detail the following key matters:

- Increasing APG utilisation rates
- Water management
- Climate change

Risks and opportunities

The corporate risk management system is a key component of the corporate governance system, and is used to identify, evaluate, monitor and mitigate potential risks that may hinder the achievement of strategic goals. The Company implements a range of initiatives to minimise these risks, with risk reports submitted to the Board of Directors every quarter.

[1] For more details, see KMG's published reports, which are publicly available at: KMG Group's 2019 GHG emissions report, KMG's CDP Climate Change Questionnaire.

[2] CDP is an independent non-profit organisation. Since 2002, it has been collecting carbon emission and climate change related data on behalf of investors. Thousands of companies from across the world's major economies report their carbon emissions inventories and use CDP to disclose their environmental information. CDP climate ratings assigned to companies based on their disclosures assessment are published by leading financial news agencies (Thomson Reuters, Google Finance) along with the reporting companies' financial metrics and are considered by investors in asset valuations and related risk assessments.

Information disclosure

KMG's carbon footprint has been calculated for the second year running. In August 2020, KMG issued a report on greenhouse gas emissions[1] in 2019 as part of its disclosures under the Carbon Disclosure Project (CDP[2]) Climate Change Questionnaire, disclosing data on direct and indirect GHG emissions, GHG emissions management, key risks and opportunities across all KMG's assets, including its international assets in Romania and Georgia.

The data include carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O). According to the report, in 2019, direct carbon dioxide emissions across KMG Group amounted to 9.7 mln tonnes (9.3 mln tonnes in 2018). The year-on-year increase in emissions was due to higher gas transportation volumes and new emission sources. Methane and nitrous oxide emissions are converted into tonnes of CO_2 equivalent using global emission factors (28 for methane and 256 for NOx).

The greenhouse gas emissions data were verified by an independent accredited organisation's report for each subsidiary or associate. Data for 2020 will be disclosed in KMG's CDP report to be published in Q3 2021. We seek to ensure consistency and comparability when preparing our disclosures. We are committed to enhancing disclosures and increasing the scope of reporting around our Scope 3 emissions.

For more details on air protection, see KMG's Sustainability Report

Efficient use of APG

In reducing our GHG footprint, we focus on increasing associated petroleum gas (APG) utilisation while minimising flaring. The measures taken so far within our raw gas processing and development programmes have increased internal APG use for heat and electricity generation.

In 2020, APG utilisation rate was 98%, with flaring at 2.2 tonnes per 1,000 tonnes of produced hydrocarbons (6 tonnes in 2018, and 2.95 tonnes in 2019), down 24% year-on-year and 79% lower than the IOGP industry average.

Raw gas flaring

Indicator	2017	2018	2019	2020
Total raw gas flaring, mln m^3	315.8	148.9	80.2	57.6
Raw gas utilisation, %	85	93	97	98
Raw gas flaring rate, tonnes per 1,000 tonnes of produced hydrocarbons	11	6	2.95	2.2

KMG strives to minimise raw gas flaring. In 2015, KMG supported the World Bank's Zero Routine Flaring by 2030 initiative. Raw gas flaring reports under the Initiative are submitted on an annual basis.

For more details, see KMG's Sustainability Report

WASTE MANAGEMENT

KMG Group's production facilities regularly monitor and control all waste handled by facilities (including contractors' waste), take measures to minimise waste generation and earmark annual funding for recycling/reuse and/or disposal of generated, accumulated and historical waste, with KMG spending on this topping KZT 13 bln in 2020.

Given the urgency of improving the environment and its commitment to environmental safety, KMG carries out projects to reduce waste storage, eliminate historical waste, and remediate oil contaminated soils.

Oil producing assets have landfills for temporary storage of oily waste. OzenMunaiGas had five landfills and Karazhanbasmunai had one with accumulated waste. These landfills were cleaned up and waste disposed of between 2016 and 2019. Mangistaumunaigaz had 10 landfills with oily waste. All landfills have been cleaned up and remediated by now, with land remediation completed on the last remaining landfill in 2020.

Currently, waste generated by OzenMunaiGaz, Mangistaumunaigaz, and Karazhanbasmunai is sent for disposal to specialist contractors without landfilling.

KazTransOil has been remediating disturbed soils along the Uzen–Atyrau–Samara pipeline, with 20.07 ha of land along the pipeline remediated over the past 10 years, and another 4 ha slated for remediation along the pipeline's second section (984–985 km) during 2021. A total of KZT 4.5 bln has been invested in the remediation of historically polluted land, with remediated lands returned to local executive authorities so that they can be put to use.

In 2019, a Memorandum of Cooperation was signed between the Ministry of Ecology, Geology, and Natural Resources and KMG, with waste disposal and oil contaminated soil remediation commitments until 2024 (inclusive) covering Mangistaumunaigaz, OzenMunaiGaz and Karazhanbasmunai. An inventory of contract lands was completed in 2019, identifying waste volumes and profiles and providing inputs for oil contaminated soil remediation projects, which were designed and obtained government approvals in 2020. Safe and effective oily waste disposal solution were selected and recommended, and oil contaminated land remediation schedules were developed as part of the projects.

Under the Memorandum, OzenMunaiGaz and Mangistaumunaigaz disposed of 558,419 tonnes of historical waste in 2020, with all activities under the Memorandum scheduled for completion by the end of 2024.

For more details, see KMG's Sustainability Report.

Asset retirement obligations

Oil and gas assets
Under the terms of certain contracts, in accordance with legislation and regulatory legal acts, KMG has legal obligations to dismantle and liquidate fixed assets and restore land plots at each of the fields. In particular, KMG's obligations include the gradual closure of all non-productive wells and actions to permanently terminate operations, such as dismantling pipelines, buildings and reclamation of the contract area, as well as decommissioning and environmental pollution obligations at the production site.

The Company calculates asset retirement obligations separately for each contract. The amount of the liability is the present value of the estimated costs that are expected to be required to settle the liability, adjusted for the expected inflation rate and discounted using average long-term risk-free interest rates on government debt of transition economies, adjusted for risks inherent in the Kazakhstan market.

As of December 31, 2020, the carrying amount of the Company's provision for liabilities to liquidate oil and gas assets was KZT 66 billion (December 31, 2019: KZT 54 billion) (details in the consolidated financial statements in Note 25).

Trunk oil and gas pipelines
In accordance with the Law of the Republic of Kazakhstan "On Trunk Pipeline", which entered into force on July 4, 2012, two subsidiaries of KMG, JSC "KazTransOil" and JSC "Intergas Central Asia", which is a subsidiary of JSC "KazTransGas", have a legal obligation to liquidate the main pipeline after the end of operation and the subsequent implementation of measures to restore the environment, including land reclamation. The provision for the obligation to abandon pipelines and land reclamation is estimated based on the cost of dismantling and reclamation works calculated by KMG. As of December 31, 2020, the carrying amount of the KMG Group's reserve for the obligation to abandon pipelines and land reclamation of the Company amounted to KZT 114 billion (as of December 31, 2019: KZT 100 billion).

For details, see the consolidated financial statements in Note 25

Environmental remediation

KMG also makes estimates and makes judgments on the formation of reserves for obligations for environmental cleanup and rehabilitation. Environmental costs are capitalized as an expense based on or attributable to their future economic benefits.

The Company's environmental remediation reserve represents management's best estimates based on an independent assessment of the expected costs required for the KMG Group to comply with the existing Kazakh and European regulatory frameworks. As of December 31, 2020, the carrying amount of the provision for environmental liabilities was KZT 65 billion (December 31, 2019: KZT 60 billion).

Details in the consolidated financial statements in Note 25

6 CLEAN WATER AND SANITATION

WATER PROTECTION

KMG's core business is concentrated in Central Asia, a region where water is a precious and scarce resource. We recognise our responsibility to society and the environment and are making every effort to ensure efficient use of water resources.

On 1 July 2019, KMG made an official commitment to contribute to water conservation efforts in Kazakhstan. At an HSE forum held for CEOs of KMG Group companies, Alik Aidarbayev, Chairman of KMG's Management Board, signed a personal Statement of Commitment to efficient water management (KMG's eight water-related principles). His initiative was backed up by the CEOs of KMG subsidiaries and associates, who signed similar statements of commitment on behalf of their respective companies. These signed statements have been made available on the official websites of KMG Group companies.

The statements set out KMG's key principles for water use, the eight water-related principles, structure the water management approach used by KMG subsidiaries and associates, and enhance the commitment to fresh water conservation among KMG's management and employees.

Projects are underway to curb discharges and reduce fresh water withdrawal from natural sources.

Atyrau Refinery

One of the major ongoing environmental initiatives of Atyrau Refinery, the Tazalyq project, includes an upgrade of mechanical and biological wastewater treatment facilities, the construction of an advanced treatment facility, and the upgrade of evaporation fields.

The water treatment facilities upgrade will enable us to reduce fresh water withdrawal from the Ural River, as the refinery will use a multi-stage wastewater treatment system that removes up to 99% of pollutants, thus allowing the refinery to multiply the volume of its water reuse and return up to 50% of treated wastewater back into the process. The project will allow to stop using evaporation fields and prevent further impacts on Atyrau's groundwater, flora, fauna, and air. The project is expected to be completed in the late 2023. Water withdrawal from the Ural River will be reduced by 38%.

Construction of desalination plants near the Kenderly recreational zone, Mangystau Region

OzenMunaiGas and KMG Engineering signed a Memorandum of Understanding and Cooperation with the Akimat of Zhanaozen. The memorandum reclassifies the desalination plant feasibility study being prepared by KMG Engineering as a social project as per the official instruction by Askar Mamin, Prime Minister of the Republic of Kazakhstan, dated 18 September 2019.The KMG-funded desalination plant project is planned to be constructed near the Kenderly recreational zone in the Mangystau Region. Its planned capacity is 50,000 m^3 per day.

JSC Karazhanbasmunai

Given the lack of fresh water sources near the Karazhanbas field and Karazhanbasmunai's need in large volumes of water to generate steam for thermal recovery, the company faced water shortages and, hence, the threat of declining oil production and related financial losses.

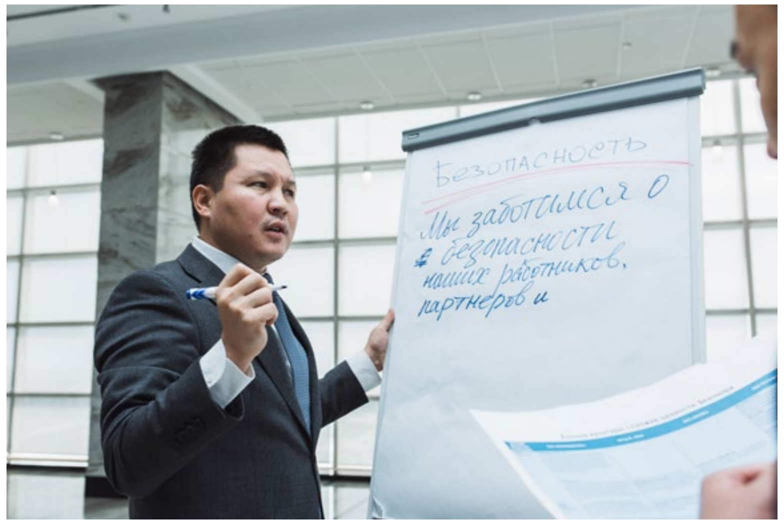
The construction and installation of Karazhanbasmunai's desalination plant in the Mangystau Region commenced in September 2019 and is currently nearing completion. The desalination plant is designed to recycle and reuse formation water and provide process water to improve recovery from the Karazhanbas reservoirs by steam injection.

The plant project is mission critical for the Company as it will not only provide desalinated water for steam generation but also resolve the issue of produced water disposal, enabling improved formation pressure maintenance capabilities for the field.

In 2020, the Company expanded its CDP reporting scope, with water management disclosures posted on the CDP's website for the first time as part of the 2019 Water Security Questionnaire.

For more details on KMG's water management and related projects, see KMG's Sustainability Report.

For more details, see KMG's published reports, which are publicly available at: CDP 2019 Water Security Questionnaire



OCCUPATIONAL HEALTH AND SAFETY

KMG's Occupational Health and Safety Policy is driven by our senior management setting the tone at the top in occupational health and safety and engaging every employee in building a robust safety culture. Management teams at KMG and its subsidiaries and associates take a zero tolerance approach to losses and damage caused by accidents (including traffic accidents), emergencies, as well as by the use of alcohol, narcotic drugs, psychotropic substances or their analogues. KMG is committed to ensuring compliance with both national laws and relevant international and national standards.

Key highlights Occupational health and safety	Unit	2019	2020	Change	%
Accidents	Acc.	41	30	–11	–27
Number of injuries	People	48	32	–16	–33
Road accidents	Acc.	44	15	–29	–66
Fires	Acc.	10	6	–4	–40

Accident and fatality rates

Indicator	2016	2017	2018	2019	2020	IOGP[1]
Lost Time Incident Rate (LTIR), per 1 mln person-hours	0.49	0.42	0.32	0.31	0.22	0.24
Fatal Accident Rate (FAR), per 100 mln person-hours	4.5	3.25	0.65	1.28	0.0	0.46

2020 highlights

The health and safety of our employees are a top priority for KMG, and we remain committed to our zero injuries vision, i.e. achieving 100% safety. We have made significant progress on health and safety over the past five years. Our employees are engaged on safer working conditions and adoption of the highest standards to better protect themselves, their colleagues, and others. But there is still room for improvement.

In 2020, no work-related fatalities were reported for the first time in KMG's history. Furthermore, since KMG joined the International Association of Oil & Gas Producers (IOGP) in 2018, its road accident and injury rates were below IOGP benchmarks.

In 2020, the number of work-related accidents decreased by 27% year-on-year (from 41 accidents in 2019 to 30 in 2020), with the number of injuries down by 33% (from 48 in 2019 to 32 in 2020).

The number of road accidents dropped by 66% (from 44 in 2019 to 15 in 2020), and the number of fires fell by 40% (from 10 in 2019 to 6 in 2020).

Process safety management

In 2020, KMG set out to improve process safety, aiming to prevent major accidents with disastrous consequences (manmade accidents, incidents and disasters) within the Company. For this purpose, the Company approved a new standard for process safety management at KMG's facilities. The standard establishes uniform requirements for, and effective approaches to, asset and process equipment integrity maintenance, safe operating rules, norms, and procedures as per the requirements of Kazakh laws and best international practices (IOGP, OSHA), as well as process risk identification and prevention/mitigation.

[1] Available data on the International Association of Oil & Gas Producers (IOGP) performance indicators for 2019 (https://www.iogp.org/).

Digitisation of HSE processes

- The Trip Management project was initiated to improve transport safety, foster a safe driving culture and establish a single centralised digital platform. Currently, the project is being piloted at JSC Embamunaigas.

The project aims to improve road safety through instilling a safe driving culture based on global best practice, advanced digital solutions, and process automation. The project will also unify the trip safety management requirements for all ground transport operations, implement a centralised tracking of key metrics and enable improved fleet utilisation through analytical reports and corporate-level indicators.

The Trip Management project's next steps:
1. connect vehicles leased by JSC Embamunaigas to a single monitoring system by the end of 2021
2. roll out the project solutions to other subsidiaries and associates.

- Development of environmental monitoring methodology project was commenced to enhance our environmental performance. The project aims to improve transparency, enable rapid responses, and minimise errors in environmental records, analysis, monitoring and management across KMG Group. A demo version of the information system was presented based on a pilot successfully run at a production company. The full roll-out and commercial launch of the automated environmental monitoring information system across KMG Group is scheduled for 2021.

HSE KMG information system upgrade

The HSE KMG system consists of the following modules:
1. Reporting – generation of HSE reporting forms
2. Observation – behavioural observations of work practices and driving safety
3. Actions – internal inspection planning and activity supervision
4. Protection – identification and alerts on unsafe condition/behaviour/action/hazardous event/factor, as well as improvement of occupational health and safety system
5. HSE Condition Analysis – surveying and collecting proposals from KMG Group employees
6. Records and Investigation – recording all types of incidents; incident investigations
7. Internal Control and Monitoring – audits by multidisciplinary teams, detection of irregularities
8. Analytics – automated HSE analysis and visualisation of consolidated data. Plans are in place to roll out the HSE KMG system across the entire KMG Group during 2021

Workplace culture improvement and HSE promotion activities
1. An analysis of well servicing and workover incidents was followed up by the development of an Action Plan to improve well servicing and workover trip safety.
2. 68 booklets and leaflets on HSE and prevention of injuries, accidents and coronavirus infection are circulated weekly across subsidiaries and associates and the Corporate Centre, with ongoing interaction and advice for specialists at subsidiaries and associates
3. Videos on the following subjects have been produced and disseminated:
   - Lessons learned from well servicing and workover trip incidents
   - Lessons learned from road accidents
   - System rolled out at KMG to manage emergencies and crises and respond to all types of incidents (manmade accidents, fires, cyber-attacks, supply disruptions, financial crises, etc.)
   - Workplace exercise
4. Subsidiaries and associates have been audited for compliance with HSE requirements, including preparedness for the second wave of the coronavirus infection, with follow-up recommendations on improvement.
5. In order to evaluate, analyse, and mitigate HSE risks of KMG Group's contractors, quarterly reports on contractors' HSE breaches, including summary of penalties imposed, are submitted to KMG's Board of Directors.
6. In order to reduce the risk of fires and damage to employees' health and property, an inspection of subsidiaries and associates was conducted, covering fire-protection, heating and power-supply systems as well as compliance with rules and procedures for process equipment operation in accordance with fire safety rules and internal regulations with due consideration of production process specifics.
7. Contractors were also inspected, with follow-up recommendations. Fire safety documentation package (schedules, plans, Inspection Report, fire fighting plan, manuals, etc.) have been developed. Fire drills involving personnel and responding fire vehicles were conducted on sites in accordance with the applicable schedules.

A number of preventive technical measures were taken:
- Maintenance and repair of automated security and fire detection, firefighting and fire alarm systems to ensure the operability of equipment through periodic preventive maintenance, condition monitoring and correction of typical malfunctions specified in operating documentation and maintenance procedures
- Fire safety inspections
- Inspection of first-aid fire fighting equipment, water supply equipment, etc.

Fires and significant HSE incidents are promptly reported to KMG's Board of Directors as per the instruction on prompt alerts to the Board issued at a Board meeting.

Upon completion of investigation, relevant materials, including an investigation report specifying immediate and root causes and financial damage, copies of orders on disciplinary actions against employees guilty of the incident, as well as documents specifying post-investigation changes, and documents aimed at preventing similar incidents in the future, are submitted to KMG's Board of Directors.

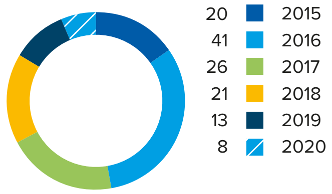
Occupational health and hygiene

The Company manages occupational health and hygiene matters in accordance with the requirements of Kazakh laws and international occupational health standards. KMG is strongly focused on employee health protection and improvement, irrespective of the specific production process involved.

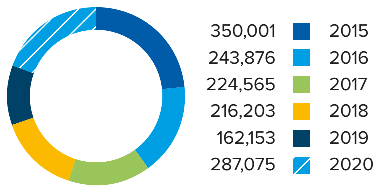
In 2020, employees of subsidiaries and associates lost 287,075 work days to illness, up 124,922 days, or 43%, year-on-year. The number of non-injury related fatalities among employees of subsidiaries and associates reduced by five incidents, or 38%, year-on-year.

To ensure better and more effective management within the Company, an occupational health and hygiene management system is in place, offering tools to assess compliance with requirements for the provision of materials and equipment to corporate primary care facilities, risk management, medical emergency response arrangements and overall occupational health and hygiene management.

The number of fatalities not related to injury



Work days lost due to illness



Main goals of the Company's occupational health and hygiene management system:
- Setting uniform requirements for process set-up to maintain and improve employees' health
- Identifying and mitigating risks (work-related hazards) by improving occupational hygiene, ergonomics and workplace hygiene
- Monitoring and taking preventive measures based on the assessment of employees' health risks to mitigate the risks
- Promoting and encouraging a healthy lifestyle during and outside of working hours.

The Company's occupational health and hygiene management system implementation is evaluated twice a year (every six months), followed by the development of improvement initiatives.

The Company regularly implements a range of measures to improve working conditions and prevent occupational diseases across its operations.

KMG continued its Heart Attack and Stroke Prevention campaign aimed at the prevention and reduction of employee fatalities related to cardiovascular diseases. The Company also tracks and monitors the implementation of the 10 Steps to Better Health initiative and the corporate standard for emergency medical response, setting uniform requirements for employee access to emergency treatment procedures, medical centre equipment and the emergency medical response action plans.

In 2020, 55 employees of KMG's Corporate Centre were trained in first aid.

A draft of the Employee Health Management Framework and 2021–2023 Implementation Roadmap for its phased roll-out were developed in order to improve health services provided to KMG employees (healthcare services and health insurance).
- A working group established
- First Aid protocol booklet prepared
- A video on workplace exercise released
- Letters on the coronavirus infection prevention and preparedness to respond to worsening epidemiological situation sent out to subsidiaries and associates
- Joint presentations with Mediker on the coronavirus infection prevention for the KMG Corporate Centre employees
- Weekly circulation of booklets, leaflets and videos on the coronavirus infection prevention to the Corporate Centre and subsidiaries and associates; ongoing interaction and advice for specialists of subsidiaries and associates
- Interaction with the Committee for Quality Control and Safety of Goods and Services under the Ministry of Healthcare of the Republic of Kazakhstan
- Organisation and coordination of PCR testing for the KMG Corporate Centre employees
- Subsidiaries and associates audited to check the preparedness for the second wave of the coronavirus infection (Mangistaumunaigaz, KazTransOil (Mangistau Oil Pipeline Management Department), service companies: Oil Services Company, Oil Transport Corporation, and Oil Construction Company), with follow-up recommendations.

Progress and ongoing initiatives on preventing the spread of COVID-19

At the beginning of the pandemic, the Company took early action to prevent the spread of COVID-19.

As the situation worsened during the first wave of the coronavirus infection, most cases were registered in the western regions.

This was attributable to the fact that most employees were concentrated on sites operating on a fly-in fly-out (FIFO) basis and were required to take PCR tests before and after fly-in periods (resulting in a higher detection rate compared to hydrocarbon refining and processing companies where employees work in shifts and crews).

The highest incidence and fatality rates were registered in early July, as the national state of emergency was lifted (on 11 May 2020).

With the onset of the pandemic, in order to reduce the incidence rate and curb the spread of COVID-19 as well as to mitigate its impact on production processes, we implemented a range of comprehensive measures, drafted and adopted guidelines and policies, and developed and approved specific action plans:
- The coronavirus infection pandemic response protocol
- On measures to prevent the introduction and spread of COVID-19
- On phased relaxation of lockdown restrictions and preparation for a potential new wave of the coronavirus infection
- Ensuring worker and employee safety and health
- On improving corporate accountability and implementing timely and effective measures to prevent and mitigate mass outbreaks of the viral disease among employees and at operations in the worst-case scenario, including the introduction of strict lockdown measures

The Company has implemented and maintains measures across the three phases of response to prevent the spread of the coronavirus infection:

Phase 1 – pre-lockdown measures

Phase 2 – lockdown measures kept in place

Phase 3 – tighter restrictions when disease outbreaks are identified

To support the action plan implementation, response protocols were activated for coronavirus infection detection and spread, providing for a range of sanitary and epidemiological control measures, including:
- Introduction of lockdown measures
- Mass testing of employees
- Workforce reduction at operating facilities
- Suspension of non-critical activities (well drilling, completion, servicing, workover)
- Business travel restrictions, ban on mass gatherings and shift to remote management
- Longer fly-in periods for staff working on the FIFO basis (from 7 to 14 days and from 14 to 28 days)
- Demobilisation of non-essential personnel from operating facilities and projects; workforce reduction at oil and gas fields to keep operations running with a skeleton staff.

Currently, the range of preventive measures and strict disinfection and sanitary protocols are still in place across KMG Group's operations. All employees, including those working from home, were instructed to ensure strict compliance with sanitary, hygiene and anti-epidemic rules. Also, instructions and leaflets are circulated on a regular basis.

Administrative staff was shifted to work from home as far as possible (50% to 100%). Non-essential personnel within the risk group that can not take leave or be shifted to remote work (staff that keeps operations running) is idled.

Administrative staff was shifted to work from home as far as possible (50% to 100%).

All FIFO personnel and contractors are tested for the coronavirus infection before fly-in.

Back-up crews have been formed, which are not involved in operations and do not contact other personnel. The back-up personnel are used in operations only when primary operational staff gets infected and quarantined.

Fly-in personnel accessing the sites (or personnel returning to their workplaces after working remotely or from leaves) are briefed on the coronavirus infection prevention and pandemic precautions (hygiene protocols, use of sanitiser and masks, social distancing) as well as other occupational safety rules.

Also, to prevent the coronavirus infection and comply with anti-epidemic rules, regular awareness raising activities are ongoing, with posters and recommendations on prevention, disinfection. sanitation and hygiene protocols circulated.

Social distancing, mandatory mask-wearing rules, use of hand sanitiser, pre-shift health screenings, temperature taking before, during, and after work are all in place across KMG and its subsidiaries.

Protocols to be followed if infection is suspected or detected have been developed and implemented. All employees have been advised of the need to promptly report test results and their first symptoms of the coronavirus infection upon discovery as well as of the liability for withholding such facts, test falsification, or quarantine breach.

Remote camps and other designated locations provide space for quarantining self-isolating asymptomatic carriers of the coronavirus infection.

Materials, goods, works and services necessary for the protection of people and disinfection of spaces are procured in an accelerated process.

Emergency response teams at subsidiaries monitor the situation and the spread of the coronavirus infection. The teams stay in touch with local executive authorities and authorised governmental agencies at all times.

The crisis management team of KMG's Corporate Centre stays abreast of how the situation evolves, with a 24/7 monitoring procedure in place. The heads of the operation-level emergency response teams report periodically or as necessary on the situation, its impact on operations and measures taken to prevent the spread of the coronavirus infection among their respective workforce. These meetings result in decisions and recommendations on preventing the spread of the coronavirus infection.

KMG Group also provided over KZT 6.2 bln worth of assistance to local governments and healthcare facilities. Specifically, we purchased medical equipment (ventilators) and related materials, ambulances, personal protective equipment, and provided support in rolling out additional beds.

With the measures taken, the situation is currently stable, and we adjust business continuity plans and reprioritise business processes and contractual obligations to other parties depending on the epidemiological situation.

Measures to prevent contracting the coronavirus and curb its spread are still in place, including the following:

- Previously introduced protocols (adjusted to incorporate lessons from the first wave) to curb the coronavirus spread and maintain anti-epidemic measures, stricter sanitation and disinfection protocols and other sanitary rules
- Critical business processes were identified, along with emergency recovery options for the processes, as well as essential personnel, suppliers, materials, and equipment
- Business continuity and critical business process recovery plans were developed
- Efforts to ensure the preparedness of first-aid facilities are ongoing with due preparations for a potential increase in laboratory examinations and coronavirus infection vaccination
- Stocks of PPE (medical masks, respirators, gloves), dispensers, sanitiser, and disinfecting solutions we built up, along with life-support kits to protect life and health
- Longer fly-in periods are still in place with greater focus on advising employees of the need for self-monitoring of symptoms, good hygiene and compliance with safety rules (staying alert and safe), and social distancing
- Arrangements were made for an accelerated procurement process and uninterrupted supply of goods, works and services in case of worsening epidemiological situation
- Continuous monitoring procedures are in place to curb the spread of the coronavirus infection, and cooperation was established between public and contracted health services to support the implementation of preventive and lockdown measures as well as to facilitate joint responses in the event of worsening epidemiological situation.

The crisis management team of KMG's Corporate Centre stays abreast of how the situation evolves, with a 24/7 monitoring procedure in place.

To facilitate these measures, a number of initiatives were implemented jointly with contracted health services, including:

- Adding competent medical practitioners
- Maintaining a minimum stock of essential medical equipment, medicines and PPE
- Procurement of necessary medical equipment
- Adding staff to first-aid facilities and call centres to provide information and remote advice
- Improved access to scheduled healthcare services for employees with non-infectious diseases
- Developing joint plans to protect employees' life and health through COVID-19 response measures.

PERSONNEL DEVELOPMENT

SOCIAL RESPONSIBILITY

KMG's Strategy and Code of Corporate Social Responsibility reflect the goals of social responsibility aimed at providing social support to employees, participating in the development of operating regions, promoting social partnership, developing human capital, ensuring social stability among KMG Group employees, and enhancing personnel involvement.

KMG Group achieves these goals through fair collective bargaining with employees, close cooperation with local executive bodies and trade unions, and streamlined internal communications between employers and employees across KMG Group.

KMG complies with the legal and regulatory requirements applicable in the Republic of Kazakhstan, as well as with international laws and treaties regulating oil companies, and is aware of its responsibility to shareholders, the public and investors for the impact on the economy, environment and society, for the creation of long-term business value, and for sustainable growth in the long run. All employees of the Company have the right to safe and healthy working conditions, to recognition and fair evaluation of their contribution to the Company, to assistance in enhancing their professional skills, and to open and constructive discussion of the quality and effectiveness of their work. The Company has a zero tolerance policy for discrimination by nationality, race, religion, age, gender, political beliefs or other grounds.

We promote meritocracy, fairness, and integrity while providing every employee with a workplace conducive to new achievements and assessing their respective contributions to KMG's overall success based on merit. We also foster a culture of understanding and engagement, and support among our employees at all levels.

In 2020, KMG's sustainability performance was evaluated for the first time at the international level by the Sustainalytics rating agency, the social aspect was scored at 70, which reflects the Company's robust social responsibility performance (KMG was ranked 36th out of 119 industry peers worldwide).

Indicator	Unit	2017	2018	2019	2020
Actual headcount for KMG Group (consolidated)	Employee	68,757	66,110	61,587	60,173
Actual headcount for KMG Group (subsidiaries and associates and 50% and more owned jointly controlled entities)	Employee	83,360	79,441	74,956	73,066

EMPLOYEE HEADCOUNT

KMG Group (consolidated) provides employment to more than 60,000 people across its operating regions. The actual headcount for KMG Group at end-2020 was 60,173l people, of whom 57,073 full time employees while 3,100 employees were outstaffed.

Indicator	Unit	2018	2019	2020
Male	%	81	82	81
Female	%	19	18	19
Blue-collar employees	%	91	91	92
White-collar employees	%	9	9	8
Employees aged 31 to 50, including	%	61	58	60
◆ Male	%	81	80	80
◆ Female	%	19	20	20
Employees aged over 50, including	%	24	27	28
◆ Male	%	82	82	82
◆ Female	%	18	18	18
Employees aged under 30, including	%	15	14	12
◆ Male	%	83	85	83
◆ Female	%	17	15	17
Jobs created in 2020	jobs	926	385	961
Of average headcount,	%	1.3	0.6	1.6
Employment terminated	employees	8,281	4,512	3,513
Managers at all levels, including,	%	9	11	11
◆ Male	%	83	83.5	82
◆ Female	%	17	16.5	18
Turnover rate for KMG Group	%	11	7	6

Considering that the Company's activities involve heavy, dangerous and hazardous working conditions, 81% of employees are male and 19% are female. Blue-collar employees account for 92% of the total headcount while white-collar employees make up 8%.

In terms of age, the majority of employees (60%) are between 31 and 50 years old, of which 80% are male and 20% are female.

Employees aged over 50 account for 28% of the total headcount; 82% of them are male and 18% are female.

The share of young people aged under 30 is 12% of the total headcount, including 82% of male and 17% of female employees.

In 2020, KMG created 961 jobs, which accounts for 1.6% of the average headcount. The number of employees whose employment was terminated in the reporting period is 3,513.

The percentage of employees who are managers at all levels is 11% of the total headcount. 18% (2019: 16.5%) of managers are female and 82% (2019: 83.5%) are male.

The turnover rate for KMG Group in 2020 was 6% (2019: 7%).

COVID-19 pandemic-related events

As part of anti-crisis measures related to the COVID-19 pandemic and the global decline in oil prices, a new organisational structure of KMG Corporate Centre was approved to ensure:

- the Corporate Centre's focus on solving strategic tasks
- significant optimisation of business processes, elimination of overlapping functions
- 34% reduction of the headquarters staff
- elimination of managing directors' positions, threefold reduction in the number of departments – from 60 to 20
- waiver of bonuses and company cars 30% reduction of top managers' salaries.

These measures helped reduce the payroll by about KZT 5 bln. No blue-collar employees were made redundant, their compensation was not changed.

To prevent the spread of COVID-19 and maintain continuous production, KMG's crisis management team has developed algorithms comprising the following key steps:

- Giving leaves to employees
- Transiting to remote work
- Increasing shift duration for rotating staff to at least 28 days
- If a leave cannot be granted or remote work cannot be arranged (in case of production processes), employees in the risk group and those not involved in the production process are to be put on standby retaining 70% of their monthly salary (Between April and December, payments to employees put on forced standby amounted to about KZT 9.5 bln)
- Transiting to a rotating schedule at key production facilities (OzenMunaiGaz, KazGPZ, Atyrau Refinery, KazTransOil)

Throughout the pandemic, KMG Group spent KZT 4.4 bln to procure goods, works and services aimed at preventing COVID-19 among employees of subsidiaries and associates.

On top of that, we sponsored the national healthcare system and local executive bodies during the pandemic and spent KZT 6.2 bln to purchase medical equipment and other goods needed to combat COVID-19.

PRIORITY AREAS OF OUR SOCIAL POLICY

Student and young talent engagement

KMG offered practical training opportunities and pre-graduation internships to 27 students who submitted their applications in Q1 2020. After COVID-19-related restrictions were imposed, we stopped accepting students for practical training and internship.

From 2018 to 2020, KMG Group participated in the Zhas Orken programme for young talent rotation aimed at providing development opportunities to talented youth in Kazakhstan. Some 15 project participants took apprenticeship at KMG Group companies under the Zhas Orken programme in 2020. Following the apprenticeship, we hired two graduates of the Zhas Orken programme.

To help talented youth improve their skills in digital technologies and digitalisation, the Digital Summer programme was launched in 2018. Its mission is to involve young talents in digitalisation projects.

About 10 participants in our Digital Summer programme were offered summer intern positions across KMG Group, and four interns were subsequently hired.

Training and professional development programmes

Due to the 2020 pandemic employee training and development at KMG Group was switched to a remote and online formats as much as possible.

In 2020, mandatory HSE training for white-collar employees was fully conducted online and training at structural units in charge of production facilities was provided in the form of webinars and online sessions.

At the same time, throughout 2020, we paid special attention to enhancing technical competencies of employees working both at KMG's Corporate Centre and at the Group subsidiaries and associates.

In 2020, we completed the Reservoir Engineer technical competency development programme launched in 2019. In particular six training modules were implemented for 24 managers and chief specialists of field development departments five projects were developed to address urgent tasks at production companies.

To maintain and develop professional competencies and creative potential of specialists in geology, KMG launched the Chief Geologist programme in cooperation with KMG Engineering LLP. The programme covered 24 specialists of the Geology Unit across 24 subsidiaries and associates of KMG Group. The programme also envisages developing projects to address relevant tasks.

The Professional Foreman programme is a result of active cooperation between KMG and PJSC Tatneft (Tatneft) in personnel development. This training programme is aimed at improving the expertise of JSC OzenMunaiGas employees in production technology and repair of wells, occupational safety, economics, lean production, as well as developing personal and business competencies and management skills. Given the challenges of the new era and the importance of digitalisation, a training course in Digitalisation and Artificial Intelligence was included in the programme. The programme involves qualified expert trainers from Tatneft Personnel Training Center and KMG Engineering.

Outplacement – a plan to help departing employees find a new job or transition to a new career

In 2020, KMG's Board of Directors approved a new organisational structure and total headcount of KMG headquarters staff.

The updated organisational structure was aligned with KMG's anti-crisis strategy and implied a 34% reduction of the Company's headquarters staff.

In view of these changes in KMG's organisational structure, we adopted initiatives to mitigate the impact of negative factors on KMG's reputation as a socially responsible employer, including the outplacement plan aimed at helping departing employees find a new job or transition to a new career.

The outplacement plan envisages a set of measures taken by the employer when dismissing employees to help former employees overcome the crisis period as easily and quickly as possible, and find a new job promptly.

As part of the outplacement plan, HR specialists communicated personally with each departing employee.

The core part of the outplacement plan comprises two stages.

Stage 1: employee engagement – searching for new opportunities via:
- webinars with each differentiated group of employees to help restore their psycho-emotional balance
- The Power Within Us individual sessions with a psychologist
- individual coaching sessions.

Stage 2: support of departing employees and development of individual promotion strategies:
- analysing the labour market in Kazakhstan, preparing a map of professions and competencies currently in demand (an atlas of professions and relevant competencies)
- webinars with each differentiated group of employees to present opportunities and risks in the labour market
- recruitment support. Registering/posting employees' CVs on career websites, at recruitment agencies and/or directly on employers' websites.

The plan was implemented online and covered 161 departing employees. 93% of departing employees are satisfied with the outplacement plan; 30% of employees found jobs with other organisations after the launch of the project, and also changed their careers and started their own businesses.

Social stability

KMG Group is engaged in a comprehensive effort to ensure social stability at its enterprises and subsequently establish a constructive dialogue with employee representatives and prevent protests.

A unified social policy is implemented through various mechanisms, including scheduled activities to improve social stability in subsidiaries and associates, compile a Social Stability Index, leverage internal communications, engage with contractors, promote social responsibility, etc.

To maintain social stability at our enterprises, we are implementing the 2020–2021 Action Plan to enhance social stability at subsidiaries and associates of JSC NC KazMunayGas.

The Action Plan is developed based on the Social Stability Index[1] compiled by the Social Partnership Centre at JSC Samruk-Kazyna for all major KMG subsidiaries and associates.

In KMG joint ventures, the Center for Social Interaction and Communication conducts social research on the following indicators:
- involvement index;
- social well-being index;
- social tranquility index.

The integration of these three components allows you to see the big picture in the KMG Group. The results of the sociological survey for 2020 showed a cumulative increase in indicators for all three components.

According to the research results, the overall indicator of KMG's social stability for 2020 was 86%, which is one of the highest indicators.

The index of involvement of production personnel of the KMG group of companies increased by 32 points and amounted to 88% (in 2019 - 56%), thereby reaching the highest level for 2013-2020 and is located in a favorable scale of values.

The social well-being index in KMG in the reporting year amounted to 74%, thus corresponding to a stable level. According to the data, 93% of respondents are optimistic about the future. The majority of workers (93%) feel comfortable in the community they live in, and 65% noted that the level of monthly wages is sufficient to support their families.

The indicator of social tranquility in KMG is assessed as favorable and amounts to 89% (in 2019 - 59%). The majority of respondents did not have any tension in relations between employees and management (88%).

1. Social Stability Index is a sociological survey that reveals employees' mood, their social harmony, and the level of protest sentiment. In addition, the Index helps identify matters of concern for employees of individual enterprises.

Unified internal communications system

KMG Group has in place the Regulations on the Unified System of Internal Communications between Employers and Employees Subsidiaries and Associates of JSC NC KazMunayGas.

The objectives of the internal communications system are to create and maintain effective mechanisms enabling direct communication between employers and employees at subsidiaries and associates, timely inform employees about the goals and objectives of activities carried out at subsidiaries and associates, communicate the current situation in the organisation to employees, and monitor the social and psychological climate among employees of subsidiaries and associates.

The principal internal communication tools are:
- planned reporting meetings between the chief executive officer and employees (held twice a year)
- ad-hoc meetings between management and trade unions/employees to discuss urgent issues requiring immediate decisions
- corporate information website and newspaper
- a screen for video announcements; a box for employees' proposals
- teambuilding: professional skills competitions, sporting events, corporate parties, etc.

The Regulations enable any employee to ask questions and receive a timely response.

Social support for employees

Social support for employees of KMG subsidiaries and associates is set out in their collective bargaining agreements and the Rules for Rendering Social Support. To unify the types and standards of social support across all KMG Group enterprises, the Standard Rules for Rendering Social Support to Employees of KMG Subsidiaries and Associates were adopted.

In accordance with all collective bargaining agreements in place at KMG Group, 35 types of social support are provided, and an important share of the benefits package offered across KMG Group includes financial assistance on health improvement for annual leaves and voluntary health insurance for employees and their families.

Currently, the terms and conditions of collective bargaining agreements are fully complied with across all KMG enterprises, independent of their financial and economic situation.

Over 2020, KMG Group companies spent approximately KZT 21 bln on social support for their employees, including social support for unemployed retirees.

Indicator	Share, %
Health insurance for employees and their families	28
Financial assistance related to the birth of children / pregnancy and childbirth / parental leave / payment for preschool institutions / education of employees' children / purchase of school supplies by school	25
Material assistance to pay for medical treatment / surgery when the cost of treatment / surgery exceeds the limit established by the voluntary medical insurance program / internationalist soldiers (Afghans) / participants in the liquidation of the Chernobyl accident / temporary disability benefit based on preferential conditions	14
Material assistance to retirees	12
Recreation / improvement of employees' housing conditions	8
Financial assistance to large families and low-income families / workers in special need / disabled people, workers with a spouse, children with disabilities from childhood (1st, 2nd and 3rd groups) in connection with the death of an employee / employee's family members / for organizing a funeral / due to general disability, disability	6
Other types of social support	7

Regulations on Interactions between SACs and Contractors

To ensure compliance with the guarantees concerning employment relations provided to contractor employees, we have adopted the Regulations on Interactions between SACs and Contractors Working on the Sites of JSC NC KazMunayGas.

An online meeting was held with the management of SACs and contractors to explain the main provisions and objectives of the Regulations. Relevant efforts are currently being initiates at subsidiaries and associates, including weekly monitoring of the number of employees and social tensions in contractor and subcontractor entities with a headcount exceeding 50 people, that operate on the sites of subsidiaries and associates.

Company-wide events

Corporate events such as a corporate sports competition and the Uzdyk Maman professional skills competition are held annually at KMG Group. In addition to promoting a healthy lifestyle and enhancing professional skills, these events act as teambuilding tools for employees within KMG Group.

Corporate parties are held on a regular basis featuring concert performances by employees of subsidiaries.

However, no mass events were held during the COVID-19 pandemic.

Development of operating regions

As a subsoil user, KMG contributes to the development of its operating regions and maintains an ongoing dialogue with key stakeholders.

To promote regional development, we actively cooperate with local authorities by signing memoranda and master agreements on cooperation on socio-economic development and gas infrastructure expansion in regions, i.e., subsoil use contracts imply that KMG enterprises allocate funds to the development of operating regions and provide social assistance to needy groups of local residents. Companies transfer funds to local executive bodies for subsequent distribution based on the needs of local communities.

In 2020, social investments under subsoil use contracts across KMG Group exceeded KZT 4.5 bln.

Charity and sponsorship

According to the Charity Policy of JSC Samruk-Kazyna, all charitable programmes on behalf of Samruk-Kazyna Group are run by Samruk-Kazyna Trust Social Development Foundation. Charitable programmes are focused on assisting people and communities in the social and medical sectors; developing media, cultural community and human resources; enhancing labor relations and inter-ethnic relations; investing in sustainable development of the society; and supporting regional business initiatives.

Samruk-Kazyna Trust Social Development Foundation runs charitable projects and programmes aimed at addressing issues that have social significance for the population on behalf of all Samruk-Kazyna Group companies including KMG.

At the same time, KMG subsidiaries could not stay away from pandemic-driven challenges in 2020: they sponsored the national healthcare system and local executive bodies and spent about KZT 6.2 bln to purchase medical equipment and other goods needed to combat COVID-19.

SUPPLIER RELATIONS

EFFICIENT PROCUREMENT SYSTEM

Ensuring efficient procurement while striving to comply with sustainability principles is an integral part of KMG's activities, which contributes to the achievement of strategic and operational goals.

The key principles of KMG Group's procurement activities include legal compliance and compliance with internal requirements, transparency of procurement procedures, promotion of fair competition, and provision of equal opportunities for counterparties. At the same time, KMG implements a number of initiatives in procurement to support domestic manufacturers as part of the Program to Assist the New Production Sites Creation.

Procurement management at KMG companies is based on three documents.

- Procedure for carrying out procurements by joint-stock company sovereign wealth fund Samruk-Kazyna and companies where JSC Samruk-Kazyna directly or indirectly holds fifty or more percent of voting stock (equity stake) on the right of ownership or trust management, approved by Resolution of the Fund's Board of Directors No. 161 dated 3 July 2019 (the "Procedure"). The Procedure sets out the key principles of, and approaches to, procurement, the general procurement management procedure, procurement management competence of the Fund and the Fund's Operator for Procurement, main requirements for procurement processes, the definition of applicable procurement methods, grounds for the application of single source procurement, a tender by carrying out competitive negotiations, and intra-group cooperation.
- The standard of procurement management at joint-stock company sovereign wealth fund Samruk-Kazyna and companies where JSC Samruk-Kazyna directly or indirectly holds fifty or more percent of voting stock (equity stake) on the right of ownership or trust management (the "standard"), approved by resolution of the fund's management board no. 31/19 Dated 9 september 2019. The Standard of procurement management details procurement processes related to procurement category management, procurement planning, supplier selection and management, management of supply contracts and stocks of inventories .
- Procurement management rules in place at JSC NC KazMunayGas and companies where JSC NC KazMunayGas directly or indirectly holds fifty or more percent of voting stock (equity stake) on the right of ownership or trust management (the "Rules"), developed and approved in line with Paragraph 4 of Article 4 of the Procedure applicable to the Fund's first level subsidiaries and companies where the Fund subsidiaries directly or indirectly hold 50% or more (resolution of KMG's Management Board No. 11 dated 26 March 2020). The Rules are aimed at detailing procurement activities and defining stakeholders' area of responsibility, integrating procurement and related processes to maximise the economic effect and cross-functional interaction, as well as defining timelines for business processes.

As from 1 January 2020, a new procurement model developed by Sovereign Wealth Fund Samruk-Kazyna Joint-Stock Company (the "Fund", "JSC Samruk-Kazyna") in accordance with Paragraph 2 of Article 19 of the Law of the Republic of Kazakhstan No. 550-IV On the Sovereign Wealth Fund dated 1 February 2012, and aimed at implementating a set of initiatives to improve procurement efficiency and transparency.

To maintain and enhance transparency and efficiency in line with the most advanced international procurement standards and technologies, KMG Group uses the E-Procurement IT System portal (the "E-Procurement IT System") providing unhindered access (with certain exceptions, primarily related to state secrets) to procurement information to all stakeholders and ensuring equal opportunities for all participants in the procurement process.

The E-Procurement IT System enables automation and standardisation of all procedures within the procurement cycle (from planning to contract management) to cut the time needed to perform relevant tasks and reduce human factor. E-procurement facilitates market access and thus contributes to improved efficiency, increased competition and reduced administrative burden and operating expenses.

In addition to the public dissemination of information on procurement procedures and procurement contracts, including details of invitations to bid and the terms and conditions of contracts, the E-Procurement IT System envisages advance establishment of requirements for participation in competitive procurement, including selection criteria, bidding rules and publication thereof while ensuring an efficient internal control system, including challenging the results of procurement in case of non-compliance with the rules or procedures established by regulations.

TOTAL PROCUREMENT VOLUME

In the reporting period, the total cost of goods, works and services supplied under executed contracts (including annual and long-term procurement) amounted to KZT 1,826 bln, with 82% accounted for by local content.

The total amount of purchases decreased by 14% year-on-year due to the sharp fall in oil prices in early 2020, which further reduced the budgets of KMG production subsidiaries. At the same time, the current situation induced by the COVID-19 pandemic has extended many contracts to 2021.

The respective responsibility of managers of KMG and its subsidiaries and associates is defined, including through the establishment of a target indicator in the KPI Scorecard for managers.

Competitive procurement is carried out by open tender, request for quotations, and competitive negotiations.

In 2020, the share of competitive procurement under signed contracts within KMG Group's annual procurement plan was KZT 420 bln. At the same time, the share of competitive procurement has increased by more than 46% over the past three years, which demonstrates KMG's commitment to fair competition and sustainable development goals.

Despite our commitment to developing a competitive market, the share of non-competitive procurement carried out within the framework of intra-group cooperation and/or procurement from a single source prevails significantly.

Supplied goods, works and services, KZT bln

Year	Goods		Works and services		Total	
	Total amount	Share of local content, %	Total amount	Share of local content, %	Total amount	Share of local content, %
2018	824	77	1,604	80	2,428	79
2019	473[1]	63[1]	1,659	83	2,132	81
2020	**472**[1]	**71**[1]	**1,354**	**86**	**1,826**	**82**

Competitive procurement, KZT bln[2]

Year	Goods		Works and services		Total	
	Total amount	Share, %	Total amount	Share, %	Total amount	Share, %
2018	137	7	375	19	511	26
2019	169	12	326	23	495	36
2020	**168**	**15**	**252**	**23**	**420**	**38**

1. Excluding oil and gas.
2. Competitive procurement comprises procurement carried out by open tender, request for quotations, and competitive negotiations.

Pre-qualification of potential suppliers

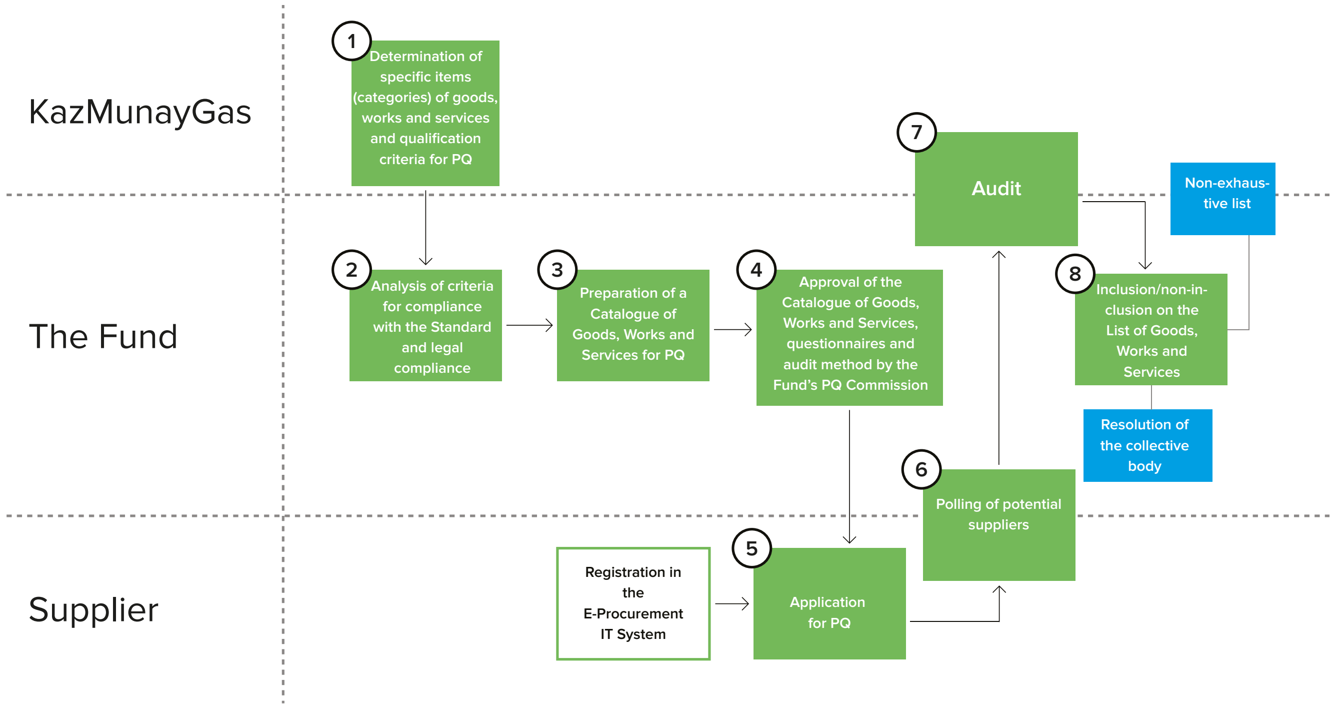
Global procurement practice demonstrates the extensive development of a mechanism for pre-qualification of potential suppliers. Continuous improvement in procurement, taking into account the requirements and standards applicable in Kazakhstani and international practices, is one of KMG's priorities.

Prequalification (PQ) is the process of evaluating potential suppliers for compliance with the qualification requirements defined in accordance with the Standard. PQ is carried out through questionnaires and audits.

The key objectives of PQ are to:

1. set up a simple, transparent and effective process for evaluating suppliers according to established qualification criteria
2. support local manufacturers
3. improve the quality of procured goods, works and services
4. speed up and simplify procurement procedures.

PQ procedure[2]



1. The Standard of Procurement Management at Joint-Stock Company Sovereign Wealth Fund Samruk-Kazyna and Companies Where JSC Samruk-Kazyna Directly or Indirectly Holds Fifty or More Percent of Voting Stock (Equity Stake) on the Right of Ownership or Trust Management, approved by Resolution of the Fund's Management Board No. 31/19 dated 9 September 2019.
2. Formed list of PQ after collecting information from potential suppliers and passing all potential suppliers through the steps of the PQ procedure

Category-based procurement

Procurement category management is the process of developing a comprehensive approach to reducing costs associated with procurement and with the use of goods, works and services included in priority categories.

Categorisation implies combining goods, works and services into procurement categories on the basis of common characteristics of the object of procurement and/or a single market of potential suppliers. Categories may include one or more items of goods, works and services.

Categories characterised by high cost, high criticality, savings potential and manageability are identified as priorities.

Category-based management helps increase the potential for savings through more detailed analysis by developing and approving a category-based procurement strategy. This strategy determines the optimal approach to purchasing goods, works and services, based on maximisation of benefits in the long or short term. Category-based procurement should contain goals and objectives, internal and external environment analysis, approaches to procurement category-based management, requirements for supplier development, calculation of benefits, and an implementation plan.

Category-based management enables significant reduction of the cost of acquisition and use of goods, works and services through strategic planning, detailed analysis of purchased goods and services, and calculations of the total cost of ownership, as well as cross-functional interaction with various business units. This method of procurement is effective in that it provides both quality and a transparent price by engaging reliable manufacturers and suppliers.

Category-based procurement volume and benefits by year, KZT mln

	2017	2018	2019	2020
Category-based procurement volume	231.88	13,948.38	41,531.68	36,986.76
Benefits from category-based procurement	85.07	1,565.01	4,101.81	6,856.57

Procurement category management includes:

- categorisation of goods, works and services to be purchased and identification of priority procurement categories
- development (update) and approval of category-based procurement strategies for priority categories
- implementation of category-based procurement strategies
- monitoring of the implementation of category-based procurement strategies
- supplier development.

In 2020, the volume of category-based procurement amounted to KZT 36,986.76 mln. At the same time, the application of this method allowed to achieve an economic effect in the procurement of goods included in priority categories in the amount of KZT 6,856.57 mln, up 67% year-on-year.

COMMITMENT TO SUSTAINABLE PROCUREMENT

KMG's sustainability principles are reflected in its interactions with counterparties based on legitimacy and transparency, compliance with contract terms, incorruptibility and intolerance of corruption in any form, and selection of counterparties based on a mix of factors: best price, quality and terms, as well as the counterparty's business reputation.

At the same time, KMG, in turn, imposes on its counterparties counter obligations to comply with applicable laws, treat employees fairly, not use child labor, ensure safe working conditions, protect the environment, and adhere to other principles of ethical conduct.

These conditions are included in contracts signed by KMG with its counterparties to guarantee respect of labour rights and create favourable working conditions for citizens of the Republic of Kazakhstan, protect children's rights and ensure environmental safety. KMG believes that these measures will help reduce the number of cases of illegal activities at companies cooperating with KMG.

When procuring goods, KMG also establishes requirements for potential suppliers to provide quality management system certificates.

Import substitution

As a company representing the interests of the government in the oil and gas industry, KMG is actively involved in import substitution efforts as part of the state programme to promote the modernisation of existing and creation of new production facilities through off-take agreements. The programme's primary objective is to support private entrepreneurs who launch new production facilities and undertake technological upgrades to manufacture products in demand by KMG Group.

Off-take agreements imply the implementation of import-substitution projects with a condition precedent stipulating the purchase and delivery of goods that will be manufactured as a result of the project.

In 2020, KMG was the leader among all portfolio companies of the Fund by the number and amount of off-take agreements signed (40 off-take agreements and 2 memoranda for a total of KZT 13.6 bln).

Imported goods in procurement

Year	Total amount, KZT bln	Share of goods supplied without a CT-KZ certificate confirming Kazakhstani origin[2], %
2018	173	21
2019	104	22
2020	94	20

The share of imported goods in procurement was KZT 94 bln, down 9.6% year-on-year.

A list of documents governing the procurement activities of KMG:
1. Procedure for carrying out procurements by joint-stock company sovereign wealth fund Samruk-Kazyna and companies where JSC Samruk-Kazyna directly or indirectly holds fifty or more percent of voting stock (equity stake) on the right of ownership or trust management, approved by the resolution of the Board of Directors of JSC Samruk-Kazyna dated 3 July 2019, Minutes No. 161
2. The standard of procurement management at joint-stock company sovereign wealth fund samruk-kazyna and companies where jsc samruk-kazyna directly or indirectly holds fifty or more percent of voting stock (equity stake) on the right of ownership or trust management, approved by the resolution of the Management Board of JSC Samruk-Kazyna dated 9 September 2019, Minutes No. 31/19
3. Rules for planning and organising procurement of goods, works and services at JSC NC KazMunayGas approved by the resolution of the Management Board of JSC NC KazMunayGas dated 30 July 2020, Minutes No. 31
4. Instruction on the procedure for drawing up and submitting reports on procurement using the IT system that provides for e-procurement and the procedure in case of technical failures, approved by Order of the Chairman of the Management Board of JSC Samruk-Kazyna No. 140-P dated 31 December 2019
5. Rules for procurement via an online shop, approved by the resolution of the Management Board of JSC Samruk-Kazyna dated 21 September 2020 (Minutes No. 34/20)
6. Rules for determining market prices of goods, approved by Order of the Chairman of the Management Board of JSC Samruk-Kazyna No. 140-P dated 31 December 2019
7. Rules for control over procurements by Joint-Stock Company Sovereign Wealth Fund Samruk-Kazyna and companies where JSC Samruk-Kazyna directly or indirectly holds fifty or more percent of voting stock (equity stake) on the right of ownership or trust management, approved by the resolution of the Board of Directors of JSC Samruk-Kazyna dated 23 December 2019, Minutes No. 166
8. Rules for procurement management at Joint-Stock Company National Company KazMunayGas and companies where JSC NC KazMunayGas directly or indirectly holds fifty or more percent of voting stock (equity stake) on the right of ownership or trust management, approved by the resolution of the Management Board of JSC NC KazMunayGas dated 26 March 2020, Minutes No. 11

[1] The share of goods supplied without a certificate confirming Kazakhstani origin is the share of imported goods supplied in the reporting period.

CORPORATE GOVERNANCE

« During the year, we were able to maintain our strong sustainability momentum from previous years and even make significant progress in this area, despite the extremely unfavourable environment. Embedding best practices in corporate governance and sustainability is one of our strategic priorities.

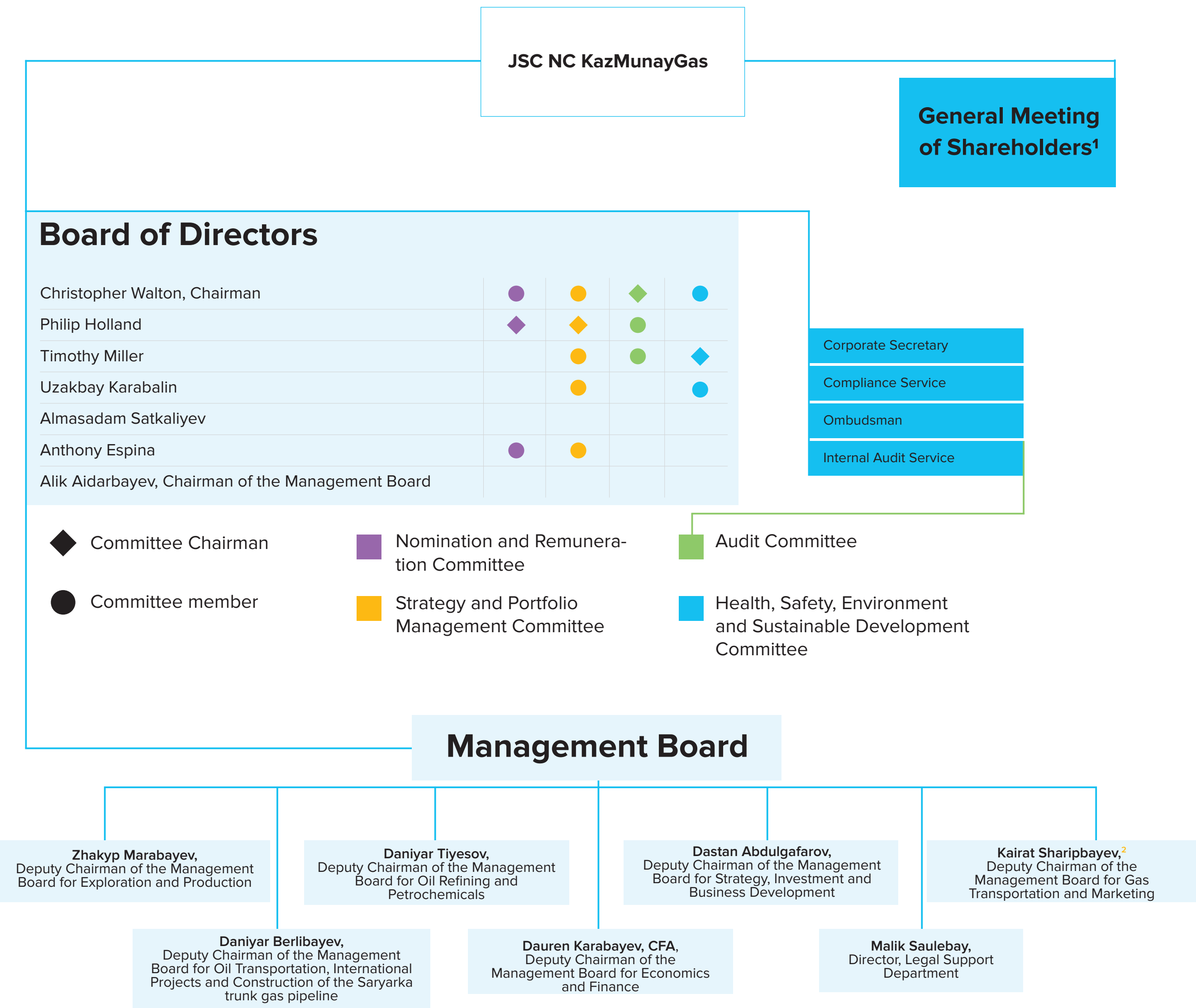
Christopher Walton,
Chairman
of the Board of Directors
of JSC NC KazMunayGas

CORPORATE GOVERNANCE FRAMEWORK

KMG's corporate governance framework represents the totality of processes ensuring management and oversight of KMG's activities and a system of relations between the shareholders (JSC Samruk-Kazyna and the National Bank of Kazakhstan), Board of Directors, Management Board and stakeholders.

The roles of KMG's governing bodies are clearly delineated and set out in the KMG's Charter.

KMG's corporate governance structure



[1] Represented by the Management Board of JSC Samruk-Kazyna.
[2] In April 2021, the powers of Kairat Sharipbayev, a member of KMG's Management Board, were terminated early.

The Company's corporate governance framework comprises:

- Supreme body – General Meeting of Shareholders
- Governing body – the Board of Directors, reporting to the General Meeting of Shareholders
- Executive body – the Management Board, reporting to the Board of Directors
- Internal Audit Service – a centralised body that directly reports to the Board of Directors, controls financial and business operations at the Company and other KMG Group entities, members of the Fund pursuant to the Law of the Republic of Kazakhstan On the Sovereign Welfare Fund ("KMG Group"), appraises internal control and risk management systems, oversees implementation of corporate governance regulations and provides consulting on enhancing KMG's and KMG Group's performance
- Corporate Secretary – a permanent and independent employee who is neither member of the Board of Directors nor member of the Company's executive body, is appointed by, and reports to, KMG's Boards of Directors, and ensures implementation of corporate documents and control over KMG's corporate governance framework within their competence
- Compliance Service – reports to the Board of Directors, whose role is to ensure compliance with mandatory regulations and global best practices in pursuing anti-corruption policies and building corporate culture across KMG Group to foster transparency and integrity among its employees, as well as to create a business environment aligned with global best practices, internal policies, and Kazakhstan's laws
- Ombudsman – an appointee of KMG's Board of Directors, whose role is to advise KMG employees upon request and assist in resolving social and labour disputes, conflicts and issues, as well as to ensure compliance with business ethics principles among KMG employees.

KMG's corporate governance framework is based on respect for the rights and legitimate interests of KMG's shareholders and key stakeholders: the state, KMG's strategic partners and counterparties (suppliers and customers), investors, and employees, as well as municipalities, local communities, and residents in KMG's operating regions.

KMG's corporate governance framework is continuously improved to reflect the evolving requirements and standards of national and international corporate governance practices.

CORPORATE GOVERNANCE DEVELOPMENT REPORT

As a corporate centre that actively engages in operations of subsidiaries and associates through a divisional management structure, building and implementing the development strategy, the Company is committed to best corporate governance practices and recognises high corporate governance standards and transparency as key drivers of investment appeal and operational efficiency, boosting confidence among potential investors, counterparties, and other stakeholders, mitigating the risk of inefficient use of corporate resources and increasing the national wealth and KMG's market value.

The KMG Corporate Governance Code (the "Code"[1]) adopted by decision of the Management Board of JSC Samruk-Kazyna on 27 May 2015 is the core document underpinning KMG's corporate governance framework and efforts to improve it. The Code was developed in accordance with Kazakhstan's laws and JSC Samruk-Kazyna's internal documents and incorporates principles of best Kazakhstan's and global corporate governance practice as well as JSC Samruk-Kazyna's Transformation Programme.

The Code sets out the principles underlying the Company's corporate governance framework. The Board of Directors and the Audit Committee monitor compliance with the Code's regulations at KMG.

According to the Code, the Corporate Secretary annually reviews KMG's compliance with the Code's provisions and principles using the "comply or explain" approach. At present, most of the Code's provisions have been complied with. Isolated instances of partial non-compliance with certain provisions of the Code have been listed in the Corporate Governance Code Compliance Report, along with the reasons for non-compliance. For KMG's 2020 Corporate Governance Code Compliance Report see the Appendix to this Annual Report.

[1] The KMG Corporate Governance Code is available on the Company's website (https://www.kmg.kz/eng/kompaniya/vnutrennie_dokumenty/).

Following an independent review conducted by an independent consultant in 2018 using the review methodology for corporate governance in legal entities in which 50% or more of the voting shares are owned directly or indirectly by the Fund (the "Methodology"), KMG was assigned a "BB" corporate governance rating which shows that the Company's corporate governance framework in all materials respects most of the identified metrics, however, there is insufficient evidence to demonstrate that the framework operates effectively.

Throughout 2019 and 2020, KMG consistently and thoroughly implemented the recommendations presented by the independent consultant following the corporate governance diagnostic and included in the 2019–2020 Detailed Action Plan to Improve Corporate Governance at KMG (the "Corporate Governance Plan"), prepared by the Corporate Secretary in line with the Methodology and approved by KMG's Board of Directors. The Corporate Governance Plan comprises over 500 activities covering various aspects of corporate governance such as the performance of the Board of Directors and the executive body, risk management, internal control and audit, sustainability, shareholder rights and transparency. The Corporate Secretary monitors and regularly prepares progress reports on the implementation of the Corporate Governance Plan and submits them for review by the Audit Committee and the Board of Directors. Following the review of these reports, the Board of Directors provides feedback via the Corporate Secretary to the Chairman of KMG's Management Board and the heads of KMG's functional units involved in the improvement of corporate governance practices. In 2020, the Company successfully implemented a number of initiatives under the Corporate Governance Plan.

Steps to enhance efficiency of the Board of Directors and the Executive Body as well as risk management and sustainability efforts were especially successful. According to preliminary estimates, they should drive the Company's corporate governance rating upgrade to BBB, the target outlined in KMG's Development Strategy which means compliance of the Company's corporate governance framework with all material aspects of the majority of established criteria as well as an evidence to demonstrate that the framework operates effectively. According to the independent consultant, the BBB rating is optimal for the Company to hold an IPO.

In addition, the Fund's and KMG's Development Strategies until 2028 outline the milestones for the ambitious targets established by the "Corporate Governance Rating" KPI. These efforts demonstrate the increased focus on corporate governance shown by KMG's major shareholder, Board of Directors, Audit Committee and management. The next independent assessment of KMG's corporate governance framework to update its rating is planned for 2021. Following the independent assessment results, the Company will develop a new Corporate Governance Plan to further strengthen its corporate governance framework and achieve the corporate governance rating targets outlined in KMG's Development Strategy until 2028.

In general, the Company's efforts to improve its corporate governance are continuous and cyclic, and the key milestone of the process is assigning a rating and issuing respective improvement recommendations by an independent assessing party.

BOARD OF DIRECTORS

The Board of Directors is responsible for the overall management of KMG's activities. Resolutions of the Board of Directors are adopted in the procedure set forth in the applicable laws and the KMG's Charter. Even though the applicable laws and the KMG's Charter allow the Board of Directors to adopt resolutions as long as a quorum is achieved and a certain majority of votes is cast in favour, KMG endeavours to have the most important resolutions adopted at meetings held in person and to have all Board members take part in the voting. KMG makes every effort to prepare such resolutions through preliminary consultations and to have such issues approved by a qualified majority vote, ensuring that the perspectives of independent directors are taken into account.

In addition, the Board of Directors determines KMG's business priorities and approves its Development Strategy; considers and makes resolutions on potential acquisitions and other significant financial issues, including the terms of bonds and derivatives issued by KMG; approves major and interested party transactions; approves acquisitions and transfers (assignments) of subsoil use rights; approves conclusion of partnership contracts (agreements) with strategic partners for joint implementation of subsoil use projects; approves investment projects funded by KMG or its subsidiaries; controls the effectiveness of corporate governance practices.

The Company's Board of Directors is guided by the Company's Charter, Corporate Governance Code and Regulations on the Board of Directors and follows the annual activity plan and meeting schedule, taking a rational and efficient approach. The Board of Directors can also review matters beyond its activity plan, if necessary.

By decision of the Management Board of JSC Samruk-Kazyna dated 17 August 2020 (Minutes No. 30/20), a new composition of the Board of Directors was elected, with three independent directors out of the total seven

MEMBERSHIP OF THE BOARD OF DIRECTORS

KMG complies with the Code standards requiring that up to 50% of the Board members should be independent directors.

By decision of the Management Board of JSC Samruk-Kazyna dated 17 August 2020 (Minutes No. 30/20), a new composition of the Board of Directors was elected, with three independent directors out of the total seven. The Chairman of the Board of Directors is an independent director.

In 2017, JSC Samruk Kazyna determined KMG's Board of Directors to consist of nine members. However, over time, the membership decreased and at the beginning of 2019, the Board of Directors consisted of seven members. This was followed by the election of two more members to the Board of Directors in 2019. On 28 June 2020, the term of the previous Board expired. On 17 August 2020, JSC Samruk Kazyna determined KMG's Board of Directors to consist of seven members.

At its meeting on 3 September 2020 (Minutes No. 8/2020), KMG's Board of Directors elected new Audit Committee, Nomination and Remuneration Committee, the Strategy and Portfolio Management Committee, Health, Safety, Environment and Sustainable Development Committee, and resolved to eliminate the Finance Committee.

The procedure for nominating and selecting candidates to the Board of Directors is set out in the KMG's Charter and other regulatory documents. Board members are elected by the General Meeting of Shareholders, supported by the Chairman of the Board of Directors and the Nomination and Remuneration Committee chair. The recruitment and hiring process is driven by transparency, impartiality, and meritocracy.

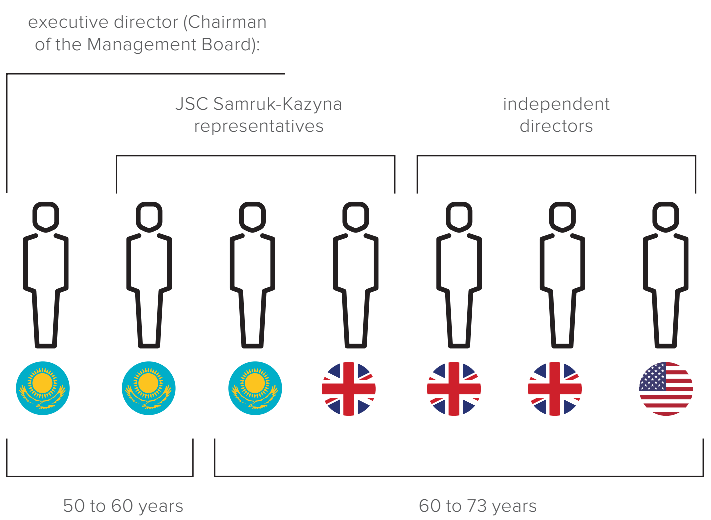
Members of the Board of Directors are elected from the candidates nominated as representatives of shareholders and other entities. Candidates to the Board of Directors are expected to possess the knowledge, skills and experience required to perform their functions and support the creation of KMG's long-term business value and sustainable growth, as well as to have an impeccable business reputation.

Composition of the Board of Directors as at 31 December 2020

⊙ first term ● second term ■ third term

	2014	2015	2016	2017	2018	2019	2020	Term of office expired
Independent directors								
Christopher Walton, Chairman	⊙	⊙	⊙	●	●	●	■	
Philip Holland							⊙	
Timothy Miller							⊙	
Stephen Whyte				⊙	⊙	⊙	●	✕ June
Philip Dayer					⊙	⊙	⊙	✕ June
Luís Palha						⊙	⊙	✕ June
The Fund representatives								
Uzakbay Karabalin			⊙	⊙	⊙	●	●	
Almasadam Satkaliyev					⊙	⊙	⊙	
Anthony Espina						⊙	⊙	
Baljeet Grewal			⊙	⊙	⊙	●	●	✕ June
Executive director (Chairman of the Management Board)								
Alik Aidarbayev					⊙	⊙	⊙	

THE BOARD HAS SEVEN MEMBERS, INCLUDING



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The Board has seven members, including

~63 YEARS

The average age of Board members is

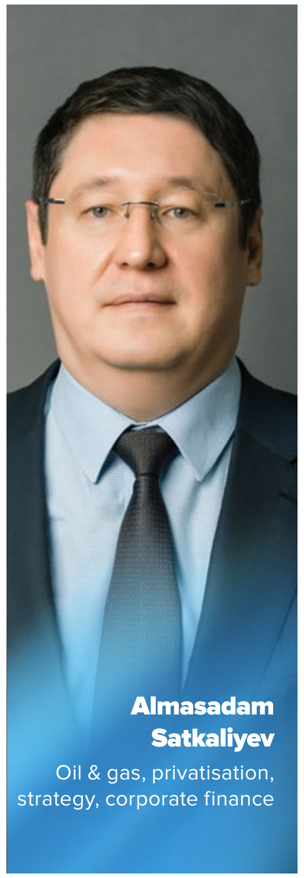
Out of seven Board members, three are Kazakhstan nationals, three are UK nationals, and one is a national of the USA.

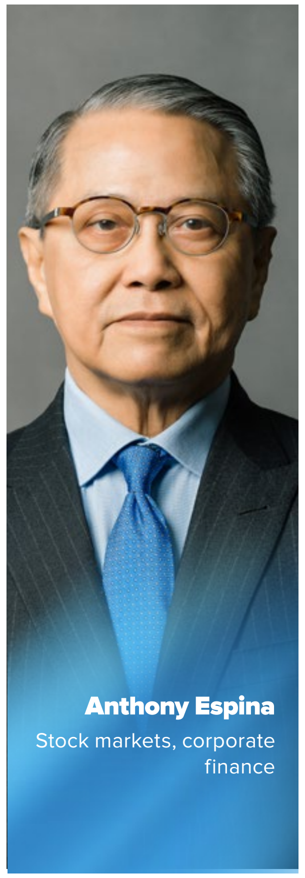
The Chairman of the Board of Directors is elected by the General Meeting of Shareholders.

Independent directors are elected in accordance with the Rules for the formation of the composition of the Board of Directors in the companies of Samruk-Kazyna JSC, approved by the decision of the Management Board of Samruk-Kazyna JSC dated 26 September 2016 No. 35/16.

Members of the Board of Directors are elected for a three-year term. Through a special consideration procedure, a member of the Board of Directors with a six-year continuous tenure may be re-elected for a new term, in each case considering the need for the Board to be effectively refreshed. As an exception, a member of the Board of Directors with a nine-year tenure may be re-elected (for independent directors, a detailed and compelling case needs to be prepared, to be disclosed by the Company to all stakeholders).

BREAKDOWN OF THE BOARD OF DIRECTORS BY EXPERTISE AS OF YE2020





KMG believes that the Board of Directors is well-balanced across all areas in terms of its skills and expertise.

Member of KMG's Board of Directors since 2014

Date of birth:
19 June 1957

Education:
- Bachelor of Arts (BA) in Political Science, the University of Western Australia
- Master of Business Administration (MBA), Finance, the University of Western Australia
- Fellow of the Royal Aeronautical Society
- Fellow of the Institute of Directors

Experience
In addition to his role as Chairman of KMG's Board of Directors, Christopher Walton is Audit Chair of the Submarine Delivery Agency (UK) and a non-executive member of the Royal Navy's National Shipbuilding Strategy Client Board. Pro-bono, Mr Walton is a trustee of the Guild of Freemen of the City of London's Charity.

Prior to that, Christopher Walton was Chairman of the management boards of Asia Resource Minerals plc (a coal mining company), Goldenport Shipmanagement Ltd. (a marine shipping company), and Lothian Buses (a municipal bus company). He also served as Senior Independent Director and Chairman of the Audit Committee of Rockhopper Exploration PLC (an oil and gas exploration company), Chairman of the Audit Committee of JSC NC Kazakhstan Temir Zholy, and a non-executive member of the Audit and Risk Committee at the Department for Culture, Media and Sport of the United Kingdom. In addition, Mr Walton was a member of the Bank of the England's Regional Economic Advisory Panel (SE England & Anglia) from 2002 to 2005.

As CFO of easyJet plc, Christopher Walton successfully conducted the company's IPO. He held other senior positions in finance and commerce in major Australian companies – Qantas, Air New Zealand, Australia Post and Australian Airlines. He served in the Australian Army Reserve.

Christopher Walton is a Fellow of the Institute of Directors and the Royal Aeronautical Society.

Joint appointments:
Guild of Freemen of the City of London – Director (charity)

Guild of Freemen of the City of London's Charity – Trustee

Submarine Delivery Agency (a government department) – Non-Executive Director

National Shipbuilding Strategy, the Client Board – independent member

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

Member of KMG's Board of Directors since 2018

Date of birth:
19 May 1963

Education:
- Oil and Gas Fields Development Technology and Complex Mechanisation, Kazakh Polytechnic Institute named after V. I. Lenin

Experience
Between 1985 and 1995, Alik Aidarbayev worked at Zhetibayneft's Upstream Unit as an operating engineer, at Mangyshlakneft Oil Production Association as Deputy Head of a reservoir pressure maintenance shop, and later at SJSC Yuzhkazneftegas as Head of a reservoir pressure maintenance shop, Head of the Upstream Unit, Deputy CEO and First Vice President.

At different periods, he was CEO of JSC Turgai Petroleum, CEO of JSC Mangistaumunaigaz, Upstream Managing Director at KMG, CEO of JSC KazMunayGas Exploration Production, Akim of the Mangystau Region, First Vice Minister for Investments and Development of the Republic of Kazakhstan, and Deputy Chairman of the Management Board at JSC Samruk-Kazyna.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

Member of KMG's Board of Directors since 2020

Date of birth:
25 December 1954

Education:
- Bachelor of Science in Civil Engineering, University of Leeds (UK)
- Master of Science in Engineering/Construction Management, Cranfield Institute of Technology (UK)

Experience
Philip graduated from the University of Leeds in 1976. After working for some time in the United Kingdom and Saudi Arabia, he joined Bechtel Corporation in 1980 and managed major oil and gas projects in a wide range of international locations. In 2004, he joined Shell as Vice President of projects, Shell Global Solutions. In 2009, Philip became Executive Vice President for Downstream Projects in Shell's newly formed projects and technology business. In 2010, he was appointed as Project Director for the Kashagan Phase 2 project in Kazakhstan and subsequently the Shell/QP Al Karaana petrochemicals project. Since 2013, he has operated as an independent project management consultant.

Philip is the Chairman of the Board of Directors at Velocys plc, and Non-Executive Director and Chairman of the Safety, Climate and Risks Committee at EnQuest PLC.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

Member of KMG's Board of Directors since 2016

Date of birth:
14 October 1947

Education:
- Mining Engineering, the Gubkin Russian State University of Oil and Gas
- Postgraduate programme at the Gubkin Russian State University of Oil and Gas
- Candidate of Technical Sciences
- Doctor of Technical Sciences
- Academician of the National and International Engineering Academies of the Republic of Kazakhstan

Experience
Uzakbay Karabalin held various positions at Kazneftegazorazvedka's administration office (the South Emba oil and gas prospecting expedition), Kazakh Scientific Research Geological Exploration Oil Institute, Prikaspiygeologiya's regional administration office, the Guryev branch of Kazakh Polytechnic Institute named after V. I. Lenin, the Industry Department of the Administration Office of the President and of the Cabinet of Ministers of the Republic of Kazakhstan.

At different periods, he was Head of the Main Oil and Gas Department at the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan, Deputy Minister of Energy and Fuel Resources of the Republic of Kazakhstan, Deputy Minister of Oil and Gas Industry of the Republic of Kazakhstan, First Vice President and Acting President of CJSC NOGC Kazakhoil, President of CJSC KazTransGas, Vice Minister of Energy and Mineral Resources of the Republic of Kazakhstan, President of KMG, CEO of JSC Mangistaumunaigaz, CEO of the Kazakh Institute of Oil and Gas, Minister of Oil and Gas of the Republic of Kazakhstan, and First Deputy Minister of Energy of the Republic of Kazakhstan.

Uzakbay Karabalin was also Chairman of the boards of directors at CJSC KazTransOil, CJSC NC Oil and Gas Transportation, CJSC NC KazMunayGas and JSC KazMunayGas Exploration Production, Chairman of the Coordination Council and Deputy Chairman of KAZENERGY Association, a member of the Supervisory Board at KazRosGas LLP, a member of National Investors' Council under the President of the Republic of Kazakhstan, Chairman of the Board of Directors of the Atyrau University of Oil and Gas, and a member of the Board of Directors (Independent Director) of the Kazakh Institute of Oil and Gas.

Holds 9,655 ordinary shares in JSC KazTransOil.

Member of KMG's Board of Directors since 2018

Date of birth:
31 October 1970

Education:
- Stanford Executive Programme (SEP) and Stanford Graduate School of Business, Stanford University (US)
- Executive MBA and Graduate School of Business (a joint programme with Duke University's Fuqua School of Business), Nazarbayev University (Kazakhstan)
- Master of Economics, the Russian Presidential Academy of National Economy and Public Administration (Russia)
- The Finance Economics programme (specialisation: Economics), Department of Public Sector Economy and Finance, the Institute of Public Administration and Civil Service of the Russian Presidential Academy of National Economy and Public Administration (Russia)
- Mechanics and Applied Mathematics, Al-Farabi Kazakh National University

Experience
Almasadam Satkaliyev served as CEO of TaSSaT LLP, a manager and Head of the Clearance Department at CJSC NCOT KazTransOil, Vice President of Economics and Managing Director at the Nur-Sultan Representative Office, Head of the Project Management Department at JSC NCOT KazTransOil, CFO and Vice President of Economics at JSC Kazakhstan Electricity Grid Operating Company (KEGOC).

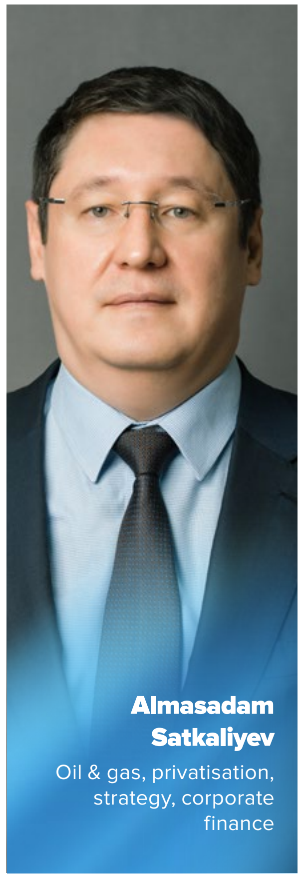
At different periods, he was First Vice President of JSC Kazakhstan Electricity Grid Operating Company (KEGOC), Director – Head of KEGOC Group, Director for Power Generation Asset Management at JSC Kazakhstan Holding for the Management of State Assets Samruk, Vice Minister of Energy and Mineral Resources of the Republic of Kazakhstan, Chairman of the Management Board, First Vice President and President of KEGOC, Managing Director at JSC Samruk-Kazyna, Chairman of the Management Board of JSC Samruk-Energy, Deputy Chairman of the Kazakhstan Association of Oil-Gas and Energy Sector Organisations KAZENERGY, and Head of the Asset Management Department at JSC Samruk-Kazyna.

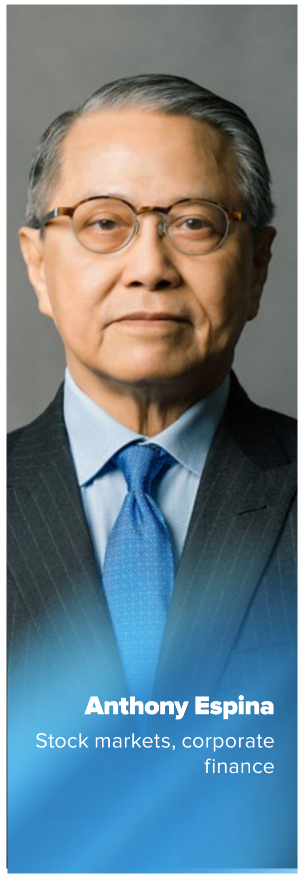
Almasadam Satkaliyev also acted as a member of the boards of directors at JSC NC Kazakhstan Temir Zholy, NAC «Kazatomprom» JSC, and Kazakhstan Electricity Association, Chairman of the Board of Directors of JSC KEGOC, Chairman of the Kazakhstan National Committee at the World Energy Council (WEC), a member of the Board and Chairman of the Coordination Council for Energy Development at KAZENERGY Association, Chairman of the Energy Committee and a member of the Presidium of the National Chamber of Entrepreneurs of the Republic of Kazakhstan Atameken, and Chairman of the Committee on Power and Electrical Engineering at Association of Kazakhstan Machinery Industry.

On 29 March 2021, he was appointed Chairman of the Management Board of Sovereign Wealth Fund Samruk-Kazyna JSC.

He earned the honorary title of the Honorary Power Engineer of the CIS from Kazakhstan Electricity Association for his work in the energy industry.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.





Member of KMG's Board of Directors since 2019

Date of birth:
27 June 1948

Education:
- Bachelor of Business, University of Southern Queensland
- Executive Master of Digital Transformation and Innovation Leadership

Experience:
He started his career as a computer programmer in Australia in 1969. In 1971, he returned to Hong Kong and worked as a computer systems analyst developing business applications for the largest shipbuilder. In 1973, he joined Arthur Andersen & Co. as an auditor and was promoted to partner in 1982. His clients included large banks, insurance companies, fund management companies and the Hong Kong Government. During this time, in addition to assisting international banks in the development of IT strategic plans and implementation of banking systems, he also developed the housing database for the Hong Kong Housing Authority, which housed over 3 million people of the Hong Kong population (7.5 million). President of the Hong Kong Computer Society in 1977.

In 1986, he joined Deloitte as a partner in charge of consulting. During his time with Deloitte, he was seconded to the Hong Kong Government and developed the central clearing and settlement system for the Stock Exchange of Hong Kong.

In 1991, he founded his own securities dealing and investment advisory business. In 2005, he was Chairman of the Hong Kong Securities Association and is currently its Permanent Honorary President. In 2012, he advised on the purchase of ATFBank, one of the Top 10 banks in Kazakhstan, and in May 2013, he was appointed as CEO and Chairman of the Management Board of ATFBank. In April 2019, he resigned from the position of Chairman of the Management Board. He was also an Independent Non-Executive Director at the Unified Accumulative Pension Fund (UAPF), the central provident fund of Kazakhstan from July 2014 to May 2017.

He is a Fellow Member of the Hong Kong Institute of Certified Public Accountants, Associate Member of CPA Australia and a Fellow Member of the Hong Kong Institute of Directors.

Joint appointments and membership in other boards of directors:
- Independent Non-Executive Director at Amber Hill Financial Holdings Limited, Target Insurance (Holdings) Limited (listed in the Stock Exchange of Hong Kong)

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

Member of KMG's Board of Directors since 2020

Date of birth:
13 November 1959

Education:
- Bachelor of Science, Mechanical Engineering, Texas Tech University, Lubbock, Texas (US)

Experience:
From 2000, Timothy Miller was Assistant to the President at Saudi Arabian Texaco, Inc. (Neutral Zone, Kuwait), Texaco Exploration and Production. Between 2003 and 2010, he held various positions at Chevron Corporation: Management Sponsor (San Ramon, California, US), Brazil Country Manager (Rio de Janeiro, Brazil), Senior Vice President of East Kalimantan (Balikpapan, Indonesia).

In 2010, he was appointed CEO of Tengizchevroil LLP (Atyrau, Kazakhstan) and served in this position for five years. In 2015, he returned to Chevron as Eurasia Business Unite Managing Director (Almaty, Kazakhstan). In 2018, after leaving Chevron, he became Eurasia Business Unit Advisor to the Operating Company President at Chevron Corporation (Frisco, Texas, US).

From May 2019 to date, he is Executive Director for the Republic of Kazakhstan and Senior Advisor for Global Operations at Integrated Global Services (IGS) (Richmond, Virginia, US).

Other businesses/positions:
- Board Member at the American Chamber of Commerce in Kazakhstan (2010–2018)
- Board Member at ValvTechnologies, Inc. (Houston, Texas) from 2019, Board Member at Joint Venture PSI-Clough (Almaty, Kazakhstan) from 2020
- Visiting lecturer at a master class on a career in the oil and gas industry as part of KAZENERGY, at the Graduate School of Business at Nazarbayev University, at Narxoz University, at the Mays Business School, Texas A&M University, and at the Kazakh-British Technical University at different periods

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

BOARD ACTIVITIES DURING 2020

Committee meetings:

- The Strategy and Portfolio Management Committee (SPMC): 5 individual meetings, 84 issues
- The Nomination and Remuneration Committee (NRC): 12 individual meetings, 88 issues
- The Audit Committee (AC): 9 individual meetings, 108 issues
- The Health, Safety, Environment and Sustainable Development Committee (HSE&SD): 4 individual meetings, 40 issues
- The Finance Committee (FC): 3 individual meetings, 23 issues

In 2020, the Board of Directors placed particular focus on updating the Company's Development Strategy, ensuring its financial stability, overseeing investment project management and sustainability issues, improving corporate governance, internal audit and risk management, developing management KPIs, and driving digital transformation as well as safety and well-being of employees.

The Board of Directors had in 2020

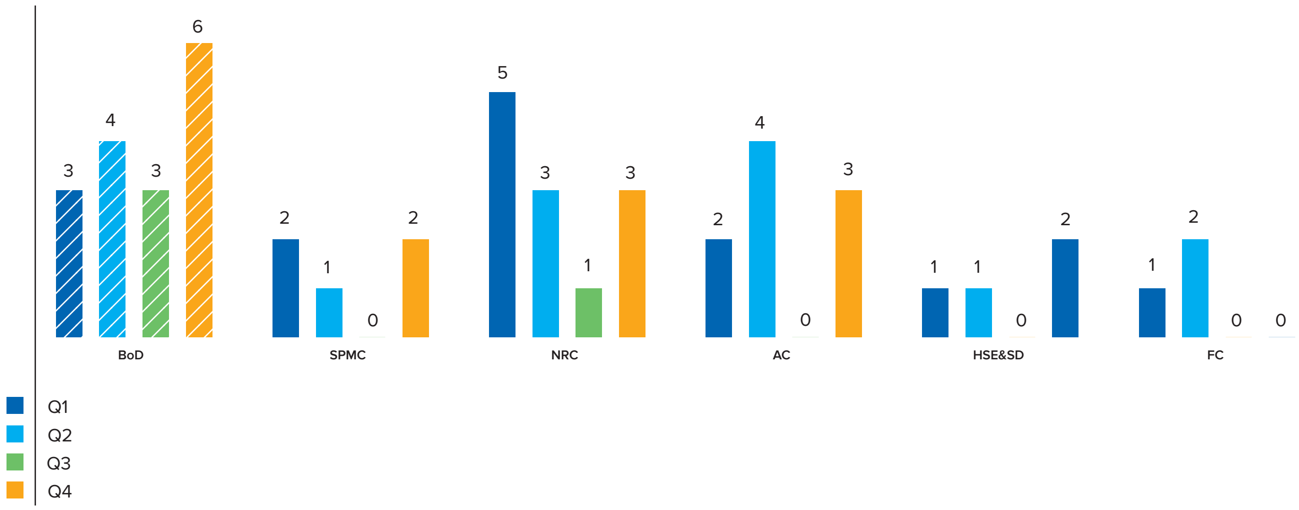
16 MEETINGS

,

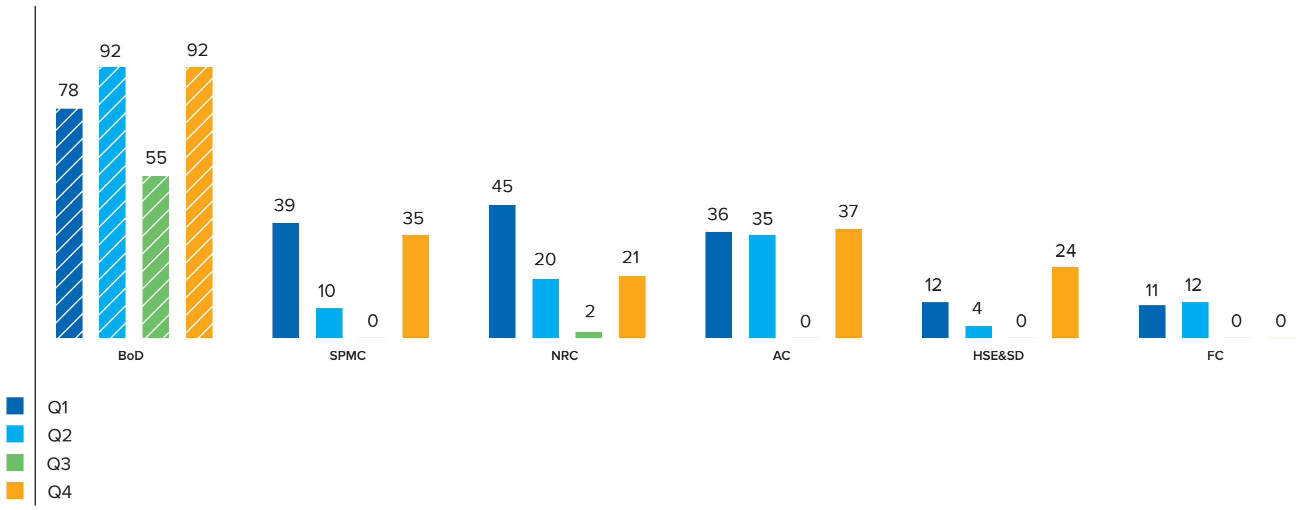
reviewing

317 ISSUES

NUMBER OF MEETINGS



NUMBER OF ISSUES REVIEWED



Issues reviewed by the Board of Directors in 2020, by category:

Reports	Strategic issues	Corporate governance issues	Transaction issues
• Report by the Chairman of KMG's Management Board on key changes in the KMG's operations • Information on KMG's HSE activities • Information on COVID-19 • Updates on KMG's interim financial and operating results • Information on the status of implementation of KMG Group's investment projects • Report on the implementation of KMG's Development Strategy until 2028 • Reports by Board Committee chairs • Information on the current status of KMG's preparations for an IPO • Report on calls and e-mails via Deloitte's hotline • Report on interested-party transactions entered into by resolution of KMG's Management Board • Quarterly risk report • Follow-up report on resolutions/instructions of the Board of Directors	• Approval of the updated Consolidated Development Plan of KMG for 2020–2024 • Development of KMG's crisis response • Approval of KMG's corporate KPIs and their target values • Approval of the organisational structure of KMG's headquarters • Issues related to the implementation of investment projects • Approval of the return of contracted territories or parts thereof to the government in a due manner • Approval of motivational KPI scorecards for KMG managers and KPI targets • Signing of oil procurement agreements and oil products sale and purchase agreements by KMG	• Results of performance self-evaluation of the Board of Directors of JSC NC KazMunayGas in 2019 • Approval of the Board of Directors' and Committees' activity plan, the schedule of meeting of the Board of Directors and its Committees • Making changes to the membership of Board Committees • Approval of regular Progress Reports on the implementation of the 2019–2020 Detailed Action Plan to Improve Corporate Governance at JSC NC KazMunayGas • Approval of amendments and additions to the 2019–2020 Detailed Action Plan to Improve Corporate Governance at JSC NC KazMunayGas • Shareholder queries regarding the Company's and its officers' actions in 2019 and corresponding responses • Approval of KMG's 2019 Annual Report • Approval of KMG's 2019 Sustainability Report	• Approval of interested-party transactions • Approval of major transactions
Issues related to subsidiaries and associates	**Approval of internal regulations**	**HR and compensation**	**Issues related to divisions of the Board of Directors**
• Election and termination of powers of managers, members of supervisory boards of subsidiaries and associates • Amending articles of association of subsidiaries and associates • Approval of subsidiaries' and associates' corporate KPIs • Acquisition and disposal of stakes in subsidiaries and associates	• Approval and cancellation of KMG's internal regulations	• Approval of KMG's headcount • Early termination of powers and election of members of KMG's Management Board; determining the salaries payable to members of KMG's Management Board, their working conditions, applicable bonuses and social support • Progress on KMG's HR Policy 2018–2028 • Determining the remunerations payable to KMG managers at end-2019	• Report by the Corporate Secretary Office, Compliance Service, Internal Audit Service and the Ombudsman • Approval of Activity Plans of the Compliance Service, Internal Audit Service and the Ombudsman • HR issues related to the Corporate Secretary Office, Internal Audit Service, Compliance Service and the Ombudsman • Approval of the Strategy of KMG's Internal Audit Service

STRATEGIC SESSION 2020

On 20 November 2020, a strategic session (a special meeting of the Board of Directors to discuss the Development Strategy) was held to review the implementation of KMG's Development Strategy until 2028, approved in 2018, taking into account changes in the external environment and crisis response. There was a positive discussion of the most pressing issues between members of KMG's Board of Directors and the Management Board. In particular, the discussion touched upon the current version of KMG's Development Strategy, the existing supply chain, improving performance and transforming KMG's operations and asset portfolio, possible business diversification, and KMG's long-term sustainable development.

FOLLOW-UP ON KMG'S KEY ISSUES

To oversee the implementation of KMG's strategic initiatives and ensure timely corrective actions, KMG's Board of Directors requires the Chairman of KMG's Management Board to report regularly on key changes in the Group's operations and give other updates on HSE issues, interim financial and operating results, interested-party transactions approved by the Management Board, progress on implementation of the Group's strategy, KPIs achievement, investment projects implementation, as well as follow-up reports on KMG's consolidated Development Plan, risk reports, reports from the Board Committee chairs, follow-up reports on resolutions of the Board of Directors, and performance reports submitted by functions reporting to the Board of Directors.

At every meeting, the Board of Directors' Strategy and Portfolio Management Committee considers and discusses progress reports on major oil and gas projects (Kashagan, Karachaganak and Tengiz), as well as on transformation and privatisation programmes.

Chairman of the Board of Directors and his role

Chairman of the Board of Directors is responsible for providing overall leadership for the Board of Directors, ensuring that the Board of Directors fully and effectively fulfils its main roles and builds a constructive dialogue between Board members, major shareholders and the Management Board. Chairman of the Board of Directors is an independent director.

Independent directors and their role

Independent directors meet all statutory independence criteria, as well as the Rules for the formation of the composition of the Board of Directors of Samruk-Kazyna JSC and the Code.

In line with global best practices, the Company seeks to ensure that its independent directors meet high standards, and hereby declares that there are no other circumstances which are likely to impair, or could appear to impair, its directors' independence. Independent directors play a significant part in the activities of the Board of Directors – they represent the majority of Board Committee members and chair the Committees.

Actual attendance by Board members at Board and Committee meetings in 2020

Member of the Board of Directors	Board and Committee meetings in 2020[1]					
	Board of Directors	Audit Committee	Nomination and Remuneration Committee	Strategy and Portfolio Management Committee	Finance Committee	Health, Safety, Environment and Sustainable Development Committee
Christopher Walton	16/16	3/3	12/12	5/5	3/3	4/4
Stephen Whyte[2]	7/7	6/6	8/8	3/3	3/3	2/2
Philip Dayer[2]	7/7	6/6	8/8	3/3	3/3	2/2
Luís Palha [2]	7/7	6/6	8/8	3/3	3/3	2/2
Baljeet Grewal[2]	7/7	–	–	3/3	3/3	–
Uzakbay Karabalin	16/16	–	8/8	5/5	–	4/4
Almasadam Satkaliyev	16/16	–	–	–	–	–
Anthony Espina	16/16	–	12/12	5/5	3/3	–
Alik Aidarbayev	16/16	–	–	–	–	–
Philip Holland[3]	9/9	3/3	4/4	2/2	–	–
Timothy Miller[3]	9/9	3/3	–	2/2	–	2/2

1. The first figure shows the number of meetings attended by a member of the Board of Directors, and the second figure is the total number of meetings they were entitled to attend
2. Stepped down from KMG's Board of Directors on 28 June 2020
3. Elected to KMG's Board of Directors on 17 August 2020

Succession planning for the Board of Directors, induction and development

The Company has developed the Succession Policy and Succession Plan for Members of KMG's Board of Directors. A meeting of the Nomination and Remuneration Committee has resolved to review these documents based on the Board of Directors' performance evaluation.

KMG has in place an Induction Programme for new members of its Board of Directors, approved by the Board of Directors in 2017. In June 2020, the Board of Directors resolved to supplement the Programme with the requirement to hold meetings with heads of the Company's functional units, as well as meetings with Board Committee chairs. The Corporate Secretary monitors the Programme implementation, i.e. the actual completion of all relevant procedures by new members of the Board of Directors. During 2020, P.M. Holland and T.G. Miller, new members of the Board of Directors, completed the induction procedure in line with the Programme. As per their request, meetings with heads of the Company's functional units were arranged for them. In addition, Chairman of the Board of Directors C.J. Walton held a conference call with new members of the Board of Directors to discuss the Programme's organisational aspects.

Members of the Board of Directors continuously improve their qualifications and provide information about completed trainings to be posted on the Company's website[1].

PERFORMANCE EVALUATION OF THE BOARD OF DIRECTORS

In accordance with the Code, the Board of Directors, its committees and members of the Board of Directors should be evaluated every year as part of a structured process approved by the Board of Directors. The process needs to be in line with JSC Samruk-Kazyna's relevant methodology. In addition, at least once every three years the performance evaluation process is run with the involvement of an independent professional organisation.

A separate independent evaluation with the involvement of the independent consultant was conducted in 2017 and its results were taken into account when determining the new composition of the Board of Directors. On top of that, in 2018, an independent consultant was involved in conducting an independent diagnostics of KMG's corporate governance based on the Methodology, which included, among other things, performance evaluation of the Board of Directors.

The next independent performance evaluation of the Board of Directors is planned in 2021. In accordance with the Code's requirements, in 2020, members of the Board of Directors conducted a self-evaluation through questionnaires. The self-evaluation questionnaire was developed by the Chairman of the Nomination and Remuneration Committee in cooperation with the Chairman of the Board of Directors. The questionnaire comprised two sections (Composition and Processes, and Behaviour and Actions) and featured 30 questions. The self-evaluation results were previewed by the Nomination and Remuneration Committee before being presented and discussed at a closed meeting of the Board of Directors attended only by members of the Board of Directors and the Corporate Secretary. The discussion included an analysis of the Board members' self-evaluation results and a review of the skills and competencies scored below four points (out of a maximum of five) (the "Areas for Improvement"). Therefore, relevant amendments to the Detailed Action Plan to Improve Corporate Governance at KMG for 2019–2020 (the "Corporate Governance Plan") were developed and approved to enhance the performance of the Board of Directors in the Areas for Improvement.

The meeting of the Nomination and Remuneration Committee held on 8 December 2020 considered the results of the 2020 performance self-evaluation, with the Corporate Secretary presenting information on the progress of the Corporate Governance Plan in 2019.

In Q1 2021, the process of evaluating the performance of the Board of Directors, Board Committees, Board members, and the Corporate Secretary in 2020 by means of self-evaluation was completed, and its results were reviewed at the meeting of the Nomination and Remuneration Committee on 9 February 2021 (Minutes No. 1/2020). With this in mind, the Board of Directors will further discuss improvements to its activities.

1. https://www.kmg.kz/eng/kompaniya/korporativnoe_upravlenie/treningi_chlenov_soveta_direkt/

CORPORATE SECRETARY

The Corporate Secretary's main role is ensuring regular communication between KMG and its shareholders; between shareholders and the Board of Directors, the Internal Audit Service, the Management Board and other bodies within KMG; and between KMG and its key subsidiaries and associates.

The Corporate Secretary's responsibilities include assisting the Board of Directors and shareholders in making timely, high-quality corporate decisions; acting as an adviser to the Board members on any matter related to their roles or the applicability of the Code's provisions, and monitoring the implementation of the Code. The Corporate Secretary is responsible for improving corporate governance practices at KMG. The Corporate Secretary is a Company employee acting independently and reporting to the Board of Directors.

Nationality:
Republic of Kazakhstan

Date of birth:
22 January 1980

Education:
- Al-Farabi Kazakh National University (International Relations Department), majoring in international law
- Russian Presidential Academy of National Economy and Public Administration, MBA programme, majoring in Management
- Certified Corporate Secretary, certified trainer in corporate governance for corporate secretaries, trainer at Samruk-Kazyna Corporate University

Experience
Between 2001 and 2007, he held various jobs working at the Tengiz field in the Atyrau Region. From 2007 to 2012, he worked at JSC Development Bank of Kazakhstan, and from 2012 to 2014, he served in different capacities at KMG and JSC KazTransGas.

Since 5 January 2015, he has been Corporate Secretary at KMG.

On 1 February 2019, Damir Sharipov was elected to the Corporate Secretaries Committee of the National Council for Corporate Governance at the Presidium of the National Chamber of Entrepreneurs of the Republic of Kazakhstan Atameken, and on 16 December 2019, he joined the National Association of Corporate Secretaries (Russia).

COMMITTEES OF THE BOARD OF DIRECTORS

Members of the Board of Directors involved in the activities of Board Committees focus on in-depth review and analysis of interrelated functions, issues and areas. Committee meetings involve invited experts, business leaders, and other stakeholders. Committees make recommendations to the Board of Directors to support its decision making. The Board Committees are made up of non-executive directors, and the majority of members are independent directors. The Committees are chaired by independent directors.

Roles and responsibilities of the Board Committees

Committee	Responsibilities
Strategy and Portfolio Management Committee	The Committee assists the Board of Directors by considering and making recommendations on: ◆ the development strategy and investment policy, including priority areas ◆ improving investment attractiveness ◆ effective financial and business planning at KMG ◆ monitoring KMG's transformation.
Nomination and Remuneration Committee	The Committee assists the Board of Directors by considering and making recommendations on: ◆ succession planning for the Board of Directors and Management Board ◆ conducting ongoing, objective performance evaluations of the Board of Directors, Management Board, Corporate Secretary, and other employees ◆ pursuing effective HR, pay and remuneration policies, and providing professional development and training opportunities for KMG officers and employees.
Audit Committee	The Committee assists the Board of Directors by considering and making recommendations on: ◆ implementing effective controls over KMG's financial and business operations ◆ monitoring the reliability and effectiveness of internal controls and risk management, as well as the implementation of corporate governance regulations ◆ overseeing the external and internal audit functions ◆ reviewing the Company's annual and quarterly financial statements ◆ monitoring KMG's compliance arrangements.
Health, Safety, Environment and Sustainable Development Committee	The Committee assists the Board of Directors by considering and making recommendations on: ◆ ensuring HSE compliance ◆ embedding sustainability in strategic planning and social and economic development at KMG ◆ KMG's social commitments and programmes under subsoil use contracts ◆ monitoring KMG's environmental performance.

NOMINATION AND REMUNERATION COMMITTEE

STATEMENT BY THE CHAIRMAN OF THE NOMINATION AND REMUNERATION COMMITTEE

In accordance with the Regulations on the Nomination and Remuneration Committee, the Committee reviews and prepares recommendations on addressing the social agenda, including social tension across the Company's operating regions, unemployment and social support provided by the Company. In line with the Company's social responsibility and engagement commitments, the Committee discussed the situation in Zhanaozen, employment and proposed solutions.

Among other things, the Committee discussed revision and definition of the Company's corporate values and amendments to KMG's Code of Business Ethics.

A skills and expertise matrix was first designed and approved in 2018 to be completed by members of the Board of Directors to maintain an appropriate balance of skills and expertise on the Board of Directors. In December 2020, the Committee reviewed consolidated information about the matrix, including data completed by new members of the Board of Directors, decided to continue the search for an independent director and prepared qualification requirements and criteria for the search.

In 2020, the Committee focused on pursuing effective HR, pay and remuneration policies, succession planning and providing social support factoring in the pandemic and its impact on KMG's HR policy. The Committee has approved the Rules for Recruiting and Screening Candidates to KMG's CEO-1, under which the Committee has repeatedly made recommendations for appointment to CEO-1 positions. In addition, the Committee also discussed the succession of members of the Company's Board of Directors and Management Board and the overall approach to succession planning within the Company, as well as the impact of the pandemic on the reduction of KMG's headcount. The Committee actively engaged with the Company's management in discussing structural reorganisation, downsizing of the Company's Corporate Centre, compensation and remuneration, as well as mitigation of KMG's reputational risks.

Philip Holland

Chairman of the Nomination and Remuneration Committee,

Independent Director

KEY ISSUES REVIEWED BY THE NOMINATION AND REMUNERATION COMMITTEE IN 2020

- Membership of KMG's Management Board
- Committees of KMG's Board of Directors
- Approval of the organisational and total headcount of KMG headquarters staff
- Approval of motivational KPI scorecards for KMG managers and KPI targets for 2021
- Determining the skills, knowledge and experience required from candidates to KMG's Board of Directors subject to KMG's current needs and long-term development strategy
- Information on the employment situation in Zhanaozen
- Appointment and determination of the term of office of the KMG ombudsman
- Defining the corporate values and amending KMG's Code of Business Ethics
- Approval of the Training Plan and Professional Development Programmes for Members of KMG's Board of Directors for 2020
- Inclusion of social activists on the boards of directors at socially important quasi-public sector enterprises
- Early termination of office and appointment of CEOs at KMG subsidiaries and associates
- Early termination of office and election of members of supervisory boards/boards of directors at KMG subsidiaries and associates
- Succession plan for members of KMG's Board of Directors and Management Board
- Self-evaluation of members of KMG's Board of Directors
- Approval of the Rules for Recruiting and Screening Candidates to KMG's CEO-1
- Approval of the guidelines for approving the appointment and early termination of powers of heads of executive bodies at kmg group's entities and approval of appointments to positions from the list of key positions approved by kmg's board of directors
- Progress on projects for the development of technical skills at KMG subsidiaries and associates
- Proposals to review the membership and remuneration of KMG's Board of Directors
- Determining the salaries payable to members of KMG's Management Board
- Progress on KMG's HR Policy 2018–2028 in 2020

Members as at 31 December 2020:

1. Philip Holland – Chairman of the Committee since September 2020
2. Christopher Walton – member of the Committee since August 2017
3. Anthony Espina – member of the Committee since June 2019

In 2020, the Nomination and Remuneration Committee held

12 MEETINGS

and reviewed

88 ISSUES.

Attendance of the Committee's meetings by its members in 2020

Meeting No. and date	Committee member						
	L.M. Palha	P.J. Dayer	C.J. Walton.	S.J. Whyte	U.S. Karabalin	A. Espina	P.M. Holland
1/2020 20 January 2020	+	+	+	+	+	+	
/2020 3 February 2020	+	+	+	+	+	+	
3/2020 12 February 2020	+	+	+	+	+	+	
4/2020 4 March 2020	+	+	+	+	+	+	
5/2020 31 March 2020	+	+	+	+	+	+	
6/2020 25 April 2020	+	+	+	+	+	+	
7/2020 29 April 2020	+	+	+	+	+	+	
8/2020 2 June 2020	+	+	+	+	+	+	
9/2020 16 September 2020	Resigned from the Committee	Resigned from the Committee	+	Resigned from the Committee	Resigned from the Committee	+	+
10/2020 6 October 2020	Resigned from the Committee	Resigned from the Committee	+	Resigned from the Committee	Resigned from the Committee	+	+
1/2020 4 November 2020	Resigned from the Committee	Resigned from the Committee	+	Resigned from the Committee	Resigned from the Committee	+	+
12/2020 8 December 2020	Resigned from the Committee	Resigned from the Committee	+	Resigned from the Committee	Resigned from the Committee	+	+
Interest, %	100	100	100	100	100	100	100

STRATEGY AND PORTFOLIO MANAGEMENT COMMITTEE

STATEMENT BY THE CHAIRMAN OF THE STRATEGY AND PORTFOLIO MANAGEMENT COMMITTEE

In 2020, the Committee focused on the impact of the pandemic on the Company's operations as well as on developing a crisis response strategy to mitigate the negative impact of the pandemic on the business. In the first half of 2020, the Committee discussed gas shortages, commercial options for addressing oil and gas force majeure situations, proposals to the Company's Development Plan in view of the falling oil prices, the pandemic's impact and global competition for a share in the oil market. In December 2020, the Committee requested and received information on Kazakhstan's oil and oil products market, including on the decrease in oil consumption, stabilisation measures and changes in global prices for oil products.

Since 2019, the Committee has actively focused on the Company's gas strategy, including the strategic financial model of JSC KazTransGas group and analysis of gas transportation, marketing and value chain.

Among other things, the Committee reviewed information on promising new exploration and production projects, their feasibility, involvement of strategic partners and subsequent negotiations.

The Committee also maintained its focus on the priority of quality over price in procurement, comparing the pros and cons of procurement and leasing, discussing the new procurement model, issues with procurement at fields and ways of addressing them.

In 2019, the Committee prepared a number of recommendations on adopting project management across the Company and portfolio investment management at JSC NC KazMunayGas as well as on implementation of a stage gate system. The Company's progress in these areas was reported to the Committee in 2020 as well as information about the approved guidelines on the investment activities at JSC NC KazMunayGas and its subsidiaries and associates. The Committee provided recommendations on the components to run project assessment and factor in the Company's social projects.

At every meeting, the Committee heard progress reports on major fields such as Kashagan, Karachaganak and Tengiz, as well as status reports on transformation, privatisation and divestment programmes.

Philip Holland

Chairman of the Strategy and Portfolio Management Committee,
Independent Director

KEY ISSUES REVIEWED BY THE STRATEGY AND PORTFOLIO MANAGEMENT COMMITTEE IN 2020

- KMG's gas strategy
- Strategic financial model of JSC KazTransGas for 2020–2030
- Adoption of portfolio investment management at KMG
- Adoption of project management at KMG
- Information on the estimated increase in the cost of the Future Growth Project at Tengizchevroil LLP
- Results of a benchmarking survey by HSB Solomon Associates LLC comprising a competitive analysis of KPIs of KMG's refineries for 2018
- Procurement, including the new procurement model, issues with procurement for the Karaton-Sarkamys (subsalt) project, etc.
- Programme of activities undertaken upon an analysis of the oil and gas value chain (improvements to low-margin areas and oil/gas prioritization)
- Progress on improvements to the operation of brownfields
- Report on the implementation of KMG's Strategy until 2028
- Construction of a gas processing plant at the Kashagan field and its impact on KMG Group
- Draft proposals to KMG's Development Plan factoring in the falling oil prices, pandemic's impact and global competition for a share in the oil market
- Gas shortages (Chinese and Russian) and gas withdrawal
- Commercial options to address force majeure circumstances in the oil and gas industry
- Transfer of JSC KazTransGas to JSC Samruk-Kazyna
- Information on the oil and oil products market of the Republic of Kazakhstan
- Signing of contracts for the sale of oil products by KMG
- Approval of KMG's oil procurement contracts
- Return of contracted territories to the government

Members as at 31 December 2020:

1. Philip Holland – Chairman of the Committee since September 2020
2. Christopher Walton – member of the Committee since August 2017
3. Uzakbay Karabalin – member of the Committee since August 2017
4. Timothy Miller – member of the Committee since September 2020
5. Anthony Espina – member of the Committee since June 2019

In 2020, the Strategy and Portfolio Management Committee held

5 MEETINGS

and reviewed

84 ISSUES

Attendance of the Committee's meetings by its members in 2020

Committee member	Meeting No. and date					
	1/2020 11–12 February 2020	2/2020 31 March 2020	3/2018 3 June 2020	4/2018 7 October 2020	5/2018 7 December 2020	Interest, %
S.J. Whyte	+	+	+	Resigned from the Committee		100
C.J. Walton	+	+	+	+	+	100
P.J. Dayer	+	+	+	Resigned from the Committee		100
U.S. Karabalin	+	+	+	+	+	100
B.K. Grewal	+	+	+	Resigned from the Committee		100
L.M. Palha	+	+	+	Resigned from the Committee		100
A. Espina	+	+	+	+	+	100
P.M. Holland				+	+	100
T.G. Miller				+	+	100

AUDIT COMMITTEE

STATEMENT BY THE CHAIRMAN OF THE AUDIT COMMITTEE

In 2020, KMG's Annual Report was prepared in a much shorter timeframe and approved as early as in April 2020, while previously the report was only approved in July or August of the year following the reporting year. During the reporting period, the Audit Committee engaged Ernst & Young Kazakhstan LLP to audit internal controls and test payroll across KMG Group.

I would like to thank all members of the Committee for their contribution. I am confident that their expertise will be valuable to the work of the Audit Committee in driving KMG's performance and financial stability.

Christopher Walton
Chairman of the Audit Committee
Independent Director

The Committee continued to monitor the Company's system of internal control, risk management and performance across key functional areas as well as reviewing and challenging as appropriate reports and key decisions made by management. The Audit Committee met the expectations and functional responsibilities set by the Code and Regulations on the Audit Committee, as well as resolutions of KMG's Board of Directors.

In its turn, the Committee paid particular attention to reports from the management and the external auditor on material accounting matters and decisions. Quarterly updates help us maintain an informed dialogue on the reliability, balance and clarity of KMG's financial statements.

KEY ISSUES REVIEWED BY THE AUDIT COMMITTEE IN 2020

- Preliminary approval of KMG's consolidated annual financial statements for the year ended 31 December 2019 and the independent auditors' report on the audit of KMG's consolidated financial statements for the year ended 31 December 2019
- Preliminary approval of KMG's standalone annual financial statements for the year ended 31 December 2019 and the independent auditors' report on the audit of KMG's standalone financial statements for the year ended 31 December 2019
- Approval of regular Progress Reports on the implementation of the 2019–2020 Detailed Action Plan to Improve Corporate Governance at KMG
- Review of KMG's Comprehensive Business Continuity Plan
- Performance report of the Internal Audit Service for 2019
- Approval of the Strategy of KMG's Internal Audit Service for 2020–2022
- Quarterly reports on calls and e-mails via Deloitte's hotline and other channels
- Preliminary approval of KMG's Annual Report 2019
- Approval of the Staff Schedule of KMG's Internal Audit Service and the Employee Pay Table
- Approval of advisory services. For example, in 2019, the Internal Audit Service (IAS) audited the oil metering process at KMG subsidiary, JSC Embamunaigas ("EMG"). Following a review of the audit results, the Internal Audit Service ordered forensic consulting services to investigate oil metering issues at EMG on behalf of the Audit Committee of KMG's Board of Directors. KPMG Tax and Advisory LLP confirmed the discrepancies reflected in the IAS report on the results of the audit of EMG's oil metering process and identified additional discrepancies and risks. Following the review of the report, KMG took a number of remedial measures.
- Approval of KMG's risk appetite statement, Risk Register, Risk Management Action Plan, a risk map, risk tolerance levels and KMG's Key Risk Indicator Register for 2021
- Approval of the Annual Audit Plan of KMG's Internal Audit Service for 2021
- Progress report on the measures of the Detailed Action Plan to Improve Corporate Governance (regular)
- Independent assessment of the Internal Audit Service (IAS)

An independent external assessment of KMG's Internal Audit Service was performed in 2020 in accordance with International Standards for the Professional Practice of Internal Auditing. KPMG Tax and Advisory LLP, one of the "big four" companies, won the public tender. An independent external assessment of the Internal Audit Service's compliance with the International Standards for the Professional Practice of Internal Auditing, international best practices, the Regulations on KMG's Internal Audit Service, the Company's Code of Ethics and other applicable external and internal regulations governing internal audit functions found 100% compliance with the standards. Therefore, the activities of the Internal Audit Service were found to be fully compliant with the requirements of the standards.

According to the IA-CM maturity model assessment, the highest level (Level 5 – Optimising) was assigned to four out of six elements:

- People management
- Services and Role of IA
- Organisational relationships and culture
- Governance structures

Members as at 31 December 2020:

1. Christopher Walton – Chairman of the Committee since September 2020
2. Timothy Miller – member of the Committee since September 2020
3. Philip Holland – member of the Committee since September 2020

In 2020, the Audit Committee held

9 MEETINGS

and reviewed

108 ISSUES.

Attendance of the Committee's meetings by its members in 2020

Meeting No. and date	Committee member					
	P.J. Dayer	L.M. Palha	S.J. Whyte	C.J. Walton	P.M. Holland	T.G. Miller
1/20 11 February 2020	+	+	+			
2/20 3 March 2020	+	+	+			
3/20 1 April 2020	+	+	+			
4/20 27 May 2020	+	+	+			
5/20 2 June 2020	+	+	+			
6/20 29 June 2020	+	+	+			
7/20 6 October 2020	Resigned from the Committee	Resigned from the Committee	Resigned from the Committee	+	+	+
8/20 19 November 2020	Resigned from the Committee	Resigned from the Committee	Resigned from the Committee	+	+	+
9/20 8 December 2020	Resigned from the Committee	Resigned from the Committee	Resigned from the Committee	+	+	+
Interest, %	100	100	100	100	100	100

HEALTH, SAFETY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT COMMITTEE

STATEMENT BY THE CHAIRMAN OF THE HEALTH, SAFETY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT COMMITTEE

The Committee was launched in 2019 as part of KMG's commitment to the health, safety, environment and Sustainable Development Goals (SDGs).

The Committee had 4 meetings during the year, reviewing 40 issues related to HSE, strategic management of ESG (Environmental, Social, Governance) aspects and sustainability reporting.

Given the particular focus on industrial safety issues, the Committee conducted in-depth reviews of safety management metrics and methods at each of our facilities and at our contractors. I am pleased to highlight that no work-related fatalities were recorded across KMG Group in 2020. During the year, the Board of Directors approved the Corporate Standard on Contractor Engagement in Health, Safety and Environment at KMG as recommended by the Committee. It is currently being implemented across KMG Group to minimise the number of work-related incidents. In this way, we were able to conduct an end-to-end review to gain a better understanding of how management takes action to improve safety performance and how we can improve the security culture at all levels of the organisation.

The Committee has introduced the practice of making deep-dives into key HSE issues at its meetings, which, in 2020, included among others climate change (GHG emissions), Carbon Disclosure Project (CDP) and Water Disclosure Project (WDP) reporting, improvements to APG utilisation across KMG Group, contractor engagement in HSE and KMG's Environmental Transparency Rating.

The Committee also consistently reviewed reports on the situation with COVID-19 at KMG and on measures taken across the Group to prevent the spread of the virus.

Transparency in our sustainability reporting was an important focus during the year. The Company continues publishing its Sustainability Report. KMG's Sustainability Report was ranked second in a competition of annual reports and sustainability reports for 2019 in the Best Sustainability Report category. According to KMG's Corporate Governance Code and Development Strategy, long-term sustainability is one of KMG's key strategic goals and objectives, which is aligned with JSC Samruk-Kazyna's vision, the Development Strategy of Kazakhstan and the global investor community agenda.

During the year, the Committee approved six priority SDGs for KMG:
- Ensure healthy lives and promote well-being for all at all ages
- Ensure access to affordable, reliable, sustainable and modern energy
- Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
- Take urgent action to combat climate change and its impacts
- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

In 2021 and onwards, we will take practical steps to achieve these goals.

The Board of Directors reaffirms its strong focus on ecology, environmental protection, health and safety of KMG employees and contractors across the Group's operations, as well as on building a talent pipeline and committing to universally recognised Sustainable Development Goals by delegating these issues to the Health, Safety, Environment and Sustainable Development Committee.

Our agenda for 2021, same as last year, will focus on the key themes of safety, health, environmental protection as well as on building a sustainability framework. We will also maintain our focus on improving our ESG rating components.

Timothy Miller

Chairman of the Health, Safety, Environment and Sustainable Development Committee

Independent Director

KEY ISSUES REVIEWED BY THE HEALTH, SAFETY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT COMMITTEE IN 2020:

- Climate change (greenhouse gas emissions, CDP (Carbon Disclosure Project) and WDP (Water Disclosure Project) reporting)
- KMG's ESG (Environmental, Social, Governance) score
- Approval of the List of Priority UN SDGs for KMG
- KMG's Health, Safety and Environment reports
- Reports on the situation with COVID-19 at KMG and on measures taken across the Group to prevent the spread of the virus
- Improvements to APG utilisation across KMG Group
- Environmental Transparency Rating of KMG Group
- Identification of potential safety threats, prevention of high-risk employee health and safety incidents
- Contractor engagement on HSE across KMG Group
- Implementing a sustainability framework across KMG and its business units and embedding sustainability principles into key business processes
- Establishing KPIs (key performance indicators) for individual executives of the Company involved in embedding sustainability principles
- Investigations and prevention of fatalities, traffic accidents and safety incidents, applying sanctions to managers based on incident investigation results
- Social policy pursued by KMG Group, social stability and social responsibility across KMG group
- Results of an anonymous survey on health, safety and environmental issues across KMG Group conducted by KMG's Internal Audit Service in 2019
- Training and testing of skills and competencies in ethical procedures and principles conducted for KMG employees

Members as at 31 December 2020:

1. Timothy Miller – Chairman of the Committee since September 2020
2. Christopher Walton – member of the Committee since December 2018
3. Uzakbay Karabalin – member of the Committee since May 2019

Documents and regulations reviewed and approved by the Committee in 2020:

- KMG Group's Corporate Unified Occupational Health Management System Standard
- KMG Group's Corporate Industrial Safety Standard
- KMG Group's Sustainability Management Guidelines

In 2020, the Health, Safety, Environment and Sustainable Development Committee held

4 MEETINGS

and reviewed

40 ISSUES

Attendance of the Committee's meetings by its members in 2020

Meeting No. and date	Committee member					
	T.G. Miller	C.J. Walton	U.S. Karabalin	P.J. Dayer	S.J. Whyte	L.M. Palha
1/2020 11 February 2020		+	+	+	+	+
2/2020 2 April 2020		+	+	+	+	+
3/2020 5 October 2020	+	+	+	Resigned from the Committee	Resigned from the Committee	Resigned from the Committee
4/2020 7 December 2020	+	+	+	Resigned from the Committee	Resigned from the Committee	Resigned from the Committee
Interest, %	100	100	100	100	100	100

FINANCE COMMITTEE

The Committee was cancelled by the resolution of KMG's Board of Directors dated 3 September 2020

KEY ISSUES REVIEWED BY THE FINANCE COMMITTEE IN 2020

- Financial stability (at each meeting)
- Impact of the COVID-19 pandemic, falling oil prices, unstable exchange rates, etc. on KMG's financial performance in 2020
- KMG falling into the red zone of credit risk in 2020
- Updates on interim financial and operating results (at each meeting)
- Certain aspects of a potential IPO by KMG
- Review of reports on compliance with limits on the balance sheet and off-balance sheet liabilities for counterparty banks of KMG

Members before 3 September 2020:

1. Christopher Walton – Chairman of the Committee since August 2017
2. Stephen Whyte – member of the Committee since August 2017
3. Baljeet Grewal – member of the Committee since August 2017
4. Philip Dayer – member of the Committee since May 2018
5. Luís Palha– member of the Committee since June 2019
6. Anthony Espina – member of the Committee since June 2019

In 2020, before the above date, the Finance Committee held

3 MEETINGS

and reviewed

23 ISSUES

Attendance of the Committee's meetings by its members in 2020 (until the Committee's closure as of 3 September 2020)

Meeting No. and date	Committee member					
	C.J. Walton	S.J. Whyte	P.J. Dayer	B.K. Grewal	L.M. Palha	A. Espina
1/2020 12 February 2020	+	+	+	+	+	+
2/2020 1 April 2020	+	+	+	+	+	+
3/2020 3 June 2020	+	+	+	+	+	+
Interest, %	100	100	100	100	100	100

MANAGEMENT BOARD PERFORMANCE REPORT

As a collective executive body, the Management Board of JSC NC KazMunayGas ("KMG") oversees the implementation of KMG's Development Strategy and Consolidated Development Plan and is responsible for their execution, and submits to the Board of Directors annual reports on the implementation of KMG's Development Strategy and Consolidated Development Plan. The Management Board's activities are regulated by the Law of the Republic of Kazakhstan On Joint Stock Companies, with due consideration of the specifics established by the Law of the Republic of Kazakhstan On the Sovereign Wealth Fund, KMG's Charter, and the Regulations on the Management Board. The Management Board may pass resolutions on any matters relating to KMG's operations not referred by regulations of the Republic of Kazakhstan and KMG's Charter to the remit of other KMG's bodies and officials. KMG's Management Board is headed by the Chairman of the Management Board appointed (elected) by the General Meeting of Shareholders. KMG's Board of Directors is responsible for appointing other members of the Management Board.

The most significant matters within the remit of the Management Board are:
- implementation of KMG's Development Strategy
- carrying out of KMG's day-to-day financial and business operations, including execution of the business plan and implementation of investment projects
- sustainability efforts at KMG and subsidiaries and associates.

KMG's Management Board is formed by the Board of Directors following the proposals of the Chairman of the Management Board, and comprises seven key managers of KMG as at 18 March 2021. Meetings of the Management Board are held in person and in absentia and are convened as necessary.

During 2020, there were the following changes in the Management Board:
- In February 2020, the powers of Yesen Kairzhan, a member of KMG's Management Board, were terminated early
- In February 2020, Dastan Abdulgafarov and Malik Saulebay were elected to the Management Board for the term of office determined for KMG's Management Board as a whole
- In May 2020, the powers of Kurmangazy Iskaziyev, a member of KMG's Management Board, were terminated early
- In October 2020, the powers of Dauletzhan Khassanov, a member of KMG's Management Board, were terminated early

The following changes took place in the Management Board between January and April 2021:
- the powers of Kairat Sharipbayev, a member of KMG's Management Board, were terminated early, in April 2021.

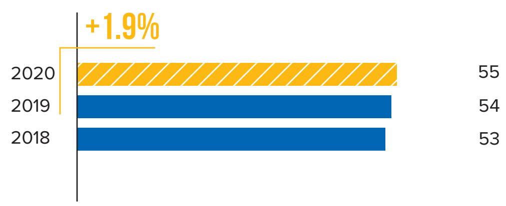
In 2020, the Management Board held a total of 55 meetings, reviewed and approved 655 resolutions, 651 of them (99.4%) at in-person meetings. The Management Board submitted 149 issues for review to the Board of Directors. The most important of them were:
- Signing new subsoil use contracts and approving investment projects
- Disposing of non-core assets
- Implementing the Company's Strategy and Development Plan
- Improving financing terms
- Quarterly risk reports and the sustainability report

Among other things, in the reporting year, the Management Board approved and submitted 12 reports to the Board of Directors, including reports on risks; interested party transactions, resolutions on which were passed by the Management Board; implementation of the Development Strategy until 2028; sustainable development. The Board of Directors also reviewed 25 issues relating to the approval of interested party transactions.

Within the scope of the powers referred to the exclusive remit of the general meeting of shareholders of subsidiaries and associates, the Management Board passed a number of resolutions acting as
- a shareholder – 19 resolutions
- a participant/trustee manager of a stake in the authorized capital – 104 resolutions
- the sole shareholder holding 100% of voting shares – 55 resolutions
- the sole participant/shareholder owning 100% of stakes – 184 resolutionsw

Number of meetings

Number of issues reviewed



MEMBERSHIP OF THE MANAGEMENT BOARD AS OF YE2020

Chairman of KMG's Management Board

For more details see the Membership of the Board of Directors section.

A member of the Management Board since 2016

Date of birth:
16 August 1963

Education:
- Kazakh National Agrarian University
- Abai Kazakh National Pedagogical University
- Candidate of Political Sciences

Experience
Kairat Sharipbayev began his career in 1985 as an agronomist in the agricultural sector. From 1991 to 1999, he held various management positions at Koktem LLP, JSC Shyn-Asyl, and Zhetisu LLP. At different periods, he served as Deputy Akim of Taraz, First Vice President of CJSC Dauir, President of Kitap Publishing House, and Chairman of the Board of Directors of JSC Danko.

In 2001, he began working in oil, gas and gas supply as he joined CJSC Intergas Central Asia as Director of the Gas Transportation and Marketing Department and then Deputy General Director for Marketing and Commerce. Later he was Adviser and Deputy General Director for Marketing at CJSC KazTransGas, Adviser to First Vice President, and Managing Director for Commerce at JSC NC Kazakhstan Temir Zholy, CEO of JSC KazTransGas Aimak, CEO of JSC KazTransGas, Deputy Chairman of the Management Board for gas transportation and marketing at KMG.

From December 2015 to November 2020, he was the Chairman of the Board of Directors of KazTransGas JSC. Since November 2020, he was appointed Chairman of the Management Board of KazTransGas JSC.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

A member of the Management Board since 2019

Date of birth:
9 August 1962

Education:
- Mining, the Gubkin Russian State University of Oil and Gas
- State University of Management (Moscow, Russia)

Experience
Zhakyp Marabayev began his career as Head of Engineering at the Upstream Unit of Komsomolskneft in 1984. At different periods, he served as Director for Commerce at Sphinx (a state-owned corporation), Head of Hydrocarbons and Petrochemicals and Deputy Head and Chief Engineer at the Ministry of Foreign Economic Relations of the Republic of Kazakhstan and Head of Offshore Activities at the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan.

Other senior management positions included Vice President and CEO of JSC KazakhstanCaspiShelf, Director for Investments and New Projects, Commercial Director, Vice President for Gas Projects and Vice President of CJSC NOGC Kazakhoil, Deputy Chairman and a member of the Management Board of CJSC Halyk Bank, Vice President for Operation at JSC KazTransOil, Deputy CEO of CJSC NC Oil and Gas Transportation, Chairman of PSA Share Managing Authority at Karachaganak Petroleum Operating B.V., CEO of JSC KazMunayGas Exploration Production, Managing Director of KMG and Chairman of the Board of Directors of JSC KazMunayGas Exploration Production.

From 2006 to 2008, he worked at KAZENERGY Association as Chairman of the Coordination Council and subsequently at North Caspian Operating Company N.V. as Deputy Managing Director until 2019.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

A member of the Management Board since 2016

Date of birth:
11 June 1978

Education:
- International Economic Relations, the Kazakh State Academy of Management
- Master of Science in Finance, Texas A&M University
- CFA Charter holder

Experience
Dauren Karabayev began his career as a credit analyst at ABN AMRO Bank Kazakhstan in 2001 and was promoted to Head of the Credit Department in 2003.

In 2004, he came to Halyk Bank as Managing Director and was Deputy Chairman of the Management Board from 2007 to 2016. In 2016 he worked as an engagement manager at McKinsey & Company. Since 2017, he is the Chairman of the Board of Directors of JSC KazMunayGas Exploration Production listed on the London Stock Exchange.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

A member of the Management Board since 2016

Date of birth:
6 December 1970

Education:
- Engineering, the Atyrau University of Oil and Gas
- Law, Sarsen Amanzholov East Kazakhstan State University

Experience
In 1994, Daniyar Tiyesov started working as a manager at Manas, then at Bata LLP and later as an executive director at Abyz LLP. At different periods, he was Assistant to First Vice President, Secretary of the Board of Directors of OJSC Atyrau Refinery, Chief Manager at CJSC NOGC Kazakhoil, Deputy Chief Manager of the group managing the renovation of the Atyrau Refinery, Head of the Day-to-day Operations Control Sector, Chief Specialist in Corporate Management and Day-to-Day Operations Monitoring at the Atyrau Refinery Management Department, Deputy Director of the Oil and Gas Refining and Petrochemicals Department, then Deputy Director of the Petrochemicals Development Department at CJSC NC KazMunayGas, Head of Capital Construction Management, CEO and CFO of the Enterprise Under Construction Directorate of Atyrau Refinery LLP.

At different periods, he was Deputy COO of JSC KazMunayGas Trading House, Deputy Chairman of the Management Board for Refining, Petrochemicals, Managing Director for Oil Refining and Marketing, Deputy Chairman of the Management Board for Oil Refining and Marketing at KMG, CEO of JSC KazMunayGas – Refining and Marketing, Senior Vice President of KMG, and Executive Vice President for Oil Transportation, Refining and Marketing of KMG.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

A member of the Management Board since 2019

Date of birth:
21 December 1968

Education:
- Law, Al-Farabi Kazakh National University

Experience
Between 1991 and 1994, Daniyar Berlibayev worked first as a junior research fellow at the Kazakh branch of the Academy of Sciences of the Soviet Union, then as a legal consultant and Head of the Legal Unit at Barikon. At different periods, he was Chief Specialist in Project Assessment Management at the National Foreign Investment Agency, Deputy Head of the National Foreign Investment Agency at the Ministry of National Economy of the Republic of Kazakhstan, Head of the Legal Expertise Directorate of the Legal Department, and then Deputy Director of the Legal Department at the State Export-Import Bank of the Republic of Kazakhstan (Ex-Im Bank).

Since 1997, Daniyar Berlibayev has been working for KMG Group. At CJSC KazTransOil, he was Head of the Investment Projects Department, Head of the Corporate Finance Department, Executive Director for Finance as well as Finance and Economics Adviser. At different periods, he was Vice President, Deputy General Director for Economics and Finance, and First Vice President at JSC KazTransGas, Deputy CEO at CJSC Intergas Central Asia, First Deputy CEO at CJSC NC Oil and Gas Transportation, First Deputy CEO at CJSC KazTransGas, Managing Director for Corporate Governance at CJSC NC KazMunayGas, Deputy Director for Corporate Development at CJSC KazTransGas, Managing Director for Finance and Economics at CJSC NC KazMunayGas, and CEO of CJSC NMSC Kazmortransflot. From 2005 to 2007, he served as First Deputy CEO at JSC KazTransGas and CEO of JSC Intergas Central Asia.

At different periods, he served as Vice President of Midstream and Downstream at KMG, Managing Director of Gas Projects and CEO of JSC KazMunayGas – Refining and Marketing, CEO of JSC KazTransGas, Managing Director for Gas Projects at KMG, First Deputy Chairman of the Management Board at KMG, Deputy Chairman of the Management Board for the Corporate Centre.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

Dastan Abdulgafarov
Deputy Chairman of the Management Board for Strategy, Investment and Business Development

A member of the Management Board since February 2020

Date of birth:
16 December 1974

Education:
- Zhautykov Republican Physics and Mathematics School
- International Law, Kazakhstan Institute of Law and International Relations
- International Economics and Law, Diplomatic Academy of the Ministry of Foreign Affairs of the Republic of Kazakhstan
- Master in Petroleum Business, Eni Corporate University (Milan, Italy)
- Executive MBA (Finance and Investments), Moscow School of Management SKOLKOVO

Experience
Dastan Abdulgafarov has been with KMG Group for more than 18 years, 14 of which he held management positions.

At different periods, he worked as a lawyer in the International Contract Department, Chief Manager and Director of the New Project Development Department, Deputy Director and then Director of the New Offshore Project Development Department, Head of the Project Management group at KMG and JSC MNC KazMunayTeniz. He was an advisor to the General Director, Managing Director for Business Development and Deputy General Director for Economics and Finance at JSC KazMunayGas Exploration Production, Managing Director for Exploration and Production Business Support, Head of Staff – Managing Director for Development at KMG.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

A member of the Management Board since 2020

Date of birth:
7 May 1975

Education:
- Zhautykov Republican Physics and Mathematics School
- Economics, Turar Ryskulov Kazakh State Academy of Management
- Law, Kazakh Academy of Labour and Social Relations
- MBA with honours, the Gubkin Russian State University of Oil and Gas

Experience
25 years of professional experience.

Malik Saulebay started his career in 1995 and until 2000 held various positions in the banking industry (leading economist and Deputy Department Director at Kazpochtabank, senior accountant/controller at JSC ALFA-BANK, Head of Directorate at OJSC TransAsian Trade Bank), and from 2000 to 2005 – in public prosecutions (prosecutor at the Prosecutor's Office in the City of Astana, Almatinsky District, Assistant to Deputy General Prosecutor and Head of Directorate at the Prosecutor's Office in the City of Astana and the Transport Prosecutor's Central Regional Office).

Malik Saulebay has a breast badge for Excellence in Public Prosecution, and in 2005, he successfully passed a qualification exam and was included into the state register of judges.

From 2005 to 2006, he served as Deputy Chairman of the Management Board at JSC Kazakhstan Mortgage Company, Head of Directorate at the Committee on Insolvent Debtors of the Ministry of Finance of the Republic of Kazakhstan.

In 2006, he was Director for Asset Management at JSC KazTransGas; from 2007 to 2009 – CEO of JSC KazTransOil-Service; from 2009 to 2011 – Adviser to the CEO, Managing Director for Legal Affairs at JSC KazMunayGas Refining and Marketing; from 2011 to 2016 – Managing Director for Legal Support, Head of Staff and member of the Management Board at JSC KazMunayGas Exploration Production; from 2016 to 2018 – Vice President for External and Corporate Relations at JSC Karazhanbasmunai; from 2018 to 2019 – Managing Director for Risk and Legal Affairs, member of the Management Board at JSC Samruk-Energy.

Malik Saulebay has served at KMG as Managing Director for Legal Support since May 2019 and as a member of the Management Board since February 2020.

Holds no shares in KMG or its subsidiaries and associates (directly or indirectly), is not involved in any transactions therewith.

Malik Saulebay
Director for Legal Support

REMUNERATION REPORT

REMUNERATION OF THE BOARD OF DIRECTORS

The Resolution of JSC Samruk-Kazyna's Management Board dated 26 September 2016 approved the Guidelines on Forming Boards of Directors at Companies of JSC Samruk-Kazyna, which provide, inter alia, for a procedure for remuneration payable to members of such Boards of Directors. Remuneration reflects the duties of the respective member of the Board of Directors, the scale of the company's operations and its long-term goals and objectives. Remuneration is also paid to independent directors. The level of remuneration payable to representatives of JSC Samruk-Kazyna on such boards is determined by a resolution of JSC Samruk-Kazyna's Management Board.

Total remuneration paid to members of the Board of Directors in 2018–2020

Members of the Board of Directors	2018	2019	2020
Total remuneration paid to members of the Board of Directors, paid in USD	884,292	1,418,097	819,020
Total remuneration paid to members of the Board of Directors, paid in KZT	56,053,998	18,559,956	15,799,427

REMUNERATION OF MEMBERS OF THE MANAGEMENT BOARD

KMG's Board of Directors determines the remuneration policy and the procedure for assessing performance of members of KMG's Management Board in line with the Corporate HR Management Standard of Samruk-Kazyna Group that was approved by the decision of the Management Board of Samruk-Kazyna JSC dated 14 December 2017.

Remuneration paid to members of the Management Board for the reporting period (year) is performance-related to encourage them towards the strategic and priority goals outlined in measurable, interrelated, consistent, and balanced motivational KPI scorecards.

A motivational KPI scorecard outlines corporate and functional KPIs.

Remuneration is determined to provide a reasonable and justified ratio of the fixed and variable parts, depending on KMG's performance and the employee's personal contribution.

The Nomination and Remuneration Committee of the Board of Directors pre-reviews matters related to building an effective and transparent remuneration framework.

When building the remuneration framework and determining the specific remuneration for members of KMG's Management Board, the actual amounts payable are expected to be sufficient to engage, motivate, and retain persons with skills and expertise required for KMG.

The total remuneration paid to members of KMG's Management Board for 2019 amounted to KZT 317,527,424.77, including all salaries and financial benefits paid by KMG to members of the Management Board for serving on the Board in 2020, under the Remuneration Rules for Members of the Management Board (executives) and Remuneration Rules for employees of internal audit services, the Corporate Secretary, Compliance and Ombudsman of KazMunayGas, approved by Resolution of KMG's Board of Directors dated 10 September 2020.

RESPONSIBILITY STATEMENT

In line with the Code, the Board of Directors, and the Management Board are responsible for preparing a reliable annual report and financial statements of the Company.

The Board of Directors and each member of the Board of Directors confirm that they recognise their responsibility for preparing and approving the annual report and financial statements, and consider the annual report and financial statements, taken as a whole, are fair, balanced and understandable and provide the information necessary for shareholders to assess the Company's performance, business model and strategy.

Each member of the Board of Directors confirms that to the best of their knowledge:

- the financial statements, prepared in accordance with IFRS, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the subsidiary undertakings included in the consolidation taken as a whole;
- the Management Board's report includes a fair review of the development and performance of the business and the financial position of the Company and the subsidiary undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties they face.

In line with the Code, the Board of Directors has determined that Christopher Walton, Philip Holland and Timothy Miller are independent in character and judgement. The Board of Directors has also determined that there are no relationships or circumstances which are likely to affect, or could appear to affect, the directors' judgement.

CORPORATE CONTROL

In the event of corporate conflicts, the parties attempt to settle by negotiation to efficiently protect the interests of KMG and other stakeholders.

In order to be effectively prevented or addressed, corporate conflicts primarily need to be identified as soon and fully as possible, with all corporate governance bodies to act in a consorted manner.

Corporate conflicts are addressed by the Chairman of the Board of Directors assisted by the Corporate Secretary. If the Chairman of the Board of Directors is involved in a corporate conflict, such cases are addressed by the Nomination and Remuneration Committee.

INTERNAL AUDIT SERVICE

The Internal Audit Service (IAS) reports and is accountable to KMG's Board of Directors and supervised by the Audit Committee of KMG's Board of Directors. The activities of the IAS are governed by Kazakhstan's laws, KMG's internal documents and the International Standards for the Professional Practice of Internal Auditing.

The IAS focuses on providing the Board of Directors with independent and objective information to ensure the effective management of KMG and its subsidiaries and associates by employing a systematic approach towards improving risk management, internal control and corporate governance processes.

To perform its activities in accordance with the annual audit plan, the IAS:

- assesses the reliability and effectiveness of applicable internal controls and risk management;
- assesses the reliability, completeness and objectivity of the accounting policy as well as financial statements of KMG and its subsidiaries and associates based on such policies;
- assesses the efficiency of resource management at KMG and its subsidiaries and associates and the methods used to ensure asset integrity;
- monitors compliance with Kazakhstan's laws, corporate operational, investment and financial rules and regulations.

The IAS uses audit results to make recommendations on improving KMG's operations. The IAS consistently monitors and oversees the development and execution of measures to implement its recommendations.

INTERNAL AUDIT

Internal audits are carried out by KMG's Internal Audit Service.

The activities of the IAS are governed by: Kazakhstan's laws; KMG's Charter; decisions of KMG's governing bodies; internal documents regulating the IAS activities; Regulations on KMG's Internal Audit Service and Guidelines for KMG's Internal Audits.

The annual Internal Audit Plan is developed from a consideration of the principal risks confronting KMG, the audit testing cycle and management requests. The Internal Audit Plan also accommodates ad hoc requests from the Audit Committee and Management.

The Audit Committee not only monitors the IAS' performance but also facilitates professional development of the IAS employees and the management of its talent pool. These issues are covered by the IAS reports and reviewed by the Audit Committee on a quarterly basis. The quarterly reports detail the progress made by the IAS against a number of objectives including obtaining certificates, completing trainings/seminars budgeted within the IAS training and upskilling programme.

The high professional level of the IAS employees is a key performance driver for KMG's internal audit function; therefore training and upskilling are prioritised.

Internal audit issues reviewed by the Audit Committee at its meetings include:

- IAS annual performance report;
- KMG Internal Audit Service's quarterly reports, including reviews of any material findings identified in audit reports and follow-up on the implementation of internal audit recommendations;
- Annual audit plan and amendments thereto;
- KPI scorecards of the IAS head and staff;
- IAS Strategic Plan;
- IAS budget;
- HR management within the IAS.

ASSESSMENTS OF THE EXTERNAL AND INTERNAL AUDIT PROCESS PERFORMANCE

The IAS conducts regular surveys among members of the Audit Committee and units of JSC NC KazMunayGas interacting with the external auditor to facilitate an assessment of the external auditor's performance. The assessment is based on the results of a completed questionnaire and a specific discussion between members of the Audit Committee with input from the relevant senior management. The assessment results were reviewed at an Audit Committee meeting and communicated to the external auditor.

As required by the quality assurance and improvement programme for KMG' Internal Audit Service, following each audit, the audited entity is required to complete a form assessing the IAS' performance. Results of these assessments are consolidated into the IAS annual performance reports approved by the Audit Committee.

An independent external assessment of the Internal Audit Service was performed in 2020 in accordance with International Standards for the Professional Practice of Internal Auditing. KPMG Tax and Advisory LLP, one of the "big four" companies, won the public tender and was awarded a contract for conducting an external assessment of the IAS' performance.

In 2020 an independent external assessment of the IAS' compliance with the International Standards for the Professional Practice of Internal Auditing, international best practices, KMG's Regulations on the Internal Audit Service, the Company's code of ethics and other applicable external and internal regulations governing internal audit functions found 100% compliance with the Standards. Therefore, the activities of the IAS were found to be fully compliant with the requirements of the Standards.

COMPLIANCE SERVICE

Amid the economic crisis caused by the COVID-19 pandemic, ethical issues remain as relevant as ever, since ethics, being a pillar of the compliance programme, foster a compliance culture whereby employees' conduct and actions are aligned with the Company's standards and requirements.

2020 proved a kind of a stress test for the Company's compliance function, enabling the assessment of how nimble we are in exercising oversight and control over compliance risk management processes and how well the compliance function adapts to the extreme environment versus best practices.

Restrictions on social interactions enabled the Compliance Service to look into ways to better organise its activities in a new environment as part of upgrading the systemic organisational and practical measures to prevent corruption among the Group employees. This optionality highlighted a much greater value placed on the Company's digital capabilities and skills, including adaptation of the way our scheduled training programme is delivered. All KMG employees took training in ethics online.

The shift to remote interactions within the Company has facilitated the adaptation of corporate policies and procedures, their simplification to maximise responsiveness and reflect changes in the protocols driven by remote work. It also increased the role of corporate communications through a greater focus on newsletters containing reminders to employees about the Company's anti-corruption requirements, regulatory changes and hotline operation, which enabled us to cover 100% of employees, raising their awareness and boosting the engagement of employees and other persons on the use of the hotline administered by Samruk-Kazyna's Social Partnership Centre. The hotline is a powerful tool to monitor how well the Company and its employees observe the statutory and ethical compliance standards. This is evidenced by a threefold increase in the number of hotline calls, with 118 calls received in 2020 versus 42 in 2019. All reports received were reviewed in a due and timely manner and followed up with relevant measures and a notification to the caller. Most of the calls to our hotline (52) related to HR issues, such as labour disputes, unethical behaviour, unequal working conditions, misuse of office etc. Based on its analysis of the calls received, the Compliance Service developed and submitted recommendations and preventive measures. With remote work arrangements for employees in place, one such recommendation, for instance, was to work out measures to ensure proper monitoring of employees' compliance with work discipline, Kazakhstan's labour laws and KMG's internal documents, as well as to give special focus to training in business ethics for middle management, with the HR team looking into employee morale in order to prevent employee dissatisfaction with working conditions from becoming a persistent issue. Making sure that the voice of every employee contacting the Compliance Service is heard remains our priority.

The new reality has required the Compliance Service to come up with new approaches at the intersection of regulation and ethics. This is how the updated Code of Business Ethics was approved to maintain the high level of our corporate governance and drive a mindset shift towards a zero-tolerance approach to any violations among employees in line with global best practice. The Code was enhanced with the addition of a Q&A section, improved and broader definitions section, updates to KMG's corporate values, and the introduction of limits on gifts and compliance communication channels, to bring it in line with the Samruk-Kazyna Code of Conduct and recommendations of international compliance audit firms. A procedure was also introduced for declaring conflict of interest by employees and officers.

The pandemic-driven adaptation effort also covered the Tone at the Top, a key compliance principle. In December 2020, as part of promoting high ethical standards of business conduct and zero tolerance for any form of corruption, an extended online meeting was held attended by the Chairman of the KMG Management Board and chief executives of KMG subsidiaries and associates. The meeting reviewed reports by the compliance teams of KMG and its subsidiaries and associates detailing their performance, and discussed the relevance of corporate intelligence for counterparty checks and the use of data analytics as a powerful tool to identify non-compliance within the various business processes. Measures were also announced to prevent and minimise the risk of fraud in a remote work environment, all resulting in more productive interactions on compliance and ethics issues between senior management and the Compliance Service. On top of that, the 2021 action plan was announced along with the shareholder's expectations from subsidiaries and associates' efforts in this area.

Integrity is a cornerstone of the entire framework of good governance, providing an assurance that the Company's interests are protected and prioritised over own interests. The Compliance Service will continue proactive efforts to raise awareness of managers' accountability for corruption offences by their subordinates and failure to take anti-corruption measures.

OMBUDSMAN OFFICE

One of the key roles of the Ombudsman Office is to improve KMG's ranking and profile through early prevention, dispute settlement and conflict resolution, and escalate systemic issues requiring action to relevant bodies and officers, as well as to make proposals to stabilise conflict situations. KMG's Code of Business Ethics clearly states the principles stipulating that KMG employees and officers shall not tolerate intimidation, even in the form of a joke, discrimination against anyone on the basis of race, religion, nationality, gender, political or other affiliation, social origin, material position, job, language or other circumstances, as well as the granting of any privileges to individual employees based on the above characteristics. KMG ombudsman's activities are guided by Kazakhstan's laws and KMG's internal documents.

The Ombudsman submits regular report detailing their activities for review by KMG's Nomination and Remuneration Committee and Board of Directors.

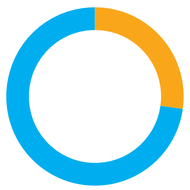
In 2020, in order to communicate the Code of Business Ethics requirements, as well as ombudsman's roles and objectives, meetings were arranged with the leaders of KMG's business verticals, executives from subsidiaries and associates, representatives of trade unions and conciliation commissions of subsidiaries and associates, the heads of HR and social teams, and members of legal, engineering and technical teams from subsidiaries and associates.

KMG's Ombudsman took a number of actions to settlement disputes and conflicts during the COVID-19 lockdown:
- A message to KMG employees calling for greater unity, understanding and accountability;
- A video with a message from Ombudsman explaining ethical standards;
- A training for OzenMunaiGas employees on KMG's corporate values, held together with LLP KMG Engineering within the Professional Foreman modular programme;
- In order to mitigate the risk of conflicts, a Memo on Ethical Standards of the Code of Business Ethics was produced and circulated to KMG employees to provide a practical quick reference guide;
- As part of KMG employees training and implementation of the Corporate Governance Plan, an online training course was developed themed "The Code of Business Ethics for all Employees Training Programme" based on the existing in-person programme. The course was also made available to new employees as part of the onboarding course to introduce them to the corporate values and ethical standards;
- To avoid conflicts, the Ombudsman provided support to the HR team throughout the corporate workforce rightsizing programme implemented as we seek a leaner structure

During the reporting period, the Ombudsman received 44 enquiries, of which:
- 32 were sent to the sponsors following preliminary review;
- 12 were reviewed by the Ombudsman.

Swift action was taken wherever possible in response to the enquiries received to settle the reported issues early on, and to give recommendations, including to restore the violated rights and lawful interests. As a result, repeat complaints were avoided, including to judicial bodies and other public authorities.

Enquiries to the Ombudsman Office



RISK MANAGEMENT AND INTERNAL CONTROL

Through risk management, the Company prevents risk events from occurring, such events affecting the achievement of strategic and operational goals, and mitigates their impact if they occur. Risk management is an integral part of the Company's strategic planning, corporate governance and financial stability.

KMG has integrated the Corporate Risk Management System (CRMS) in its key business and management processes. The purpose of the CRMS is to ensure an optimal balance between the Company's growth in value, its profitability and risks. The CRMS is a key element of the corporate governance framework, supporting timely identification, assessment and monitoring of all material risks, as well as timely and adequate mitigation measures. The CRMS established at KMG and its subsidiaries and dependent companies covers all areas of their business.

Risk management policy of JSC NC KazMunayGas and its subsidiaries and dependent companies is available on the Company's website.

RISK MANAGEMENT PROCESS

The CRMS is designed to provide a consistent and clear framework for managing the risks associated with KMG's operations. The Company uses a top-down risk management approach, with risk management embedded across all management levels from top (KMG) to the line level (an operating structural unit of a subsidiary or dependent company). Each officer is responsible for ensuring risks are properly assessed when making decisions. Risks are assessed using a range of qualitative and quantitative assessment tools factoring in risk probability and potential impact.

THE CRMS OPERATES THROUGH SEVEN INTERRELATED CRMS PROCESSES INTEGRATED INTO KMG GROUP'S MANAGEMENT BUSINESS PROCESSES:

1. Goal setting (alignment of strategic, medium- and short-term planning goals);
2. Identification of risks/risk factors (whether any of KMG Group's activities and business processes are exposed to risks that may adversely affect the achievement of set goals and objectives);
3. Risk/risk factor assessment and analysis (to determine the degree of risks/risk factors' impact on the achievement of the Company's KPIs Operational and non-operational risks and associated risk factors are analysed in terms of probability of occurrence (probability) and degree of impact (potential for business losses);
4. Risk management (the process of developing and implementing measures to mitigate the adverse consequences and (or) reduce the probability of occurrence for inherent risks and associated risk factors);
5. Monitoring and reporting (to control the dynamics of changes in risk profiles and the effectiveness of risk management activities and control procedures. Monitoring is carried out by KMG's Risk Management and Internal Control Service, with a quarterly risk report submitted to the Board of Directors;
6. Information and communication (to provide the participants of the risk management process with accurate and timely risk information and raise awareness about the risks and risk response methods and tools);
7. The establishment of internal environment (the implementation of the above components of the risk management process at KMG Group fosters a group-wide risk culture driven by the appropriate "tone at the top", strong risk awareness and knowledge, and the accountability of risk owners/risk factor owners, as well as active risk management and timely reporting.

INTERACTIONS WITH THE BOARD OF DIRECTORS

The following documents are submitted for review to KMG's Board of Directors at least once a year:

- Proposals on the Company's risk appetite;
- Consolidated Risk Register;
- Risk map;
- The Company's Risk Management Action Plan;
- Risk Tolerance Levels;
- Key Risk Indicator Register

In addition, a risk report (consolidating KMG subsidiaries and dependent companies) is submitted on a quarterly basis to the Board of Directors for consideration with the Board duly reviewing and discussing it in full. The Board of Directors takes appropriate measures to bring the existing risk management and internal control system in line with the principles and approaches determined by the Board of Directors.

IMPROVING RISK MANAGEMENT

KMG Group's efforts to improve its CRMS and drive a robust risk culture are guided by KMG's Corporate Governance Plan for 2019 –2020. The Plan outlines key initiatives supporting the Company's CRMS and ICS goals.

KMG has been continuously improving its CRMS and consistently enhancing its risk management framework. The Company remains fully committed to the continuous development and improvement of the Company's CRMS.

In 2020, KMG conducted a comprehensive analysis on the impact of the COVID-19 pandemic risks on its operations. The analysis and response measures taken were provided to the KMG Board of Directors. As the Company continues to foster a robust risk culture, it provided online employee training to improve risk management skills following the shift to remote work due to the COVID-19 pandemic.

On the planned improvements to risk management in 2021 and beyond, the Company intends to foster cross-functional interactions in risk management as part of project management, enhance information security, sustainability, compliance, strategy and KPIs. KMG continuously improves CRMS by updating the CRMS policy and standard rules for establishing a risk management process, regulatory and methodological documents.

RISK APPETITE

The Company's risk appetite shows its level of risk retention under which the Company is able to achieve its strategic goals and operational targets. It affects resource allocation, the establishment of processes and creation of an infrastructure within the organisation to support effective monitoring and responses to risk events.

Selected excerpts from KMG's 2021 risk appetite statement, as approved by KMG's Board of Directors

Financial activities	Operations	Investment activities
• Compliance with covenants set by lenders • Ensuring that the targeted dividend flow from subsidiaries and dependent companies to the Company falls no more than 10% (except when impacted by a significant drop in market oil prices) • Ensuring that the Company's credit rating is not downgraded (except when impacted by a downgrade of Kazakhstan's sovereign rating)	• Zero tolerance of negative impact on reputation, health, safety and environment • Ensuring social stability in the operating regions • No transactions leading to violation of sanctions • In managing its information security and cyber risks, the Company: – ensures service availability in case of information and communication infrastructure failure – ensures the integrity of the information resources, software and hardware – prevents confidential information from leaking or other unauthorised disclosure • Zero tolerance of corruption in any form and violations of business ethics	• Compliance with the requirements of JSC Samruk-Kazyna's investment policy • Financing of investment projects primarily with equity. In case of borrowing, ensure that the Group's financial stability is not undermined • Implementation of subsoil use projects with strategic partners primarily under carry financing

CORPORATE INSURANCE

Insurance is central to ensuring robust risk control and financial management across KMG Group as it serves to protect the property interests of the Company and its shareholders against unexpected losses that may result from operations, including as a result of external factors.

The Group's insurance function is centralised to ensure the enforcement of the group-wide Corporate Standard for obtaining and maintaining insurance cover, which ensures a comprehensive approach to managing continuous coverage.

KMG's Corporate Insurance Programme includes the following key types of insurance coverage:

- Insurance of core operating assets of the Company
- Public liability insurance
- Energy risk insurance

A reinsurance company is only considered for reinsurance when holding a financial credit rating of at least "A–" on the Standard & Poor's scale. Best industry practice is applied in negotiating the best insurance and risk coverage terms for the Company.

INTERNAL CONTROL SYSTEM (ICS)

The ICS is an integral part of the CRMS. The system uses the COSO framework and includes five interrelated elements: control environment, risk assessment, controls, information and communication, and monitoring procedures. It is designed to achieve reasonable assurance that KMG will reach its goals across three key areas:

- Improving operational efficiency
- Preparing complete and reliable financial statements
- Complying with Kazakhstan's laws and KMG's internal documents

COSO

KMG's Internal Control System Policy outlines the objectives, operating principles and elements of the ICS. In order to implement the Internal Control System Policy, the Company has put in place the Internal Control System Guidelines detailing related roles, responsibilities, operating procedures, organisation and performance criteria.

In 2020, to match KMG's business needs, internal regulations on the ICS were updated with a detailed description of the risk identification and assessment process, scale and criteria for internal controls maturity assessment for a business process, improved risk culture, ICS maturity assessment and interactions among ICS actors.

KMG annually approves a schedule based on the criticality ranking of business processes as well as recommendations by external and internal auditors. The schedule specifies when business processes will be formalised and design of controls tested (analysed). Formalisation means the design and update of the existing risk flowcharts and matrices, and business process controls. Improvement recommendations are prepared based on the results of design testing (review). Similar activities are performed by subsidiaries and dependent companies. The results of these ICS activities are communicated to business process owners, IAS, external auditor, Management Board, and the Board of Directors.

ICS-related meetings and trainings for employees of KMG and its subsidiaries and dependent companies take place annually, with workshops, experience sharing, discussions of issues and their solutions.

The internal control system model from the perspective of hierarchy levels, roles and powers of the key actors of the internal control process:

- Level 1, Organisation and Function, is about how the internal control system is organised, the interfaces between its actors, and "the tone at the top".
- Level 2, Corporate Controls, is related to the management mechanisms established at the level of KMG or its structural units to facilitate the achievement of KMG's goals, directly or indirectly impacting the risks inherent to its operations. These controls enable better structuring of the internal control system by shaping the overall control environment and optimising the effectiveness and number of control procedures. Corporate-level controls impact KMG as a whole, and each business process in particular. They are linked to monitoring key metrics and reliability criteria, as wee as maturity levels to ensure they meet the targets. Such metrics, criteria and maturity levels are set out in KMG's policies, its long-term development programme, and a number of KMG's other conceptual and regulatory documents.
- Level 3, Process Controls, is about the implementation of control procedures embedded in business processes and day-to-day activities of employees, such procedures not impacting KMG's overall control environment

KEY RISKS

KMG operates in a constantly changing environment. Some risks can evolve over time, while their potential impact and likelihood can change in response to internal and external factors. KMG manages, tracks and reports key risks and uncertainties that can affect its strategy's implementation.

During the reporting period, a number of risks materialised, but their negative impact was managed and minimised through risk mitigation measures. Below are the Company's key risks.

Key risks of the Company

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Production decline risk ◆ Declines in production from mature fields is KMG's key operational risk. ◆ Production decline due to lower oil prices driven by the challenging global energy markets (due to pandemic) and commitments under the OPEC+ agreement. For more details see the Upstream section.	To maintain production rates at mature fields, KMG: ◆ implements measures to increase time between well repairs and ensure timely execution of well services, workovers and well interventions ◆ implements upgrade programmes for obsolete equipment ◆ implements upgrade programmes for obsolete equipment Diversification of production assets. Cutting and optimising costs' replanning; reviewing scenarios to revise targets (subject to production profitability). Liaising with the competent authorities of the Republic of Kazakhstan on the OPEC+ agreement to curb oil supply
	Work-related injury risk Employee non-compliance with the established health and safety rules, and breaches of operational discipline may pose a threat to the life and health of employees.	To prevent industrial accidents, KMG implements organisational and technical measures that ensure: ◆ safe work execution and prevention of work-related injuries and occupational diseases ◆ timely training and knowledge testing ◆ internal health and safety controls; deployment of new technologies and mechanised techniques, and improvement of industrial safety for production facilities Implementing the near miss reporting programme through the Korgau Card project. The following Corporate Standards were approved: ◆ KMG Group's corporate standard for engaging contractors on HSE ◆ KMG Group's corporate standard for building HSE capabilities ◆ KMG Group's corporate standard for occupational health

[1] The use of the Korgau card is aimed at identifying and reporting an unsafe condition, unsafe behaviour, unsafe action, hazardous event or hazardous factor, as well as good practice and suggestions (initiatives).

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Risk of emergencies or man-made disasters at production facilities The Company's operations are potentially hazardous. KMG is exposed to the risk of damage to property, third parties or the environment caused by accidents or emergencies, man-made disasters at production facilities or third party misconduct	To mitigate operational risks, the Company: ◆ ensurews timely maintenance and repair of equipment as required by relevant regulations ◆ performs timely retrofits and upgrades ◆ performs timely diagnostics and identification of potential hazards, as well as industrial safety assessments of production facilities. improves the technical expertise and qualifications of operating personnel. The Company is phasing in advanced protection, safety and security technology and solutions. In accordance with statutory HSE requirements, KMG takes out annual mandatory liability insurance for facility owners whose operations have an inherent risk of damage to third parties, as well as mandatory environmental insurance. In addition, annual voluntary property insurance is taken out (against the risk of accidental destruction, loss or damage) for insured events.
	Environmental risk and climate change risk The Company is exposed to the risk of adverse environmental impact and the risk of tougher responsibility for non-compliance with environmental laws, as well as risks related to climate change. For more details see the Ensuring sustainable development section.	The Company's priorities in environmental protection: ◆ Greenhouse gas management and flaring reduction ◆ Water management ◆ Production waste management ◆ Land reclamation; ◆ Energy efficiency improvement. To mitigate the environmental risk, the Company: ◆ ensures preventive management of significant environmental aspects, based on project management and a risk-based approach, to improve environmental performance ◆ follows up the implementation of the Emissions Management Policy and the Corporate Standard for Water Resources Management ◆ quarterly assesses and analyses the flaring rate in the upstream sector under IOGP requirements ◆ engages stakeholders on environmental issues ◆ implements the Memorandum of Cooperation in Environmental Protection signed with a competent authority to dispose of and recycle waste from its subsidiaries and dependent companies ◆ comprehensively develops the corporate environmental function and aligns KMG's activities with green economy principles The Company takes an active part in the working group of the authorised body tasked with developing the new environmental code. Climate change risks: ◆ In August 2020, the Company published its Climate Change 2019 Questionnaire on the CDP's (Carbon Disclosure Project) website within the required timelines ◆ The Company assessed the forecast balance between shortage and surplus of quotas for the National Allocation Plan for GHG Emissions for 2018–2020

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Risk of gas shortages Gas export volumes might decrease due to higher domestic gas consumption, given the gas chemical projects launched in the domestic market; a decrease in gas production due to gas re-injection to maintain the oil production plateau and/or caused by the lack of gas processing capacities; and due to immature gas production resource base.	The company has envisaged the implementation of a number of projects to increase the resource base of marketable gas by expanding the capacity for processing associated petroleum gas, reducing gas re-injection and burning associated petroleum gas in the fields. We are implementing activities to develop new promising fields and increase gas production at existing fields.
	Geological risk The implementation of new exploration projects is always associated with geological risks arising from the uncertainty of geology: lack of hydrocarbon discoveries; failure to confirm or low recoverable oil and gas reserve estimates.	To address this risk, the Company: ◆ collects, analyses, synthesizes and updates the geological and geophysical data from the operating area and similar nearby fields ◆ plans geophysical surveys and exploration for hydrocarbons, applies effective study techniques and data processing and interpretation methods ◆ runs high-resolution 2D/3D seismic surveys ◆ conducts regional surveys with international companies (Equinor, LUKOIL, BP) and pilot refining projects involving advanced technology and expertise from foreign companies (Eni) ◆ building sedimentary, geology and basin models of the region and fields based on qualitative analyses and advanced methods of geochemical and lithology analyses ◆ attracting strategic partners for joint exploration and development of new fields, including under carry financing arrangements to reduce the financial impact of geological risks.
	Social unrest in operating regions The Company is exposed to the risk of unauthorised strikes.	To mitigate social risks, the Company: ◆ runs awareness raising activities across operations, including management holding reporting meetings directly with representatives of the workforce and trade unions; ◆ implements the Regulations on Interactions between subsidiaries and dependent companies and Contractors Working on the Sites of JSC NC KazMunayGas in order to deliver on its labour commitments to contractor employees ◆ has in place and maintains a unified internal communications system, holds mandatory meetings between the management and employees at all the Company's facilities to discuss social, day-to-day and operational matters as well as to develop solutions together ◆ builds an integrated youth policy system to drive engagement among young employees and encourage them to participate in social activities and be part of the corporate team ◆ runs regular surveys, analyses and monitors employee satisfaction in its operating regions, with corresponding Action Plans to minimise the areas of concern identified by the studies and enhance social stability based on their findings
	Liquidity and financial stability risks Liquidity and financial stability risks are KMG's key risks. For more details see the Strategic priorities section.	To overcome these risks, along with debt management activities and efforts to prevent liquidity shortages, the Company is focused on improving operational efficiency, clear prioritisation of capital expenditures, commitment to financial discipline, rationalisation of the Company's asset and project portfolios, and transition to portfolio-based project management.

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Compliance risk Intentional corruption for personal or material gain, including for the benefit of third parties. The Company has zero tolerance towards any fraudulent actions regardless of the amount of monetary damage.	The Company consistently implements and reinforces internal controls, embedding group-wide policies to prevent unlawful or wrongful acts by third parties or by its employees, and maintaining the procedure for conducting internal investigations of unlawful or wrongful acts of its employees. The Company has adopted policies and standards, as well as committed itself to: ◆ improving and consolidating its internal and compliance controls ◆ conducting anti-corruption monitoring ◆ analysing corruption risks ◆ promoting an anti-corruption culture, taking preventive steps and informs employees on potential violations and enforcement ◆ establishing an organisational and legal framework to foster accountability and transparency of decision-making procedures ◆ implementing and complying with business ethics standards ◆ holding anti-corruption workshops and trainings ◆ analysing drafts of internal documents to identify corruption factors ◆ preventing conflicts of Interest ◆ handling whistleblowing reports via the hotline, respective reporting to the Audit Committee and the Board of Directors.
	Volatility of crude oil prices The Company is exposed to the risk of energy price volatility For more details see the Market overview and the Impact of COVID-19 and response sections.	To secure its financial position, the Company developed the Crisis Response Strategy which sets forth measures to mitigate the impact of the crisis in the oil and gas industry by end-2021. In 2020, the Company: ◆ approved the amended KMG's Development Plan with updated macroparameters, cost cuts and optimisation ◆ optimised its 2020 investment portfolio, started rolling out a project management system ◆ cancelled bonuses, optimised business processes ◆ approved corporate KPIs following the digitisation of the Crisis Response Programme, the motivational KPI scorecard for executives and their 2020 targets ◆ optimised KMG's headquarters staff ◆ approved a new organisation comprising fewer management levels, reviewed the Employee Pay Table following a reduction in top managers' and executives' salaries ◆ approved the Risk Management Programme outlining additional downside risks/risk factors. KMG continuously monitors and analyses price and demand dynamics for crude oil and oil products and also considers purchasing financial tools to be protected in case of a significant fall in oil prices. KMG continuously monitors and analyses price and demand dynamics for crude oil and oil products and also considers purchasing financial tools to be protected in case of a significant fall in oil prices.

Trend (over the year)	Risk description and likely impacts	Mitigation and management
↔	**Country risks and the risk of sanctions** The Company operates internationally. Any significant adverse change in the economic and political situation in a recipient country could affect the Company's operations. Sanctions against certain countries, including sectoral sanctions, can affect the Company's operations and its prospective projects.	The Company mitigates country risks by setting country-specific limits based on the analysis of the recipient country (from the economic, political, strategic, social and other perspectives). The Company analysed the impact on its operations from economic sanctions, along with potential response measures. Joint projects/material transactions with Russian entities were reviewed, with relevant potential operational and financial risks explored. The Company monitors existing sanctions to minimise negative impacts and implications, considering the potential widening of sanctions, which may have a targeted impact on the Company's prospective projects. To reduce risks, the Company provides for mechanisms to exit projects or implement them independently in the event of a tougher sanctions regime
↑	**Cyber risks** Shifting to work from home, remote connection and increased impact of digitalisation on production and management processes at KMG lead to increased risks of attacks on the Company's ICT system aimed at compromising its integrity, accessibility and security.	To address this risk, the Company: - introduces specialist information security hardware/software at KMG to ensure automated monitoring of external and internal threats, as well as control over organisational and practical measures to protect the ICT system - runs tests to check its ICT system for vulnerability to external attacks, analyses of IT infrastructure security, audits of network elements, monitoring of operating systems security on a regular basis, identification and blocking of violators - maintains its security management system to meet the current international standards for information security (ISMS) - provides information security training to units responsible for ISIS - keeps up cyber security hygiene.
↔	**Reputational risk** The Company is exposed to reputational risk which affects its business reputation and relationships with investors, counterparties, partners and other stakeholders.	The Company implements a range of measures to manage this risk including publications in the media, holding of briefings, press conferences and management presentations highlighting various aspects of the Company's activities and raising awareness among stakeholders. The Company daily tracks press mentions of its activities and promptly responses to unreliable information (rumours) published in media and social networks. In 2020, KMG developed and implemented a Communications Plan to Provide Information Support on the Crisis Response Strategy to timely inform the community on KMG's performance and prevent negative press mentions. Under the Plan, the Company's management paid working visits to the regions of presence to implement the crisis response strategy and check the measures taken to curb and prevent the coronavirus infection at enterprises. KMG published press releases and held respective briefings, and the measures were widely covered in mass media (TV, newspapers, internet publications, corporate websites). The Company maintains a speak-up hotline and a procedure ensuring prompt responses to complaints and claims to eliminate their root causes.
↔	**FX risk** Currency risk is a potential negative change in the Company's financial performance due to exchange rate fluctuations	Given the currency mix of its revenues and liabilities, the Company is also exposed to FX risk in its operations. The strategy for managing this risk involves the use of a holistic approach that considers natural (economic) hedging options. KMG ensures the optimal balance of assets and liabilities denominated in foreign currency, and calculates earnings considering the FX risk.

Trend (over the year)	Risk description and likely impacts	Mitigation and management
↔	**Tax risk** The Company is exposed to the persistent risks of changes in tax laws and lack of clear interpretation, as well as the risk of increased tax burden and loss of entitlement to tax benefits.	The Company continuously monitors changes in tax laws, evaluates and forecasts the extent to which they can potentially impact its operations, as well as follows trends in law enforcement practice and considers the implications of regulatory changes for its operations. The Company's specialists regularly take part in various working groups responsible for drafting tax legislation. To mitigate tax risks, the Company improves its tax administration processes and conducts tax audits.
↔	**Interest rate and commercial bank liquidity risk** Higher interest rates and lower financial stability of the banking sector can have a negative impact on the cost of borrowing, as well as the placement of idle cash.	To mitigate these risks, the Company diversifies investments in financial instruments in accordance with the treasury portfolio's pre-defined limits and regularly monitors how idle cash is placed across KMG Group. Most of KMG's earnings are generated in US dollars, while the main source of borrowing is the international lending market. For these reasons, KMG's debt portfolio is largely denominated in US dollars. The interest rates for servicing a portion of these loans are based on and interbank lending rates, and their growth may lead to additional debt servicing costs.
↔	**Investment (project) risk** The Company is implementing a number of projects in hydrocarbon exploration, production, transportation and processing, which could be exposed to significant risks associated with external and internal factors. The materialisation of such risks can significantly affect the success of these projects.	The Company regularly monitors the status of project implementation in the regions in which it operates, making timely adjustments to project implementation plans as necessary. Where risk can arise affecting the timing, budget or quality of projects, mitigation measures may include negotiations with stakeholders, reduction of operating costs, optimisation of the investment programme, etc.
↑	**Risk of changes in applicable laws, and litigation and arbitration risks** The Company's performance can be impacted by changes in applicable laws, including subsoil use, tax, currency, customs regulations, etc., as well as the risk of negative court decisions on court or arbitration disputes involving the Company.	The Company continuously monitors changes in laws, as well as evaluates and forecasts the extent to which they can potentially impact the operations of the Group entities. The Company regularly takes part in working groups to develop and discuss draft laws in various areas of the law. The Company continuously monitors judicial and law enforcement practices, and actively applies best practices in resolving legal issues and disputes arising in the course of the Company's operations.

Trend (over the year)	Risk description and likely impacts	Mitigation and management
	Risk of pandemic (COVID-19) The outbreak of COVID-19 had a negative impact on the health of employees and their family members, caused temporarily disability, deaths and suffering, inflicted restrictions and lead to an economic shock, changing fundamental demand and production factors globally. For more details see the Impact of COVID-19 and response section.	The Company continues all possible measures to mitigate the negative pandemic-related risk factors, particularly: ◆ continuously monitors the epidemiological situation ◆ imposed travel restrictions for employees (business trips, conferences, training), social distancing, shifted employees to remote work ◆ introduced special rules relating to employee residence, catering, transporting and shift rotation to minimise contacts ◆ ensures strict compliance with sanitary requirements and mask mandate for facilities and offices (including contractors), including temperature screenings before work and employee COVID-19 screening questionnaires ◆ engages emergency response and crisis management teams, cooperates with state authorities and medical assistants ◆ implemented the comprehensive measures in line with approved comprehensive business continuity plans of KMG and its subsidiaries and dependent companies to be ready in case of deteriorating epidemiological situation ◆ provided seasonal vaccination against the flu, ensured preparedness of first-aid facilities, with due preparations for a potential increase in laboratory examinations and coronavirus infection vaccination ◆ prepared reserves of PPE (medical masks, respirators, gloves), dispensers, sanitisers and disinfecting solutions as well as minimum life-support packages necessary to maintain life and health, including medicine and medical equipment. To be prepared for further potential pandemic waves, prevent disease and the spread of COVID-19, the Company continues to: ◆ follow previously introduced algorithms (as amended on the first-wave experience) to mitigate the risk of coronavirus infection spread and maintain the anti-epidemic measures, sanitary and disinfection measures ◆ identify critical business processes and options for the emergency recovery of the processes as well as essential personnel, suppliers, materials and equipment, develop business continuity and recovery plans for critical business process and IT systems.

STAKEHOLDER ENGAGEMENT

KMG recognises the importance of its economic, environmental and social impact and strives to maintain a balance between stakeholder interests, taking a responsible, informed and rational approach to stakeholder engagement.

KMG has an approved Stakeholder Map, reflecting risks and rankings (based on direct or indirect dependence), obligations, the situation (with a special focus on higher-risk areas), influence and different prospects. The Company effectively implements Stakeholder Engagement Plans. KMG follows best stakeholder engagement practices, including such international standards as AA1000 Stakeholder Engagement Standard

The Company's goal is to increase stakeholders' loyalty by improving working conditions and building a productive dialogue with stakeholders, which boosts KMG's performance through understanding and support from customers, shareholders, investors, authorities, local communities and public organisations.

Stakeholder engagement measures include the following:

Stakeholder group	Type of provided information	Communication methods
Shareholders	Information on the Company's performance, corporate events of interest for security holders	◆ Access to information ◆ Representation of shareholder interests on KMG's Board of Directors ◆ Publications on the corporate website ◆ Publications on the website of Kazakhstan Stock Exchange ◆ Financial disclosures on the depositary's internet page
Subsidiaries and dependent companies	Information on the Company's performance, strategic development plans, introduced corporate governance mechanisms, communication methods, corporate events of interest for subsidiaries and dependent companies	◆ Access to information ◆ Publications on the corporate website ◆ Representation of shareholder interests on General Shareholders' Meetings/meetings of subsidiaries and boards of directors/supervisory boards ◆ Meetings, consulting panels, conference calls ◆ Participation in committees, working groups ◆ Trainings, workshops
Company employees and their trade unions	Information on the Company's development plans, working conditions, career opportunities, protection of social and labour rights, corporate events of interest for KMG employees	◆ Access to information ◆ Publications on the corporate website ◆ Meetings, reporting meetings between the management and employees ◆ Occupational health and safety councils and committees ◆ Trainings, workshops ◆ Internal e-mails ◆ Materials sent through internal communication channels ◆ Surveys, polling ◆ Contests

Stakeholder group	Type of provided information	Communication methods
Business partners, suppliers, consumers For more details see the Supplier Relations section	Information on the management's decisions that may impact mutually beneficial cooperation, corporate events of interest for partners, suppliers and customers	• Access to information • Publications on the corporate website • Group and one-on-one meetings, conference calls • Handling complaints and queries • Partner Days and Supplier Days • Notification e-mails • Audits
Investors For more details see the Investor Communications section	Information on the Company's performance, corporate events of interest for investors and the investment community in general	• Access to information • Publications on the corporate website • Publications on the website of Kazakhstan Stock Exchange • Road shows for investors and other public events; meetings, conference calls • Handling requests by e-mail (ir@kmg.kz) and consulting by phone • Press releases • Financial disclosures on the depositary's internet page
Authorities	Information on social, economic, environmental and industry aspects of interest for the government and people	• Access to information • Publications on the corporate website • Group and one-on-one meetings, conference calls • Publications in mass media • Data entered in electronic systems • Notifications via communication channels • Working groups for improving Kazakhstan's laws
Financial institutions	Financial information of interest for financial institutions, matters of the Company's financial stability	• Access to information • Publications on the corporate website • Publications in mass media
Local communities	Information on employment, corporate social responsibility, environmental safety and protection	• Publications on the corporate website • Meetings with local communities • Participation in public consultations • Publications in mass media • Appointments for citizens • Handling complaints and queries • Participation in the work of local authorities and projects of local communities • Holding public events involving representatives of local communities
Mass media	Any information unless deemed confidential under Kazakhstan's laws and KMG's internal documents	• Press releases, informational publications, articles on the Company's website and in mass media • Distribution of press releases • Response to mass media's requests • Conference calls, briefings, press tours, forums, information sessions and other media events
Public organisations	Any information unless deemed confidential under Kazakhstan's laws and KMG's internal documents	• Membership of associations • International initiatives • Participation in industry forums, conferences • Membership of social and environmental working groups • Surveys and studies • Handling requests

SHAREHOLDER AND INVESTOR RELATIONS

KMG's shareholders [1]

Shareholder	Ordinary shares	Ordinary shares, %	Preferred shares	Total shares	Total shares, %
JSC Sovereign Wealth Fund Samruk-Kazyna	551,698,745	90,42	–	551,698,745	90,42
The National Bank of Kazakhstan	58,420,748	9,58	–	58,420,748	9,58

Securities issues

Type of shares	Authorised shares	Outstanding shares	Unissued shares
Ordinary	849,559,596	610,119,493	239,440,103

There were no changes in the shareholder structure in the reporting period.

The annual General Meeting of Shareholders, with its roles performed by the Management Board of the Fund according to applicable law and KMG Charter, pending approval of the following documents:

- KMG's 2020 annual financial statements (consolidated and separate)
- KMG's 2020 net profit distribution
- Amount of dividend per ordinary share in KMG

Dividend history

Indicator	2018	2019	2020
Dividend per share, KZT	61.54	60.64	133.97
Total dividends paid, KZT mln	36,273	36,998	81,738

For more details see the Financial Statements section

DIVIDENDS

The Dividend Policy aims at ensuring the balance of interests of the Fund and the Companies, as well as predictability and transparency of the approach to determining the dividend amount and payment terms and procedure.

The amount of dividend payable to companies, with more than 50% of common owned by the Fund, is differentiated according to their maturity and financial and economic position determined based on financial stability and liquidity indicators.

The dividend payment timeline is fixed by the General Meeting of Shareholders when resolving to pay out dividends.

JSC Samruk-Kazyna's Dividend Policy for Subsidiaries is available on the Company's website.

[1] As at 31 December 2020.

CREDIT RATINGS

Credit ratings assigned by international rating agencies serve as reliable and independent tools for the Group's credit assessment. KMG aims at aligning its key financial metrics with target investment-grade long-term ratings and exceeding it. The Company provides rating agencies with access to all information necessary for a comprehensive and reliable evaluation of the Group's creditworthiness Rating agencies and KMG's Management Board hold regular review meetings, and KMG maintains the contacts.

In 2020, despite material external economic risks, Fitch and S&P affirmed their earlier ratings.

In addition to the Company's operating and financial results and market environment, KMG's credit ratings are linked to Kazakhstan's sovereign credit profile as its change may impact credit ratings of Kazakhstan's companies, including KMG.

KMG's efforts to strengthen its financial position were recognised by rating agencies. In 2018–2019, KMG's financial performance improvement was translated into higher ratings of the Company's stand-alone credit profile (SACP) from Fitch, Moody's and S&P.

In 2020, despite material external economic risks, Fitch and S&P affirmed their earlier ratings. Currently, the Company has investment-grade credit ratings from Moody's and Fitch and is two grades below the investment-grade credit rating from S&P.

- • On 22 August 2019, the Moody's rating agency affirmed KMG's long-term credit rating at Baa3 with the outlook changed from stable to positive, whereas the standalone rating of KMG was upgraded from Ba3 to Ba2. In its periodic review on 14 December 2020, Moody's mentions such factors as large oil reserves and track record of sustainable production without OPEC+ restrictions, robust liquidity and long-term debt maturity profile and expects that the Company's leverage, interest coverage and cash flow metrics will remain commensurate with its Baseline Credit Assessment (BCA).
- On 27 March 2020, Fitch Ratings affirmed KMG's long-term issuer default rating at BBB– with a stable outlook. KMG's standalone credit profile at BB- was conditioned by the agency's forecast for the Company's leverage to gradually decrease after a projected increase in 2020 due to the pandemic-driven drop in oil prices.
- On 27 March 2020, S&P Global Ratings revised its outlook for KMG from stable to negative and affirmed its BB local and foreign currency ratings, following its review of Brent crude prices which are expected to average USD 30 per bbl for the rest of 2020, USD 50 per bbl in 2021 and USD 55 per bbl afterwards.
- On 28 January 2021, following the revision of its risk assessment for the oil and gas exploration, production and refining sector, S&P Global Ratings affirmed KMG's credit ratings at BB with a negative outlook.

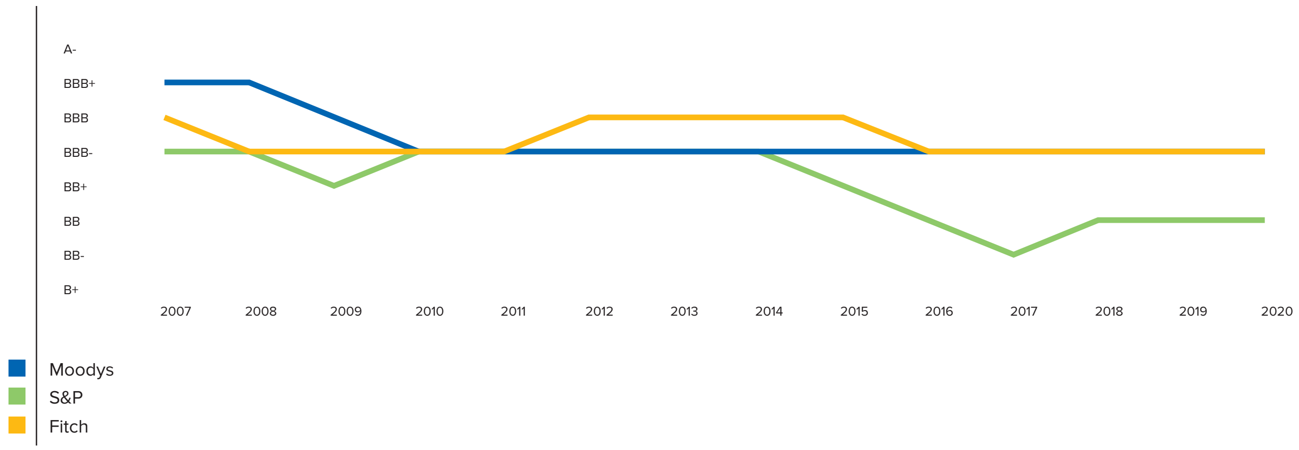
KMG's credit ratings

Rating agency	Date	Rating type	Rating	Outlook
Moody's Investors Service	22 August 2019	Long-term foreign currency rating	Baa3	Positive
S&P Global Ratings	28 January 2021	Issuer default rating	BB	Negative
Fitch Ratings	27 March 2020	Long-term issuer default rating	BBB–	Stable

Kazakhstan's credit ratings

Rating agency	Date	Rating type	Rating	Outlook
Moody's Investors Service	22 August 2019	Long-term foreign currency credit rating	Baa3	Positive
S&P Global Ratings	5 March 2021	Sovereign foreign and local currency credit rating	BBB–	Stable
Fitch Ratings	19 February 2021	Long-term foreign currency issuer default rating	BBB	Stable

Change in KMG's ratings



Sources: Moody's, S&P, Fitch

BOND ISSUES

As at 31 December 2020, KMG's consolidated debt (expressed in USD) was USD 9,690 bln, including USD 7,075 bln (around 73%) in bond issues.

KMG Group's projects are largely financed through its own net cash flows. At the same time, KMG and its subsidiaries and dependent companies may enter the bonds market, if the conditions are favourable, in order to finance individual strategic projects or remain financially stable to implement the Development Strategy until 2028.

KMG borrows both on the national and global capital markets in line with its flexible, balanced debt management policy. KMG bonds are among the most liquid instruments among those offered by Kazakhstan's issuers. KMG's FX-denominated bonds have been historically attractive to a wide range of investors. KMG bonds' investor base includes thousands of institutional and retail investors, mostly based in the USA, Europe and Asia. KMG's Eurobonds are traded in the London Stock Exchange and the Kazakhstan Stock Exchange.

KMG Eurobonds for a total amount of USD 6.25 bln have been included in the official list of Astana International Exchange since 30 March 2021. KMG Eurobonds have been traded on AIX since 31 March 2021 under the ticker symbol (KMG) with settlements in US dollars.

In October 2020, the Company issued 12.5-year Eurobonds for a total amount of USD 750 mln. Orders from investors in Kazakhstan were collected through JSC Kazakhstan Stock Exchange ("KASE") simultaneously with the international book-building. The initial price guidance was set at yields to maturity of around 3.875%, but backed by strong investor support was later revised to 3.5%, implying a total yield improvement by 37.5 bps. In October – November 2020, the Company made an early full repayment of bonds due 2022 and 2023 with nominal value of USD 906.6 mln

As at 31 December 2020, KMG had six outstanding Eurobond issues for a total amount of USD 6.25 bln on par value.

KMG's outstanding Eurobonds[1]

Currency	Issue date/maturity date	Issue size, USD mln	Outstanding bonds, USD mln	Coupon rate, % p.a.	ISIN: RegS/144A
USD	19.04.2017/19.04.2027	1,000	1,000	4.75	XS1595713782 / US48667QAN51
USD	19.04.2017/19.04.2047	1,250	1,250	5.75	XS1595714087 / US48667QAP00
USD	24.04.2018/24.04.2025	500	500	4.75	XS1807299174 / US48667QAR65
USD	24.04.2018/24.04.2030	1,250	1,250	5.375	XS1807300105 / US48667QAQ82
USD	24.04.2018/24.04.2048	1,500	1,500	6.375	XS1807299331 / US48667QAS49
USD	14.10.2020/14.04.2033	750	750	3.50	XS2242422397 / US48126PAA03

1. Senior unsecured, as at 31 December 2020 at the corporate centre level

INVESTOR COMMUNICATIONS

KMG continues to successfully implement its investor relations programme to ensure stability of financing and reduce its cost of capital. Communications with investors involve the Chairman of the Board of Directors, Chairman of the Management Board, members of the Management Board and heads of KMG's strategic, financial, and operating units, as well as the Investor Relations. In 2020, the Health, Safety and Environment Department also started participating in conference calls to provide more detailed information on occupational health, industrial safety and environmental protection matters.

KMG holds quarterly conference calls for investors to discuss financial and operating results with the Deputy Chairman and members of the Management Board, as well as department directors. Apart from the quarterly ones, the Company held special conference calls to discuss the divesture of JSC KazTransGas from KMG Group in Q2 2020 and the roadshow before the Eurobond issue in Q4 2020.

The Company adheres to the principles of timeliness, completeness and availability of disclosures for the investment community. KMG quarterly publishes quarterly results presentations, financial results, trading updates, IFRS financial statements and analyst databooks. In 2020, the Company continued its practice to promptly inform investors and analysts on KMG's financial and operating performance upon their request.

Guided by sustainability principles, in 2020 the Company considerably enhanced the transparency of its ESG disclosures. Particularly, the Company published its expanded 2019 Sustainability Report as well as 2019 CDP Climate Change Questionnaire and, for the first time, a Water Security Questionnaire, both on the CDP's website as well. In addition, for a third year running, KMG has been the leader of the environmental transparency and responsibility rating of Kazakhstan oil and gas companies in 2019, prepared by the World Wide Fund for Nature (WWF), CREON Group and the National Rating Agency, supported by the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan and in partnership with the United Nations Environment Programme (UNEP) in Central Asia.

The materials and publications as well as contacts of the Investor Relations are available in the Investors section on the Company's website.

KMG understands the importance of further enhancing its two-way dialogue with the investment community and regularly conducts investor perception surveys on the Company, with the results reviewed by the Board of Directors.

2020 investor calendar

Q1 2020	◆ Investor conference call on full-year 2019 financial and operating results ◆ 2019 quarterly results presentation ◆ 2019 financial results and trading update ◆ IFRS consolidated financial statements for 2019
Q2 2020	◆ Investor conference call on Q1 2020 financial and operating results ◆ Q1 2020 quarterly results presentation ◆ Q1 2020 financial results and trading update ◆ Interim condensed consolidated IFRS financial statements for 3M 2020 ended on 31 March 2020 ◆ Publication of 2019 Annual Report ◆ Special call for investors on the divesture of JSC KazTransGas from KMG Group
Q3 2020	◆ Investor conference call on Q2 2020 financial and operating results ◆ Q2 2020 quarterly results presentation ◆ Q2 2020 financial results and trading update ◆ Interim condensed consolidated IFRS financial statements for 6M 2020 ended on 30 June 2020 ◆ Publication of 2019 Sustainability Report ◆ Publication of 2019 CDP Climate Change Questionnaire and Water Security Questionnaire
Q4 2020	◆ Investor conference call on Q3 2020 financial and operating results ◆ Q3 2020 quarterly results presentation ◆ Q3 2020 financial results and trading update ◆ Interim condensed consolidated IFRS financial statements for 9M 2020 ended on 30 September 2020 ◆ Roadshow on the Eurobond issue, including a series of conference calls with current and potential investors, involving the Deputy Chairman of the Management Board for Economics and Finance and Chairman of the Board of Directors

FINANCIAL STATEMENTS

The Company observes financial discipline and timely fulfills all its financial obligations.

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Independent auditor's report

To the Shareholders, Board of Directors and Management of Joint Stock Company "National Company "KazMunayGas"

Opinion

We have audited the consolidated financial statements of JSC NC "KazMunayGas" and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2020, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2020 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' (IESBA) International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements section* of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

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Key audit matter	How our audit addressed the key audit matter
Impairment of non-current assets	
We considered this matter to be one of most significance in the audit due to materiality of the balances of non-current assets, including upstream, exploration and evaluation, downstream assets and investments in upstream and midstream joint ventures and associates, to the consolidated financial statements, the high level of subjectivity in respect of assumptions underlying impairment analysis and significant judgements and estimates made by management. In addition, the combination of volatility in oil prices and Tenge and uncertainty about future economic growth affects the Group's business prospects and therefore triggers potential impairment of the Group's assets. Significant assumptions included discount rates, oil and petroleum products prices forecasts and inflation and exchange rate forecasts. Significant estimates included production forecast, future capital expenditure and oil and gas reserves available for development and production. Information on non-current assets and the impairment tests performed is disclosed in Note 4 to the consolidated financial statements.	We involved our business valuation specialists in the testing of impairment analysis and calculation of recoverable amounts performed by management. We analyzed the assumptions underlying management forecast. We compared oil and petroleum products prices used in the calculation of recoverable amounts to available market forecasts. We compared the discount rates and long-term growth rates to general market indicators and other available evidence. We tested the mathematical integrity of the impairment models and assessed the analysis of the sensitivity of the results of impairment tests to changes in assumptions. We performed procedures to assess competence, capabilities and objectivity of the external experts engaged by the Group to estimate the volumes of oil and gas reserves and prepare impairment models, where applicable. We analysed disclosures on impairment test in the consolidated financial statements.
Compliance with debt covenants	
In accordance with the terms of certain financing arrangements, the Group should comply with certain financial and non-financial covenants. There is a higher likelihood that covenants impacted by trading volumes, revenue and profit may be breached particularly in subsidiaries impacted by volatility of oil prices and higher operating expenses, therefore, we focused on this area during our audit. Breaching covenants could result in funding shortages.	We examined the terms of financing arrangements and analysed financial and non-financial covenants, terms of early repayment and events of default. We examined the presence of confirmations received from the banks related to compliance with financial covenants. We compared data used in the calculations with the financial statements. We tested mathematical accuracy of financial covenants calculations.

Cross default provisions are in place under the Group's financing arrangements. Compliance with the financing covenants is one of the matters of most significance in the audit since it can have a major impact on the going concern assumption used in the preparation of the consolidated financial statements, and on classification of interest-bearing liabilities in the consolidated statement of financial position.

Information on compliance with covenants is disclosed in Note 24 to the consolidated financial statements.

We analysed the disclosures in respect of debt covenants compliance in the consolidated financial statements of the Group.

Other information included in the Group's 2020 annual report

Other information consists of the information included in the Group's 2020 Annual Report, other than the consolidated financial statements and our auditor's report thereon. Management is responsible for the other information. The Group's 2020 Annual Report is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information, when it becomes available, and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

Responsibilities of management and the Audit Committee for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

Building a better working world

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The partner in charge of the audit resulting in this independent auditor's report is Paul Cohn.

Ernst & Young LLP

Paul Cohn
Audit Partner

Guldariya Zaripova
Auditor

Auditor qualification certificate
No. МФ-0000414 dated 13 January 2017

Rustamzhan Sattarov
General Director
Ernst and Young LLP

State audit license for audit activities on the territory of the Republic of Kazakhstan: series МФЮ-2 No. 0000003 issued by the Ministry of finance of the Republic of Kazakhstan on 15 July 2005

050060, Republic of Kazakhstan, Almaty
Al-Farabi Ave., 77/7, Esentai Tower

5 March 2021

CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2020 WITH INDEPENDENT AUDITOR'S REPORT

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

In millions of tenge	Note	For the years ended December 31 2020	2019[1]
Revenue and other income			
Revenue	5	4,556,037	6,858,856
Share in profit of joint ventures and associates, net	6	511,195	827,979
Finance income	13	109,753	240,880
Gain on sale of subsidiaries		519	17,481
Other operating income		24,576	24,936
Total revenue and other income		5,202,080	7,970,132
Costs and expenses			
Cost of purchased oil, gas, petroleum products and other materials	7	(2,277,066)	(3,913,744)
Production expenses	8	(740,786)	(721,693)
Taxes other than income tax	9	(269,559)	(454,295)
Depreciation, depletion and amortization	32	(360,283)	(337,424)
Transportation and selling expenses	10	(458,186)	(420,402)
General and administrative expenses	11	(170,208)	(213,967)
Impairment of property, plant and equipment, intangible assets, exploration and evaluation assets	12	(243,694)	(150,751)
Exploration expense	12	(19,807)	(57,068)
Impairments of investments in joint ventures and associate	18	(30,654)	–
Finance costs	13	(297,551)	(317,433)
Other expenses		(32,151)	(7,203)
Net foreign exchange (loss)/ gain		(23,935)	8,479
Total costs and expenses		(4,923,880)	(6,585,501)

[1] Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2019, and reflect reclassifications made, refer to Note

In millions of tenge	Note	For the years ended December 31 2020	2019[1]
Profit before income tax		278,200	1,384,631
Income tax expense	28	(106,303)	(226,180)
Profit for the year from continuing operations		171,897	1,158,451
Discontinued operations			
Profit after income tax for the year from discontinued operations		–	6
Net profit for the year		171,897	1,158,457
Net profit/(loss) for the year attributable to:			
Equity holders of the Parent Company		273,237	1,197,157
Non-controlling interest		(101,340)	(38,700)
		171,897	1,158,457
Other comprehensive income/(loss)			
Other comprehensive income/(loss) to be reclassified to profit or loss in subsequent periods			
Hedging effect		(25)	–
Exchange differences on translation of foreign operations		450,936	(32,072)
Tax effect		(36,481)	(1,240)
Net other comprehensive income/(loss) to be reclassified to profit or loss in the subsequent periods		414,430	(33,312)
Other comprehensive loss not to be reclassified to profit or loss in subsequent periods			
Actuarial loss on defined benefit plans of the Group		(10,592)	(5,688)
Actuarial (loss)/gain on defined benefit plans of joint ventures		(285)	199
Tax effect		108	1,179
Net other comprehensive loss not to be reclassified to profit or loss in the subsequent periods		(10,769)	(4,310)
Net other comprehensive income/(loss) for the year		403,661	(37,622)
Total comprehensive income for the year, net of tax		575,558	1,120,835
Total comprehensive income for the year attributable to:			
Equity holders of the Parent Company		677,742	1,159,447
Non-controlling interest		(102,184)	(38,612)
Earnings per share** – Tenge thousands			
Basic and diluted	23	0.28	1.90

Deputy Chairman of the Management Board for Economy and Finance

D.S. Karabayev

Chief accountant

A.S. Yesbergenova

[2] The number of ordinary shares as of December 31, 2020 and 2019 equaled to 610,119,493.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

In millions of tenge	Note	As at December 31 2019*	2019[1]
Assets			
Non-current assets			
Property, plant and equipment	14	4,369,745	4,484,271
Right-of-use assets		53,661	38,379
Exploration and evaluation assets	15	158,385	179,897
Investment property		22,826	9,541
Intangible assets	16	168,481	171,172
Long-term bank deposits	17	56,528	52,526
Investments in joint ventures and associates	18	6,471,021	5,590,384
Deferred income tax assets	28	58,590	73,714
VAT receivable		94,481	133,557
Advances for non-current assets		23,343	73,367
Loans and receivables due from related parties	21	684,610	615,546
Other non-current financial assets		11,651	2,488
Other non-current non-financial assets		3,542	17,162
		12,176,864	11,442,004
Current assets			
Inventories	19	228,065	281,215
VAT receivable		106,695	74,049
Income tax prepaid	28	70,301	54,517
Trade accounts receivable	20	422.821	397,757
Short-term bank deposits	17	282,472	359,504
Loans and receivables due from related parties	21	27,795	138,719
Other current financial assets	20	57.071	63,555
Other current non-financial assets	20	88,821	198,539
Cash and cash equivalents	22	1,145,864	1,064,452
		2,429,905	2,632,307
Assets classified as held for sale	14	46,518	7,604
		2,476,423	2,639,911
Total assets		14,653,287	14,081,915
Equity and liabilities			
Equity			
Share capital	23	916,541	916,541
Additional paid-in capital	23	8,981	40,794
Other equity		58	83
Currency translation reserve		2,146,035	1,731,747
Retained earnings		5,636,705	5,469,236
Attributable to equity holders of the Parent Company		8,708,320	8,158,401

[1] Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2019, and reflect reclassifications made, refer to Note 3.

In millions of tenge	Note	As at December 31 2019*	2019[1]
Non-controlling interest	23	(71,641)	38,255
Total equity		8,636,679	8,196,656
Non-current liabilities			
Borrowings	24	3,716,892	3,584,076
Provisions	25	303,154	273,589
Deferred income tax liabilities	28	555,894	509,462
Lease liabilities		45,499	35,996
Other non-current financial liabilities		32,963	16,365
Other non-current non-financial liabilities		28,831	27,329
		4,683,233	4,446,817
Current liabilities			
Borrowings	24	361,556	253,428
Provisions	25	63,235	103,538
Income tax payable	28	8,967	13,011
Trade accounts payable	26	536,922	667,861
Other taxes payable	27	130,263	86,666
Lease liabilities		16,971	10,922
Other current financial liabilities	26	86,440	93,139
Other current non-financial liabilities	26	129,021	209,877
		1,333,375	1,438,442
Total liabilities		6,016,608	5,885,259
Total equity and liabilities		14.653.287	14.081.915
Book value per ordinary share – Tenge thousands	23	13.880	13.154

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Chief accountant

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CONSOLIDATED STATEMENT OF CASH FLOWS

In millions of tenge	Note	For the years ended December 31, 2019	2019
Operating activities			
Profit before income tax from continuing operations		278,200	1,384,631
Profit before income tax from discontinued operations		–	6
Profit before income tax		**278,200**	**1,384,637**

[1] Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2019, and reflect reclassifications made, refer to Note 3.

In millions of tenge	Note	2019	2019
		For the years ended December 31,	
Adjustments to reconcile profit before taxation to net cash provided by operating activities:			
Depreciation, depletion and amortization	32	360,283	337,424
Impairment of property, plant and equipment, intangible assets, exploration and evaluation assets	12	243,694	150,751
Finance costs	13	297,551	317,433
Net foreign exchange differences		45,388	4,142
Impairment of investment in joint venture	18	30,654	–
Exploration expense	12	19,807	57,068
Loss on disposal of property, plant and equipment, intangible assets and investment property, net		6,508	6,430
Accrual of impairment of VAT receivable	11	6,435	15,703
Change in financial guarantees		6,288	(6,956)
VAT that could not be offset	11	4,528	6,910
Allowance of expected credit loss for trade receivables and other financial assets	11	4,225	14,096
Unrealized losses/(gains) from derivatives on petroleum products		626	(465)
Gain on sale of subsidiaries		(519)	(17,481)
Allowance/(reversal) of obsolete inventories		357	(2,534)
Adjustment for repayment of advances received for the supply of oil		–	(864,450)
(Reversal)/accrual of impairment losses allowance for other non-financial assets	11	(65)	42
Realized gain from derivatives on petroleum products		(22,946)	(8,410)
Movements in provisions		(43,174)	2,967
Finance income	13	(109,753)	(240,880)
Share in profit of joint ventures and associates, net	6	(511,195)	(827,979)
Other adjustments		317	13
Operating profit before working capital changes		**617,209**	**328,461**
Change in VAT receivable		(3,993)	(28,070)
Change in inventory		82,337	11,710
Change in trade accounts receivable and other current assets		121,837	11,466
Change in trade and other payables and contract liabilities		(305,380)	(23,578)
Change in other taxes payable		34,066	(19,916)
Cash generated from operations		546,076	280,073
Dividends received from joint ventures and associates	18	134,772	126,461
Net payment of derivative instruments		(142)	(7)
Income taxes paid		(87,984)	(161,979)
Interest received		90,798	118,207
Interest paid		(236,987)	(238,954)
Net cash flow from operating activities		**446,533**	**123,801**
Investing activities			
Withdrawal and placement of bank deposits, net		104,107	28,987

In millions of tenge	Note	2019	2019
		For the years ended December 31,	
Purchase of property, plant and equipment, intangible assets, investment property and exploration and evaluation assets		(396,406)	(444,193)
Proceeds from sale of property, plant and equipment, intangible assets, investment property, exploration and evaluation assets and assets held for sale		50,738	42,776
Proceeds from disposal of subsidiaries, net		8,710	56,760
Contribution to joint ventures		(6,586)	(889)
Proceeds from disposal of joint ventures		5,966	–
Loans given to related parties	29	(57,485)	(56,516)
Repayment of loans due from related parties	29	72,721	47,656
(Acquisition)/refund of debt securities		(292)	454
Proceeds from lease receivables from joint venture		1,404	–
Proceeds from Note receivable from a shareholder of a joint venture		11,512	5,403
Net cash flows used in investing activities		**(205,611)**	**(319,562)**
Financing activities			
Proceeds from borrowings	24	676,979	271,772
Repayment of borrowings	24	(807,355)	(444,656)
Dividends paid to Samruk-Kazyna and National Bank of RK	23	(81,738)	(36,998)
Dividends paid to non-controlling interests	23	(4,553)	(5,693)
Share buyback by subsidiary	23	(212)	(2,318)
Distributions to Samruk-Kazyna	23	(7,987)	(36,297)
Payment of principal lease liabilities		(18,978)	(16,181)
Payment under financial guarantee		(1,383)	–
Net cash flows used in financing activities		(245,227)	(270,371)
Effects of exchange rate changes on cash and cash equivalents		85,341	(14,985)
Change in allowance for expected credit losses in cash and cash equivalents		376	(279)
Net change in cash and cash equivalents		**81,412**	**(481,396)**
Cash and cash equivalents, at the beginning of the year		**1,064,452**	**1,545,848**
Cash and cash equivalents, at the end of the year		**1,145,864**	**1,064,452**

Deputy Chairman of the Management Board for Economy and Finance

D.S. Karabayev

Chief accountant

A.S. Yesbergenova

NON-CASH AND OTHER TRANSACTIONS: SUPPLEMENTAL DISCLOSURE

The following significant non-cash transactions and other transactions were excluded from the consolidated statement of cash flows:

Account payable for non-current assets

For the year ended December 31, 2020, accounts payable for purchases of property, plant and equipment increased by 6,107 million tenge (2019: increased by 97,382 million tenge).

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Attributable to equity holders of the Parent Company							
In millions of tenge	Share capital	Additional paid-in capital	Other equity	Currency translation reserve	Retained earnings	Total	Non-controlling interest	Total
As at December 31, 2018	**916,541**	**40,794**	**83**	**1,764,108**	**4,341,063**	**7,062,589**	**80,480**	**7,143,069**
Effect of adoption of IFRS 16	–	–	–	–	(4,268)	(4,268)	(910)	(5,178)
As at January 1, 2019 (restated)	**916,541**	**40,794**	**83**	**1,764,108**	**4,336,795**	**7,058,321**	**79,570**	**7,137,891**
Net profit/(loss) for the year	–	–	–	–	1,197,157	1,197,157	(38,700)	1,158,457
Other comprehensive (loss)/income	–	–	–	(32,361)	(5,349)	(37,710)	88	(37,622)
Total comprehensive income/(loss) for the year	–	–	–	(32,361)	1,191,808	1,159,447	(38,612)	1,120,835
Dividends (Note 23)	–	–	–	–	(36,998)	(36,998)	(4,138)	(41,136)
Transactions with Samruk-Kazyna (Note 23)	–	–	–	–	(14,184)	(14,184)	–	(14,184)
Distributions to Samruk-Kazyna (Note 23)	–	–	–	–	(6,194)	(6,194)	–	(6,194)
Share buyback by subsidiary	–	–	–	–	(1,991)	(1,991)	(473)	(2,464)
Contribution to share capital of subsidiary without change in ownership shares	–	–	–	–	–	–	1,908	1,908
As at December 31, 2019	**916,541**	**40,794**	**83**	**1,731,747**	**5,469,236**	**8,158,401**	**38,255**	**8,196,656**
Net profit/(loss) for the year	–	–	–	–	273,237	273,237	(101,340)	171,897
Other comprehensive income/(loss)	–	–	(25)	414,288	(9,758)	404,505	(844)	403,661
Total comprehensive income/(loss) for the year	–	–	(25)	414,288	263,479	677,742	(102,184)	575,558
Dividends (Note 23)	–	–	–	–	(81,738)	(81,738)	(4,856)	(86,594)
Transactions with Samruk-Kazyna (Note 23)	–	–	–	–	(11,617)	(11,617)	–	(11,617)
Distributions to Samruk-Kazyna (Note 23)	–	–	–	–	(7,763)	(7,763)	–	(7,763)
Transfer of pipelines contributed by the Government due to termination of the trust management agreement (Note 23)	–	(17,323)	–	–	1,205	(16,118)	–	(16,118)
Transfer of difference between par and fair value of to the loan received from Samruk-Kazyna to the Company due to settlement (Note 23)	–	(10,971)	–	–	10,971	–	–	–
Transfer of excess of fair value over nominal value of the loan receivable, contributed by Samruk-Kazyna due to settlement (Note 23)	–	(3,519)	–	–	3.519	–	–	–
Reserve for put option of non-controlling interest holder of a subsidiary	–	–	–	–	(10,750)	(10,750)	(2,481)	(13,231)
Share buyback by subsidiary	–	–	–	–	163	163	(375)	(212)
As at December 31, 2020	**916,541**	**8,981**	**58**	**2,146,035**	**5,636,705**	**8,708,320**	**(71,641)**	**8,636,679**

Deputy Chairman of the Management Board for Economy and Finance

D.S. Karabayev

Chief accountant

A.S. Yesbergenova

The accounting policies and explanatory notes on pages 9 through 91 form an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2020

1. GENERAL

Joint stock company "National Company "KazMunayGas" (the Company, JSC NC "KazMunayGas" or Parent Company) is oil and gas enterprise of the Republic of Kazakhstan (RK), which was established on February 27, 2002 as a closed joint stock company pursuant to the Decree No. 811 of the President of the Republic of Kazakhstan dated February 20, 2002 and the resolution of the Government of the RK (further the Government) No. 248 dated February 25, 2002. The Company was formed as a result of the merger of closed joint stock companies "National Oil and Gas Company Kazakhoil" and "National Company Transport Nefti i Gaza". As the result of the merger, all assets and liabilities, including ownership interest in all entities owned by these companies, have been transferred to the Company. The Company was reregistered as a joint stock company in accordance with the legislation of the RK in March 2004.

Starting from June 8, 2006, the sole shareholder of the Company was joint stock company "Kazakhstan Holding Company for State Assets Management "Samruk", which in October 2008 was merged with the state owned Sustainable Development Fund "Kazyna" and formed joint stock company "National Welfare Fund "Samruk-Kazyna", now renamed to joint stock company "Sovereign Wealth Fund Samruk-Kazyna" (further Samruk-Kazyna). The Government is the sole shareholder of Samruk Kazyna. On August 7, 2015, the National Bank of RK purchased 9.58% plus one share of the Company from Samruk-Kazyna.

As at December 31, 2020, the Company has interest in 61 operating companies (as of December 31, 2019: 54) (jointly the "Group").

The Company has its registered office in the RK, Nur-Sultan, Dinmukhamed Kunayev, 8.

The principal activity of the Group includes, but is not limited, to the following:
- Participation in the development and implementation of the uniform public policy in the oil and gas sector;
- Representation of the state interests in subsoil use contracts through interest participation in those contracts; and
- Corporate governance and monitoring of exploration, development, production, oil servicing, processing, petrochemistry, transportation and sale of hydrocarbons and the designing, construction and maintenance of oil-and-gas pipeline and field infrastructure.

The consolidated financial statements comprise the financial statements of the Company and its controlled subsidiaries (Note 3).

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2. BASIS OF PREPARATION

These consolidated financial statements have been prepared on a historical cost basis, except as described in the accounting policies and the notes to these consolidated financial statements. All values in these consolidated financial statements are rounded to the nearest millions, except when otherwise indicated.

STATEMENT OF COMPLIANCE

These consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by International Accounting Standards Board ("IASB").

The preparation of the consolidated financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the Group consolidated financial statements are disclosed in Note 4.

In course of preparation of these consolidated financial statements the Group management considered the current international economic environment including complex of uncertainties due to COVID-19 pandemic. The consolidated financial statements were prepared on a going concern basis.

FOREIGN CURRENCY TRANSLATION

Functional and presentation currency

Items included in the financial statements of each of the Group's entities included in these consolidated financial statements are measured using the currency of the primary economic environment in which the entities operate ("the functional currency"). The consolidated financial statements are presented in Kazakhstan tenge ("tenge" or "KZT"), which is the Company's functional currency.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the consolidated statement of comprehensive income.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined.

Differences arising on settlement or translation of monetary items are recognised in profit or loss with the exception of monetary items that are designated as part of the hedge of the Group's net investment of a foreign operation. These are recognised in other comprehensive income until the net investment is disposed of, at which time, the cumulative amount is reclassified to profit or loss. Tax charges and credits attributable to exchange differences on those monetary items are also recorded in other comprehensive income.

Group Companies

The results and financial position of all of the Group's subsidiaries, joint ventures and associates (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:
- assets and liabilities for each statement of financial position presented are translated at the closing rate at that reporting date;
- income and expenses for each statement of comprehensive income are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the dates of the transactions); and
- all resulting exchange differences are recognized as a separate component of other comprehensive income.

Exchange rates

Weighted average currency exchange rates established by the Kazakhstan Stock Exchange ("KASE") are used as official currency exchange rates in the RK.

The currency exchange rate of KASE as at December 31, 2020 was 420.91 tenge to 1 US dollar. This rate was used to translate monetary assets and liabilities denominated in United States dollars ("US dollar") as at December 31, 2020 (2019: 382.59 tenge to 1 US dollar). The currency exchange rate of KASE as at March 5, 2021 was 419.66 tenge to 1 US dollar.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

NEW AND AMENDED STANDARDS AND INTERPRETATIONS

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Group's annual consolidated financial statements for the year ended December 31, 2019, except for the adoption of new standards and interpretations effective as of January 1, 2020.

The following amendments were applied for the first time in 2020:

- Amendments to IFRS 3 Business Combinations. The amendments enhanced definition of a business set out by the standard and clarifies that to be considered a business, an integrated set of activities and assets must include, at a minimum, an input and a substantive process that, together, significantly contribute to the ability to create output. Furthermore, it clarifies that a business can exist without including all of the inputs and processes needed to create outputs. The amendments are applicable prospectively. These amendments had no impact on the consolidated financial statements of the Group since the current practice is in line with these amendments.
- Amendments to IFRS 7 Financial instruments: Disclosures, IAS 39 Financial Instruments: Recognition and Measurement and IFRS 9 Financial instruments. The amendments provide a number of reliefs, which apply to all hedging relationships that are directly affected by interest rate benchmark reform. A hedging relationship is affected if the reform gives rise to uncertainty about the timing and/or amount of benchmark-based cash flows of the hedged item or the hedging instrument. These amendments have no impact on the consolidated financial statements of the Group as it does not have any interest rate hedge relationships.
- Amendments to IAS 1 Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors. These amendments introduced new definition of material. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users. Since the current practice is in line with these amendments, there is no impact on the consolidated financial statements.
- Revised version of Conceptual Framework for Financial Reporting. In particular, the revised version introduced new definitions of assets and liabilities, as well as amended definitions of income and expenses. These amendments had no impact on the consolidated financial statements of the Group.
- Amendments to IFRS 16 Leases in regards of COVID-19-related rent concessions. The amendments provide relief to lessees from assessment whether a COVID-19-related rent concession is a lease modification. The amendments did not have a material impact on the consolidated financial statements, as the Group has not received significant rent concessions related to pandemic.

STANDARDS ISSUED BUT NOT YET EFFECTIVE

In May 2017, the IASB issued IFRS 17 Insurance Contracts. IFRS 17 establishes a single framework for the accounting for insurance contracts and contains requirements for related disclosures. The new standard replaces IFRS 4 Insurance Contracts. The standard is effective for annual periods beginning on or after January 1, 2021. The Group does not expect the standard to have a material impact on the consolidated financial statements.

In January 2020, the IASB issued amendments to IAS 1 Presentation of Financial Statements named Classification of Liabilities as Current or Non-current. The amendments clarify requirements for classifying liabilities as current or non-current. The amendments are effective on or after January 1, 2023; earlier application is permitted. The Group does not expect the amendments to have a material impact on the consolidated financial statements, as the Group already applies criteria set by the amendments.

In May 2020, the IASB issued amendments to IFRS 3 Business Combinations named Reference to the Conceptual Framework. The amendments replace references to the Conceptual Framework for Financial Reporting with the current version issued in March 2018, without significantly changing the requirements of the standard. The amendments are effective on or after January 1, 2022; earlier application is permitted. The Group does not expect the amendments to have a material impact on the consolidated financial statements.

In May 2020, the IASB issued amendments to IAS 16 Property, Plant and Equipment named Property, Plant and Equipment: Proceeds Before Intended Use. The amendments prohibit entities from deducting from the cost of an item of property, plant and equipment any proceeds of the sale of items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognises the proceeds from selling such items, and the costs of producing those items, in profit or loss. The amendments are effective on or after January 1, 2022 and should be applied retrospectively. The Group does not expect the amendments to have a material impact on the consolidated financial statements.

In May 2020, the IASB issued amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets named Onerous Contracts – Costs of Fulfilling a Contract. The amendments specify which costs an entity needs to include when assessing whether a contract is onerous. The amendments are effective on or after January 1, 2022; earlier application is permitted. The Group does not expect the amendments to have a material impact on the consolidated financial statements.

In August 2020, the IASB issued amendments to IFRS 7 Financial Instruments: Disclosures, IFRS 9 Financial Instruments as well as IFRS 4 Insurance Contracts and IFRS 16 Leases named Interest Rate Benchmark Reform – Phase II. The amendments provide certain temporary reliefs which address the financial reporting effects related to the transfer to the risk-free interest rate. The amendments are effective on or after January 1, 2021; earlier application is permitted. The Group does not expect the amendments to have a material impact on the consolidated financial statements.

Additionally, a number of amendments, not yet effective, were issued during annual improvement process conducted by IASB. They include the amendments to IFRS 1 Fist-time Adoption named First-time Adoption: Subsidiary as a First-time Adopter, and the amendments to IFRS 9 Financial Instruments named Fees in the '10 per cent' Test for Derecognition of Financial Liabilities. The Group does not expect the amendments to have a material impact on the consolidated financial statements.

Amendments to IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2 Making Materiality Judgements. The amendments to IAS 1 require companies to disclose their material accounting policy information rather than their significant accounting policies. The amendments to IFRS Practice Statement 2 provide guidance on how to apply the concept of materiality to accounting policy disclosures.

Separately, the Board has also issued amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors. The amendments clarify how companies should distinguish changes in accounting policies from changes in accounting estimates. That distinction is important because changes in accounting estimates are applied prospectively only to future transactions and other future events, but changes in accounting policies are generally also applied retrospectively to past transactions and other past events.

The amendments to IAS 1 and IAS 8 will be effective for annual reporting periods beginning on or after 1 January 2023, with early application permitted.

Changes in accounting policies related to presentation

The Group has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective.

In accordance with IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors, the Group decided to apply voluntary changes in accounting policies related to presentation of the consolidated financial statements to improve presentation that led to reclassifications below, none of which affect net profit or comprehensive income or equity.

Changes in presentation of the consolidated statement of comprehensive income

In 2020, the Group decided to present separately Exploration expense that was included in Impairment of property, plant and equipment, intangible assets and exploration and evaluation assets for the year ended December 31, 2019. Accordingly, comparative information in the consolidated statement of comprehensive income, Notes 12 and 15 have been re-presented to align with the presentation of 2020.

Changes in presentation of the consolidated statement of financial position

In 2020, the Group decided to present separately other financial and non-financial current assets, financial and non-financial non-current and current liabilities. Accordingly, comparative information in the consolidated statement of financial position have been re-presented to align with the presentation of 2020.

CHANGE IN ESTIMATES ON CONTRIBUTION OF GAS PIPELINES UNDER TRUST MANAGEMENT AGREEMENTS TERMS FROM THE STATE BODIES

In prior years the Group used a judgement when treating pipelines transferred to the Group from local executive bodies (LEB) or State Property and Privatization Committee Departments (SPPCD) under trust management agreements (TMA). The judgement was that TMA serves as a temporary mechanism, which gives control to the Group over the pipelines until the legal title is transferred to the Group. The Group assumed that the Government transfers the pipelines to Samruk-Kazyna, and the latter transfers to the Group in the shortest period possible. Also the judgment was based on the Memorandum of Understanding signed in 2017 with local authorities, according to which all risks and rewards were transferred to the Group, including property taxation and rights for tariff filings.

During 2020, following significant changes occurred in facts and circumstances that supported the initial judgement:
- TMA has expired without prolongation and gas pipelines were returned to LEB, while it was initially assumed that the Group will receive legal ownership of these assets;
- Assets received under TMA were not transferred to the republican ownership (to SPPCD) and, further to Samruk-Kazyna within the short period as was expected. This revealed that the transferring mechanism was not a temporary measure to provide the Group with the ownership rights until the formal transfer of the legal title.
- The above mentioned Memorandum expired.

Accordingly, the Group concluded that from 2020, the initial judgement is no longer applicable and, after TMA update, the Group no longer can exercise control over the pipelines provided by LEB. In accordance with IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors, this change in judgement does not represent an accounting error and, was accounted prospectively.

As a result, in 2020 the Group derecognized all pipelines received under such TMA at their carrying amounts at that date and, correspondingly, reduced additional paid-in capital by 17,323 million tenge (Note 23). The change in the judgment affects current and future reporting periods, and if the change in the judgement did not occur in 2020, equity and PPE at the end of 2020 would have been higher by 15,873 million tenge, the income statement effect on the current and future reporting periods is insignificant.

BASIS OF CONSOLIDATION

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries as of December 31, 2020. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if and only if the Group has: power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee); exposure, or rights, to variable returns from its involvement with the investee, and; the ability to use its power over the investee to affect its returns.

Generally, there is a presumption that a majority of voting rights result in control. To support this presumption and when the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including: the contractual arrangement with the other vote holders of the investee; rights arising from other contractual arrangements; the Group's voting rights and potential voting rights. The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control over the subsidiary. Assets, liabilities, revenue and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary. All intra-group balances, transactions, unrealized gains and losses resulting from intra-group transactions and dividends are eliminated in full. A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognises the related assets (including goodwill), liabilities, non-controlling interest and other components of equity while any resultant gain or loss is recognised in profit or loss. Any investment retained is recognised at fair value.

SUBSIDIARIES

As at December 31, 2020 and 2019, the following direct significant subsidiaries were included in these consolidated financial statements:

Significant entities	Main activity	Country of incorporation	Percentage ownership	
			2020	2019
KazMunayGas Exploration Production JSC (KMG EP)	Exploration and production	Kazakhstan		99,70%
KazMunayTeniz LLP	Exploration and production	Kazakhstan		100%
KMG Karachaganak LLP (Karachaganak)	Exploration and production	Kazakhstan		100%
KazTransOil JSC (KTO)	Oil transportation	Kazakhstan		90%
KazMorTransFlot LLP	Oil transportation and construction	Kazakhstan		100%
KazTransGas JSC (KTG)	Gas transportation	Kazakhstan		100%
Cooperative KazMunayGas PKI U.A.	Refinery and marketing of oil products	Netherlands		100%
Atyrau Refinery LLP (Atyrau refinery)	Refinery	Kazakhstan		99,53%
Pavlodar oil chemistry refinery LLP (Pavlodar refinery)	Refinery	Kazakhstan		100%
KMG International N.V. (KMGI)	Refinery and marketing of oil products	Romania		100%
KazMunayGas Onimdery LLP	Marketing of oil products	Kazakhstan		100%
KazMunayGas-Service LLP	Service projects	Kazakhstan		100%
KMG Drilling&Services LLP (KMG Drilling)	Drilling services	Kazakhstan		100%

BUSINESS COMBINATIONS AND GOODWILL

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition costs incurred are expensed and included in general and administrative expenses.

When the Group acquires a business, it assesses the financial assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

Any contingent consideration to be transferred by the acquirer will be recognised at fair value at the acquisition date. Contingent consideration classified as an asset or liability that is a financial instrument and within the scope of IFRS 9 Financial Instruments: Recognition and Measurement, is measured at fair value with changes in fair value recognised in the statement of profit or loss in accordance with IFRS 9. If the contingent consideration is not within the scope of IFRS 9, it is measured at fair value through profit and loss. Contingent consideration that is classified as equity is not remeasured and its subsequent settlement is accounted for within equity.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognised for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognised at the acquisition date.

If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognised in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill forms part of a cash-generating unit and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed off in this circumstance is measured based on the relative values of the operation disposed of and the portion of the cash-generating unit retained.

Business combinations achieved in stages

The acquisition date fair value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date through profit or loss. In a business combination achieved in stages the acquirer recognises goodwill as of the acquisition date measured as the excess of (1) over (2) below:

1. the aggregate of: (i) the consideration transferred measured in accordance with this IFRS 3 Business Combinations, which generally requires acquisition-date fair value; (ii) the amount of any non-controlling interest in the acquiree measured in accordance with this IFRS; and (iii) the acquisition-date fair value of the acquirer's previously held equity interest in the acquire;
2. the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed.

Acquisition of subsidiaries from parties under common control

Acquisitions of subsidiaries from parties under common control are accounted for using the pooling of interest method.

The assets and liabilities of the subsidiary transferred under common control are recorded in the consolidated financial statements at the carrying amounts of the transferring entity (the Predecessor) at the date of the transfer. Related goodwill, if any, inherent in the Predecessor's original acquisition is also recorded in the consolidated financial statements. Any difference between the total book value of net assets, including the Predecessor's goodwill, and the consideration paid is accounted for in the consolidated financial statements as an adjustment to equity.

The consolidated financial statements, including corresponding figures, are presented as if the subsidiary had been acquired by the Group on the date it was originally acquired by the Predecessor.

JOINT OPERATIONS

A joint operation is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets and obligations for the liabilities, relating to the arrangement. In relation to its interests in joint operations, the Group recognizes its: Assets, including its share of any assets held jointly; Liabilities, including its share of any liabilities incurred jointly; Revenue from the sale of its share of the output arising from the joint operation; Share of the revenue from the sale of the output by the joint operation; Expenses, including its share of any expenses incurred jointly.

INVESTMENT IN ASSOCIATES AND JOINT VENTURES

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but which does not comprise control or joint control over those policies. A joint venture (further - JV) is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control. Under contractual arrangement that establishes joint control the Group may own less than 50% of shares in JVs.

The considerations made in determining significant influence or joint control are similar to those necessary to determine control over subsidiaries.

The Group's investments in its JV and associates are accounted for using the equity method. Under the equity method, the investment in a JV or an associate is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the JV or associate since the acquisition date. Goodwill relating to the JV or associate is included in the carrying amount of the investment and is neither amortized nor individually tested for impairment.

The consolidated statement of comprehensive income reflects the Group's share of the results of operations of the JV or associate. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognized directly in the equity of the JV or associate, the Group recognizes its share of any changes, when applicable, in the consolidated statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the JV or associate are eliminated to the extent of the interest in the JV or associate.

The aggregate of the Group's share in profit or loss of a JV and an associate is shown on the face of the consolidated statement of comprehensive income and represents profit or loss after tax and non-controlling interest in the subsidiaries of the JV or associate. The financial statements of the JV or associate are prepared for the same reporting period as the Group. When necessary, adjustments are made to bring their accounting policies in line with those of the Group.

After application of the equity method, the Group determines whether it is necessary to recognize an impairment loss on its investment in its JV or associate. At each reporting date, the Group determines whether there is objective evidence that the investment in the JV or associate is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or JV and its carrying value, and then recognizes the loss as "Impairment of investment in JV or associate" in the consolidated statement of comprehensive income. Upon loss of joint control over the JV or significant influence over the associate, the Group measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the JV or associate upon loss of joint control or significant influence and the fair value of the retained investment and proceeds from disposal is recognized in profit or loss.

CURRENT VERSUS NON-CURRENT CLASSIFICATION

The Group presents assets and liabilities in the consolidated statement of financial position based on current/non-current classification. An asset is classified as current when: expected to be realized or intended to sold or consumed in normal operating cycle; held primarily for the purpose of trading; expected to be realized within 12 (twelve) months after the reporting period; or it is cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least 12 (twelve) months after the reporting period. All other assets are classified as non-current.

A liability is classified as current when: it is expected to be settled in normal operating cycle; it is held primarily for the purpose of trading; it is due to be settled within 12 (twelve) months after the reporting period; or there is no unconditional right to defer the settlement of the liability for at least 12 (twelve) months after the reporting period. The Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are always classified as non current assets and liabilities.

OIL AND NATURAL GAS EXPLORATION, EVALUATION AND DEVELOPMENT EXPENDITURE

Costs incurred before obtaining subsoil use rights (licenses)

Costs incurred before obtaining full subsoil use rights (licenses) are expensed in the period in which they are incurred, except when costs are incurred after signing preliminary agreements with the Government of RK, in such cases costs incurred after this date are capitalized in exploration and evaluation assets.

Subsoil use rights and property acquisition costs

Exploration and production subsoil use rights and related property acquisition costs are capitalized within exploration and evaluation assets and subclassified as intangible. Each property under exploration and appraisal is reviewed on an annual basis to confirm that drilling activity is planned and it is not impaired. If no future activity is planned, the carrying amount of the exploration subsoil use right and related property acquisition costs is written off.

Upon determination of economically recoverable reserves ('proved reserves' or 'commercial reserves') and internal approval of development, the carrying amount of the subsoil use right and related property acquisition costs held on a field by field basis is aggregated with exploration and evaluation assets and transferred to oil and gas assets or intangible assets.

Exploration and evaluation costs

associated with exploration and appraisal wells, including unsuccessful development or delineation wells are capitalized as exploration and evaluation intangible or tangible assets, according to the nature of the costs, until the drilling of the well is complete and the results have been evaluated. These costs include employee remuneration, materials and fuel used, rig costs and payments made to contractors. If no expected reserves are found, the exploration and evaluation asset is tested for impairment, if extractable hydrocarbons are found and, subject to further appraisal activity, which may include the drilling of further wells, are likely to be developed commercially; the costs continue to be carried as an asset while sufficient/continued progress is made in assessing the commerciality of the hydrocarbon reserves. All such carried costs are subject to technical, commercial and management review as well as review for impairment at least once a year to confirm the continued intent to develop or otherwise extract value from the discovery.

When proved reserves of hydrocarbons are determined and development is sanctioned, the relevant expenditure is transferred to oil and gas assets after impairment is assessed and impairment loss recognized, if any.

When this is no longer the case, and the Group decides to relinquish the contract territory to the Government and terminate the subsoil use contracts, the assets are written off.

Development costs

Expenditures on the construction, installation or completion of infrastructure facilities such as platforms, pipelines and the drilling of development wells, are capitalized within oil and gas assets.

OIL AND GAS ASSETS AND OTHER PROPERTY, PLANT AND EQUIPMENT

Oil and gas assets and other property, plant and equipment are stated at cost less accumulated depreciation, depletion and impairment ("DD&A").

The initial cost of an asset comprises its purchase price or construction cost, borrowing cost for long-term construction or development project, if recognition criteria is met, any costs directly attributable to bringing the asset into operation and the initial estimate of decommissioning obligation, if there is any. The purchase price or construction cost is the aggregate amount paid and the fair value of any other consideration given to acquire the asset.

Oil and gas assets are depreciated using a unit-of-production method, whereas tangible assets are depreciated over proved developed reserves and intangible assets – over proved reserves. Certain oil and gas assets with useful lives less than the remaining life of the fields or term of the subsoil use contracts are depreciated on a straight-line basis over useful lives.

Property, plant and equipment other than oil and gas assets and land principally comprise buildings, machinery and equipment, vehicles and others that are depreciated on a straight-line basis over the expected remaining useful average lives as follows:

Refinery assets	4-100 years
Pipelines	2-30 years
Buildings and improvements	2-100 years
Machinery and equipment	2-30 years
Vehicles	3-35 years
Other	2-20 years
Land	not depreciated

The expected useful lives of property, plant and equipment are reviewed on an annual basis and, if necessary, changes in useful lives are accounted for prospectively.

The carrying value of property, plant and equipment is reviewed for impairment whenever events or changes in circumstances indicate the carrying value may not be recoverable.

An item of property, plant and equipment, inclusive of production wells which stop producing commercial quantities of hydrocarbons and are scheduled for abandonment, is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the item) is included in the profit or loss in the period the item is derecognized.

INTANGIBLE ASSETS

Intangible assets are stated at cost, less accumulated amortization and accumulated impairment losses. Intangible assets include expenditure on acquiring subsoil use rights for oil and natural gas exploration, evaluation and development, computer software and goodwill. Intangible assets acquired separately from a business are carried initially at cost. The initial cost is the aggregate amount paid and the fair value of any other consideration given to acquire the asset.

Intangible assets, except for goodwill and subsoil use rights, are amortized on a straight-line basis over the expected remaining useful life. The expected useful lives of the assets are reviewed on an annual basis and, if necessary, changes in useful lives are accounted for prospectively. Computer software costs have an estimated useful life of 3 to 7 years. The carrying value of intangible assets is reviewed for impairment whenever events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is tested for impairment annually (as at December 31) and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each cash-generating unit (or group of cash-generating units) to which the goodwill relates. Where the recoverable amount of the cash generating unit is less than their carrying amount an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods.

IMPAIRMENT OF NON-FINANCIAL ASSETS

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded subsidiaries or other available fair value indicators. Impairment losses of continuing operations are recognized in the consolidated statement of comprehensive income in those expense categories consistent with the function of the impaired asset.

The Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of 5 (five) years. For longer periods, a long-term growth rate is calculated and applied to projected future cash flows after the fifth year.

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such indication exists, the Group estimates the asset's or cash-generating unit's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of accumulated depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the consolidated statement of comprehensive income.

IMPAIRMENT OF EXPLORATION AND EVALUATION ASSETS

Exploration and evaluation assets are tested for impairment when reclassified to oil and gas development tangible or intangible assets or whenever facts and circumstances indicate impairment.

One or more of the following facts and circumstances indicate that the Group should test exploration and evaluation assets for impairment (the list is not exhaustive):
- the period for which the Group entity has the right to explore and appraise in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed;
- substantive expenditure on the further exploration for and evaluation of hydrocarbon resources in the specific area is neither budgeted nor planned;
- exploration for and evaluation of hydrocarbon resources in the specific area have not led to the discovery of commercial viable quantities of hydrocarbon resources and the Group entity has decided to discontinue such activities in the specific area;
- sufficient data exist to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or by sale.

NON-CURRENT ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

Non-current assets and disposal groups classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell. Non-current assets and disposal groups are classified as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the asset or disposal group is available for immediate sale in its present condition.

Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

In the consolidated statement of comprehensive income of the reporting period, and of the comparable period of the previous year, income and expenses from discontinued operations are reported separately from income and expenses from continuing operations, down to the level of profit after taxes, even when the Group retains a non-controlling interest in the subsidiary after the sale. The resulting profit or loss (after taxes) is reported separately in the consolidated statement of comprehensive income.

Property, plant and equipment and intangible assets once classified as held for sale are not depreciated or amortized.

ASSET RETIREMENT OBLIGATION (DECOMMISSIONING)

Provision for decommissioning is recognized in full, on a discounted cash flow basis, when the Group has an obligation to dismantle and remove a facility or an item of plant, property and equipment and to restore the site on which it is located, and when a reasonable estimate of that provision can be made. The amount recognized is the present value of the estimated future expenditure determined in accordance with local conditions and requirements. A corresponding item of property, plant and equipment of an amount equivalent to the provision is also created. This asset is subsequently depreciated as part of the capital costs of the production and transportation facilities based on the appropriate depreciation method.

Changes in the measurement of an existing decommissioning provision that result from changes in the estimated timing or amount of the outflow of resources embodying economic benefits required to settle the obligation, or change in the discount rate, is accounted for so that:
1. changes in the provision are added to, or deducted from, the cost of the related asset in the current period;
2. the amount deducted from the cost of the asset shall not exceed its carrying amount. If a decrease in the provision exceeds the carrying amount of the asset, the excess is recognized immediately in the consolidated statement of comprehensive income; and
3. if the adjustment results in an addition to the cost of an asset, the Group considers whether this is an indication that the new carrying amount of the asset may not be fully recoverable. If it is such an indication, the Group tests the asset for impairment by estimating its recoverable amount, and accounts for any impairment loss, in accordance with IAS 36.

FINANCIAL ASSETS

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortised cost, fair value through other comprehensive income (FVOCI), and fair value through profit or loss (FVPL). The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under IFRS 15. In order for a debt financial asset to be classified and measured at amortised cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level. The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in two categories:
- Financial assets at amortised cost (debt instruments)
- Financial assets at fair value through profit or loss

The Group does not have financial assets at fair value through other comprehensive income.

FINANCIAL ASSETS AT AMORTISED COST (DEBT INSTRUMENTS)

This category is the most relevant to the Group. The Group measures financial assets at amortised cost if both of the following conditions are met:
- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows, and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

Financial assets at amortised cost are subsequently measured using the effective interest (EIR) method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

The Group's financial assets at amortised cost include trade and other receivables, loans due from related parties and bank deposits.

FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS

Financial assets at fair value through profit or loss include certain loans due from related parties, which contain embedded derivative financial instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at fair value through profit or loss, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortised cost or at fair value through OCI, as described above, debt instruments may be designated at fair value through profit or loss on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

Financial assets at fair value through profit or loss are carried in the consolidated statement of financial position at fair value with net changes in fair value recognised in the consolidated statement of comprehensive income within the profit and loss.

DERECOGNITION

A financial asset is primarily derecognised (removed from the consolidated statement of financial position) when:

- The rights to receive cash flows from the asset have expired or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Group continues to recognise the transferred asset to the extent of its continuing involvement. In that case, the Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained. Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

IMPAIRMENT OF FINANCIAL ASSETS

The Group recognises an allowance for expected credit losses (ECL) for all debt instruments not held at fair value through profit or loss.

ECL are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate.

The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECL are recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECL are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade and other receivables the Group applies a simplified approach in calculating ECL. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECL at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

INVENTORIES

Inventories are stated at the lower of cost and net realizable value on a first-in first-out ("FIFO") basis. Cost includes all costs incurred in the normal course of business in bringing each product to its present location and condition. The cost of crude oil and refined products is the cost of production, including the appropriate proportion of DD&A and overheads based on normal capacity. Net realizable value of crude oil and refined products is based on estimated selling price in the ordinary course of business less any costs expected to be incurred to complete the sale.

VALUE ADDED TAX (VAT)

The tax authorities permit the settlement of VAT on sales and purchases on a net basis. VAT receivable represents VAT on domestic purchases net of VAT on domestic sales. Export sales are zero rated.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents include cash in bank and cash on hand, demand deposits with banks with original maturities of three months or less.

FINANCIAL LIABILITIES

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans borrowings and payables, or as derivatives financial instruments.

All financial liabilities are recognized initially at fair value and in the case of loans and borrowings, plus directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification as follows:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss includes financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss.

Financial liabilities are classified as held for trading if they are acquired for the purpose of selling in the near term. This category includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by IFRS 9. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in profit or loss.

The Group has not designated any financial liabilities upon initial recognition as at fair value through profit or loss.

Trade and other payables

Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the EIR.

Loans and borrowings

After initial recognition, interest bearing loans and borrowings are subsequently measured at amortized cost using the EIR. Gains and losses are recognized in the consolidated statement of comprehensive income when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fee or costs that are an integral part of the EIR. The EIR amortization is included in finance costs.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least twelve months after the reporting date. Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized as part of the cost of that asset. Other borrowing costs are recognized as an expense when incurred

Financial guarantee contracts

Financial guarantee contracts issued by the Group are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognised initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the expected credit losses allowance calculated under IFRS 9 and the amount recognised less cumulative amortisation, if any

Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the consolidated statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

Fair value of financial instruments

The fair value of financial instruments that are traded in active markets at each reporting date is determined by reference to quoted market prices or dealer price quotations (bid price for long positions and ask price for short positions), without any deduction for transaction costs.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. Such techniques may include using recent arm's length market transactions; reference to the current fair value of another instrument that is substantially the same; a discounted cash flow analysis or other valuation models.

PROVISIONS

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the Group expects a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognized as a separate asset but only when the reimbursement is virtually certain.

If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost

Provision for obligations to the Government

The Government assigns various sponsorship and financing obligations to the Group. Management of the Group believes that such Government's assignments represent constructive obligations of the Group and require recognition on the basis of respective resolution of the Government. Furthermore, as the Government is the ultimate controlling party of the Group, the expenditures on these assignments are recognized as other distributions to the Shareholders directly in the equity, in the consolidated financial statements. .

EMPLOYEE BENEFITS

Pension scheme

Payments to defined contribution retirement benefit plans are charged as an expense as they fall due. Payments made to state – managed retirement benefit schemes are dealt with as defined contribution plans where the Group's obligations under the scheme are equivalent to those arising in a defined contribution retirement benefit plan.

Long-term employee benefits

The Group provides long-term employee benefits to employees before, on and after retirement, in accordance with the collective agreements between the Group entities and their employees. The collective agreement provides for certain one-off retirement payments, financial aid for employees' disability, anniversaries, funeral and other benefits. The entitlement to benefits is usually conditional on the employee remaining in service up to retirement age.

The expected costs of the benefits associated with one-off retirement payments are accrued over the period of employment using the same accounting methodology as used for defined benefit post-employment plans with defined payments upon the end of employment. Actuarial gains and losses arising in the year are taken to other comprehensive income. For this purpose, actuarial gains and losses comprise both the effects of changes in actuarial assumptions and experience adjustments arising because of differences between the previous actuarial assumptions and what has actually occurred. Other movements are recognised in the current period, including current service cost, any past service cost and the effect of any curtailments or settlements.

The most significant assumptions used in accounting for defined benefit obligations are discount rate and mortality assumptions. The discount rate is used to determine the net present value of future liabilities and each year the unwinding of the discount on those liabilities is charged to the consolidated statement of comprehensive income as finance costs. The mortality assumption is used to project the future stream of benefit payments, which is then discounted to arrive at a net present value of liabilities.

Employee benefits other than one-off retirement payments are considered as other long-term employee benefits. The expected cost of these benefits is accrued over the period of employment using the same accounting methodology as used for the defined benefit plan. Actuarial gains and losses on other long-term employee benefits are recognised in the profit or loss. These obligations are valued by independent qualified actuaries on an annual basis.

REVENUE RECOGNITION

Revenues are recognized when (or as) the Group satisfies a performance obligation by transferring a promised good or service (i.e. an asset) to a customer. An asset is transferred when (or as) the customer obtains control of that asset, which usually occurs when the title is passed, provided that the contract price is fixed or determinable and collectability of the receivable is reasonably assured. Specifically, domestic sales of crude oil and gas, as well as petroleum products and materials are usually recognized when title passes. For export sales, title generally passes at the border of the RK. Revenue is measured at the fair value of the consideration received or receivable taking into account the amount of any trade discounts, volume rebates and reimbursable taxes.

Sales of support services are recognized as services are performed provided that the service price can be determined and no significant uncertainties regarding the receipt of revenues exist.

Interest income and expense

For all financial instruments measured at amortised cost, and interest income and interest expense are recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the net carrying amount of the financial asset or liability. Interest income is included in finance income and interest expense is included in finance costs in the consolidated statement of comprehensive income.

Trade receivables

A receivable represents the Group's right to an amount of consideration that is unconditional (i.e., only the passage of time is required before payment of the consideration is due).

Contract liabilities

A contract liability is the obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Group transfers goods or services to the customer, a contract liability is recognized when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognised as revenue when the Group performs under the contract.

EXPENSE RECOGNITION

Expenses are recognized as incurred and are reported in the consolidated financial statements in the period to which they relate on an accrual basis.

INCOME TAXES

Income tax for the year comprises current income tax, excess profit tax and deferred tax. Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted by the reporting date. Current income tax ("CIT") relating to items recognized directly in equity is recognized in equity and not in the consolidated statement of comprehensive income.

Excess profit tax ("EPT") is treated as an income tax and forms part of income tax expense. In accordance with the applicable tax legislation, the Group accrues and pays EPT in respect of each subsoil use contract, at varying rates based on the ratio of aggregate annual income to deductions for the year for a particular subsoil use contract. The ratio of aggregate annual income to deductions in each tax year triggering the application of EPT is 1.25:1. EPT rates are applied to the part of the taxable income (taxable income after corporate income tax and allowable adjustments) related to each subsoil use contract in excess of 25% of the deductions attributable to each contract.

Deferred tax is calculated with respect to both CIT and EPT. Deferred EPT is calculated on temporary differences for assets allocated to subsoil use contracts at the expected rate of EPT to be paid under the contract.

Deferred income tax is provided using the liability method on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred income tax liabilities are recognized for all taxable temporary differences, except:
- where the deferred income tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in JVs, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred income tax assets are recognized for all deductible temporary differences, carryforward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carryforward of unused tax credits and unused tax losses can be utilized except:
- where the deferred income tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in JVs, deferred income tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred income tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred income tax asset to be utilized. Unrecognized deferred income tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered. Deferred income tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted at the reporting date.

Deferred income tax relating to items recognized directly in equity is recognized in equity and not in the consolidated statement of comprehensive income. Deferred income tax assets and deferred income tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred income taxes relate to the same taxable entity and the same taxation authority. Deferred tax assets are recognized for all allowances and unused tax losses to the extent that it is probable that taxable temporary differences and business nature of such expenses will be proved. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and level of future taxable profits together with future tax planning strategies.

EQUITY

Non-controlling interest

Non-controlling interests are presented in the consolidated statement of financial position within equity, separately from the equity of the Company's owners. Total comprehensive income is attributed to the Company's owners and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Dividends

Dividends are recognized as a liability and deducted from equity at the reporting date only if they are declared before or on the reporting date. Dividends are disclosed when they are proposed before the reporting date or proposed or declared after the reporting date but before the consolidated financial statements are authorized for issue.

Distributions to the Shareholders

Expenditures incurred by the Group based on the respective resolution of the Government based on the RK President's charge or decision and instructions of Samruk-Kazyna are accounted for as other distributions through equity. Such expenditures include costs associated with non-core activity of the Group (construction of social assets to be transferred to the Shareholder).

SUBSEQUENT EVENTS

The results of post-year-end events that provide evidence of conditions that existed at the reporting date (adjusting events) are reflected in the consolidated financial statements. Post-year-end events that are not adjusting events are disclosed in the notes to the consolidated financial statements when material.

4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGEMENTS

The preparation of the Group's consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities and the disclosure of contingent liabilities and assets, at the reporting date. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

CONSIDERATIONS IN RESPECT OF COVID-19 PANDEMIC AND HYDROCARBON ECONOMY IN 2020

The impact of COVID-19 and unfavorable trend in the global hydrocarbons market on the basis of preparation of this consolidated financial statements has been considered as part of the going concern assessment. To support this assertion liquidity forecast has been assessed under several stressed scenarios. And as a result, impairment tests for upstream and midstream segments were performed

Impairment testing assumptions

The Group's long-term assumptions for Brent oil prices, KZT/USD exchange rate and inflation projections have been revised and are based on externally sourced forecasts and rates of the independent research organizations considering long-tern market expectations. Production volumes estimates are based on proved developed and undeveloped reserves for subsidiaries, and on proved and probable reserves for significant investments in JVs and associates. Production period is either based on subsoil use contracts' expiration date or on extended license period, to which the Group has strong intention to extend its licenses. Estimated production volumes are based on the Group's production plans that are mostly used for the purposes of application filing for extension of subsoil use contracts.

Discount rates were estimated on the weighted average cost of capital of the individual cash generating unit and ranged between 7.77%-14.50% depending on the functional currency, production period, size, equity risk premium, beta and gearing ratio of the relevant cash-generating unit (CGU).

CONSIDERATIONS IN RESPECT OF COVID-19 PANDEMIC AND HYDROCARBON ECONOMY IN 2020

Impairment testing assumptions

The long-term price assumptions applied were derived from Bloomberg consensus; so did the near-term commodity price assumptions, a summary of which, in real 2020 terms, is provided below:

	2021	2022	2023	2024	2025
Brent oil ($/bbl)	48	54.5	54	56	57

In Exploration and production of oil and gas segment net impairment charges were 91,094 million tenge for 2020. Impairment charges mainly relate to producing assets and principally arose as a result of changes to the group's oil and gas price assumptions, and include 60,440 million tenge attributable to Embamunaigas JSC, the Group subsidiary, (EMG) (Note 12) and 30,654 million tenge related to the Group's JVs and associate (Note 18). The Group's share of impairment charges arising in equity-accounted entities was 16,818 million tenge and mainly attributable to PetroKazakhstan Inc. The recoverable amounts of the CGUs within these businesses were based on value-in-use calculations.

In Refining and trading of crude oil and refined products segment impairment charges of 162,455 million tenge were recognized in 2020, which represents partial impairment of refining assets of KMGI due to the decline in refining margins following lock-downs caused by COVID-19 (Note 12). The recoverable amount of these assets for impairment testing purposes was determined based on fair value less cost to disposal.

Headroom of the majority of oil and refining assets are sensitive to changes in price or other assumptions. The changes within next financial periods may result in recoverable amount of these assets above or below the current carrying amounts and therefore there is a risk of impairment reversals or charges in those periods. Sensitivity to key assumptions for significant CGUs of the Group, at which impairment charges were recognized in 2020, were disclosed in Note 12. Impairment testing is performed by independent qualified appraisers on an annual basis.

OIL AND GAS RESERVES

Oil and gas reserves are a material factor in the Group's computation of DD&A expenses. The Group estimates its oil and gas reserves in accordance with the methodology of the Society of Petroleum Engineers ("SPE"). In estimating its reserves under SPE methodology, the Group uses long-term planning prices. Using planning prices for estimating proved reserves removes the impact of the volatility inherent in using year-end spot prices. Management believes that long-term planning price assumptions, which are also used by management for their business planning and investment decisions are more consistent with the long-term nature of the upstream business and provide the most appropriate basis for estimating oil and gas reserves.

All reserve estimates involve some degree of uncertainty. The uncertainty depends mainly on the amount of reliable geological and engineering data available at the time of the estimate and the interpretation of this data.

The relative degree of uncertainty can be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Proved reserves are more certain to be recovered than unproved reserves and may be further sub-classified as developed and undeveloped to denote progressively increasing uncertainty in their recoverability.

Estimates are reviewed and revised annually. Revisions occur due to the evaluation or re-evaluation of already available geological, reservoir or production data, availability of new data, or changes to underlying price assumptions. Reserve estimates may also be revised due to improved recovery projects, changes in production capacity or changes in development strategy. Proved developed reserves are used to calculate the unit of production rates for DD&A in relation to oil and gas production assets. The Group has included in proved reserves only those quantities that are expected to be produced during the initial subsoil use contract period. This is due to the uncertainties surrounding the outcome of such renewal procedures, since the renewal is ultimately at the discretion of the Government. An increase in the Group's subsoil use contract periods and corresponding increase in reported reserves would generally lead to lower DD&A expense and could materially affect earnings. A reduction in proved developed reserves will increase DD&A expense (assuming constant production), reduce income and could also result in an immediate write-down of the property's book value. Given the relatively small number of producing fields, it is possible that any changes in reserve estimates year on year could significantly affect prospective charges for DD&A.

Please refer Note 12 for details on annual impairment test results

RECOVERABILITY OF OIL AND GAS ASSETS, DOWNSTREAM, REFINING AND OTHER ASSETS

The Group assesses assets or CGU for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Where an indicator of impairment exists, a formal estimate of the recoverable amount is made, which is considered to be the higher of the fair value less costs to sell and value in use. These assessments require the use of estimates and assumptions such as long-term oil prices, discount rates, future capital requirements, operating performance (including production and sales volumes) that are subject to risk and uncertainty. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset/CGU is considered to be impaired and is written down to its recoverable amount. In assessing recoverable values, the estimated future cash flows are adjusted for the risks specific to the asset group and are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Fair value less costs to sell is identified as the price that would be received to sell the asset in an orderly transaction between market participants and does not reflect the effects of factors that may be specific to the entity and not applicable to entities in general.

KMGI CGU, including goodwill

As at December 31, 2020 and 2019, the Group performed its annual impairment tests for goodwill and downstream, refining and other assets due to existence of impairment indicators at the CGUs of KMGI. As the result of the impairment analysis, recoverable amount of KMGI CGUs exceeded their carrying values, except for Refining CGU (Note 12).

Pavlodar refinery, goodwill

As of December 31, 2020 and 2019 the Group has goodwill of 88,553 million tenge related to acquisition of Pavlodar refinery (Note 16). The Group performed annual impairment test for the Pavlodar refinery goodwill using the current tolling business scheme used by Pavlodar refinery in December 2020 and 2019. The Group considered the forecast for oil tolling volumes, oil tolling tariffs, capital expenditures, among other factors, when reviewing for indicators of impairment. The recoverable amount is calculated using a discounted cash flow model. In 2020, the discount rate of 10.79% (2019: 9.7%) was calculated based on the weighted average cost of capital before taxes. The weighted average cost of capital considers both borrowed funds and equity. The cost of equity is derived from the expected return on investment. The cost of debt capital is based on long-term interest-bearing loans of Pavlodar refinery. The inherent risk was included by applying an individual beta factor. The beta factor was estimated based on the publicly available market data. Forecasted cash flows till to 2029 were based on five-years business plan of Pavlodar refinery 2021-2025, which assumes current management estimates on potential changes in operating and capital costs. The significant part of those cash flows after 2025 was forecasted by applying expected inflation rate of 2020: 5.53% (2019: 5.49%), excluding capital costs, which are based on the best estimate of the Group as of valuation date. As at December 31, 2020 and 2019 the recoverable amount of goodwill, which was determined based on value-in-use, exceeded its book value, as such no impairment of Pavlodar refinery goodwill was recognised.

Sensitivity to changes in assumptions

Results of the assessment of recoverable amount of Pavlodar refinery goodwill are sensitive to changes in key assumptions, in particular, assumptions related to changes in discount rate and target EBITDA in terminal period. Increase in discount rates by 1.0% to 11.89% and decrease of target EBITDA in terminal period by 1% from 34% to 35% would result in decrease of the recoverable amount of CGU Pavlodar refinery to its carrying value.

Other CGUs

Revision to the Group's commodity price and other assumptions have not resulted in impairment charges in any other CGUs of the Refining and trading of crude oil and refined products segment.

ASSETS RETIREMENT OBLIGATIONS

Oil and gas production facilities

Under the terms of certain subsoil use contracts, legislation and regulations the Group has legal obligations to dismantle and remove tangible assets and restore the land at each production site.

Specifically, the Group's obligation relates to the ongoing closure of all non-producing wells and final closure activities such as removal of pipes, buildings and recultivation of the contract territories, and also obligations to dismantle and remove tangible assets and restore territory at each production site. Since the subsoil use contract terms cannot be extended at the discretion of the Group, the settlement date of the final closure obligations has been assumed to be the end of each subsoil use contract period. The extent of the Group's obligations to finance the abandonment of wells and for final closure costs depends on the terms of the respective subsoil use contracts and current legislation.

Where neither subsoil use contracts nor legislation include an unambiguous obligation to undertake or finance such final abandonment and closure costs at the end of the subsoil use contract term, no liability has been recognized. There is some uncertainty and significant judgment involved in making such a determination. Management's assessment of the presence or absence of such obligations could change with shifts in policies and practices of the Government or in the local industry practice.

The Group calculates asset retirement obligations separately for each contract. The amount of the obligation is the present value of the estimated expenditures expected to be required to settle the obligation adjusted for expected inflation and discounted using average long-term risk-free interest rates for emerging market sovereign debt adjusted for risks specific to the Kazakhstan market.

At each reporting date the Group reviews site restoration provisions, and adjusts them to reflect the current best estimate in accordance with IFRIC 1 Changes in Existing Decommissioning, Restoration and Similar Liabilities.

Estimating the future closure costs involves significant estimates and judgments by management. Most of these obligations are many years in the future and, in addition to ambiguities in the legal requirements, the Group's estimate can be affected by changes in asset removal technologies, costs and industry practice. The Group estimates future well abandonment cost using current year prices and the average long-term inflation rate.

The long-term inflation and discount rates used to determine the obligation in the consolidated statement of financial position across the Group entities at December 31, 2020 were in the range from 2.00% to 7.3% and from 3.68% to 11.00% (December 31, 2019: from 2.01% to 5.49% and from 4.43% to 8.95%). As at December 31, 2020 the carrying amounts of the Group's asset retirement obligations relating to decommissioning of oil and gas facilities were 66,177 million tenge (December 31, 2019: 54,165 million tenge) (Note 25).

Major oil and gas pipelines

According to the Law of the RK On Major Pipelines which was made effective on July 4, 2012 mainly KTO and Intergas Central Asia JSC, the subsidiary of KTG, have legal obligation to decommission its major oil pipelines at the end of their operating life and to restore the land to its original condition. Asset retirement obligation is calculated based on estimate of the work to decommission and rehabilitate. As at December 31, 2020, the carrying values of the Group's asset retirement obligations relating to decommissioning of pipelines and land were 113,558 million tenge (December 31, 2019: 100,229 million tenge) (Note 25).

ENVIRONMENTAL REMEDIATION OBLIGATIONS PROVISION

The Group also makes judgments and estimates in establishing provisions for environmental remediation obligations. Environmental expenditures are capitalized or expensed depending upon their future economic benefit. Expenditures that relate to an existing condition caused by past operations and do not have a future economic benefit are expensed.

Liabilities are determined based on current information about costs and expected plans for remediation and are recorded on discounted basis. The Group's environmental remediation provision represents management best estimate based on an independent assessment of the anticipated expenditure necessary for the Group to remain in compliance with the current regulatory regime in Kazakhstan and Europe. The Group has classified this obligation as non-current except for the portion of costs, included in the annual budget for 2020 and 2021. For environmental remediation provisions, actual costs can differ from estimates because of changes in laws and regulations, public expectations, discovery and analysis of site conditions and changes in clean-up technology. Movements in the provision for environmental remediation obligations are disclosed in Note 25.

EMPLOYEE BENEFITS

The cost of defined long-term employee benefits payable before, on and after retirement and the present value of the obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases.

Due to the complexity of the valuation, the underlying assumptions and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

TAXATION

In assessing tax risks, management considers to be probable obligations the known areas of tax positions which the Group would not appeal or does not believe it could successfully appeal, if assessed by tax authorities. Such determinations inherently involve significant judgment and are subject to change as a result of changes in tax laws and regulations, amendments to the taxation terms of the Group's subsoil use contracts, the determination of expected outcomes from pending tax proceedings and current outcome of ongoing compliance audits by tax authorities. The provision for tax risks other than on income tax are disclosed under provisions for taxes in Note 25. Contingent liabilities for tax risks other than on income tax are disclosed in Note 31. Provisions and contingent liabilities related to income tax are included or disclosed as income tax liabilities or contingencies (see Note 28 and 31 for further details).

USEFUL LIVES OF PROPERTY, PLANT AND EQUIPMENT

The Group assesses the remaining useful lives of items of property, plant and equipment at least at each financial year-end and, if expectations differ from previous estimates, the changes are accounted for prospectively as a change in an accounting estimate in accordance with IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors.

FAIR VALUE OF FINANCIAL INSTRUMENTS

Where the fair value of financial assets and financial liabilities recorded in the consolidated statement of financial position cannot be derived from active markets, they are determined using valuation techniques including the discounted cash flows model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments presented in the consolidated financial statements. Further details are disclosed in Note 30.

5. REVENUE

In millions of tenge	2020	2019
Type of goods and services		
Sales of crude oil and gas	2,467,391	3,966,941
Sales of refined products	1,337,579	2,043,848
Oil and gas transportation services	289,880	389,496
Refining of oil and oil products	193,659	195,896
Other revenue	267,528	262,675
	4,556,037	**6,858,856**
Geographical markets		
Kazakhstan	950,298	1,212,267
Other countries	3,605,739	5,646,589
	4,556,037	**6,858,856**

6. SHARE IN PROFIT OF JOINT VENTURES AND ASSOCIATES, NET

In millions of tenge	2020	2019
Asia Gas Pipeline LLP (AGP)	175,339	168,086
Tengizchevroil LLP (TCO)	173,476	414,940
Caspian Pipeline Consortium (CPC)	81,582	70,869
Beineu-Shymkent Pipeline LLP (BSP)	55,005	56,194
Mangistau Investments B.V. (MIBV)	16,749	81,991
KazGerMunay LLP (KGM)	15,622	17,561
Kazakhstan - China Pipeline LLP (KCP)	10,380	3,313
Teniz Service LLP (Teniz Service)	3,891	6,742
Kazakhoil-Aktobe LLP (KOA)	2,448	9,722
KazRosGas LLP (KRG)	957	18,091
Valsera Holding BV (Valsera)	(6,137)	(6,107)
KMG Kashagan B.V. (Kashagan)	(6,961)	13,114
PetroKazakhstan Inc. (PKI)	(8,812)	(18,244)
Ural Group Limited BVI (UGL)	(10,265)	(18,895)
Other joint ventures and associates	7,921	10,602
	511,195	**827,979**

7. COST OF PURCHASED OIL, GAS, PETROLEUM PRODUCTS AND OTHER MATERIALS

In millions of tenge	2020	2019
Purchased oil for resale	1,311,169	2,448,412
Purchased gas for resale	380,261	493,280
Cost of oil for refining	313,543	638,293
Materials and supplies	226,223	217,138
Purchased petroleum products for resale	45,870	116,621
	2,277,066	**3,913,744**

8. PRODUCTION EXPENSES

In millions of tenge	2020	2019
Payroll	339,877	338,120
Repair and maintenance	114,700	129,450
Energy	83,290	88,910
Transportation costs	42,507	30,456
Short-term lease expenses	37,743	52,091
Others	122,669	82,666
	740,786	**721,693**

9. TAXES OTHER THAN INCOME TAX

In millions of tenge	2020	2019
Export customs duty	71,746	131,326
Mineral extraction tax (MET)	59,374	100,300
Rent tax on crude oil export (rent tax)	41,120	133,144
Other taxes	97,319	89,525
	269,559	**454,295**

10. TRANSPORTATION AND SELLING EXPENSES

In millions of tenge	2020	2019
Transportation	415,842	374,686
Payroll	12,811	12,542
Other	29,533	33,174
	458,186	**420,402**

11. GENERAL AND ADMINISTRATIVE EXPENSES

In millions of tenge	2020	2019
Payroll	74,704	78,055
Consulting services	23,402	25,448
Maintenance	8,655	8,711
Accrual of impairment of VAT receivable	6,435	15,703
Social payments	5,961	8,933
VAT that could not be offset	4,528	6,910
Communication	3,809	2,963
Accrual of ECL for trade receivables and current financial assets (Note 20)	4,225	14,096
(Reversal)/accrual of impairment losses allowance for other non-financial current assets (Note 20)	(65)	42
Allowance for/(reversal of) fines, penalties and tax provisions	44	(19,755)
Provision under the KMG DS - Consortium case (Note 31)	–	34,132
Other	38,510	38,729
	170,208	**213,967**

For the year ended December 31, 2020, the total payroll amounted to 427,392 million tenge (2019: 428,717 million tenge) and was included in production expenses, transportation and selling expenses and general and administrative expenses in the consolidated statement of comprehensive income.

12. IMPAIRMENT OF PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS, EXPLORATION AND EVALUATION ASSETS AND EXPLORATION EXPENSE

In millions of tenge	2020	2019
Impairment expense		
Property, plant and equipment (Note 14)	220,913	144,482
Exploration and evaluation assets (Note 15)	16,389	171
Investment property	142	(142)
Intangible assets (Note 16)	6,250	6,240
	243,694	**150,751**
Exploration expense (exploration and evaluation assets write-off) (Note 15)		
Brownfields of KMG EP	19,692	18,888
Pearls project	–	38,180
Samtyr, Zhayik, Saraishyk, Zaburunie projects	115	–
	19,807	**57,068**
	263,501	**207,819**

For the following CGUs impairment losses were recognised for years ended:

In millions of tenge	2020	2019
Refining CGU of KMGI	162,455	93,587
EMG CGU	60,440	–
Sunkar, Barys and Berkut, self-propelled barges (Barges)	10,297	11,837
Satti, the drilling jackup rig (Satti rig)	–	24,505
Batumi Oil Terminal, the CGU (BNT CGU)	–	12,583
Others	10,502	8,239
	243,694	**150,751**

Refining CGU of KMGI

In 2020 and 2019, the Group performed impairment test of the Refining CGU of KMGI. The Group considered forecasted refining margins and production volumes, among other factors, when reviewing for indicators of impairment. The recoverable amount of Refining CGU of KMGI was determined based on fair value less costs of disposal (FVLCD), which was calculated using the discounted cash flow method. The key assumptions used in the FVLCD calculations for the CGU were operating profit, discount rates and growth rate used to extrapolate cash flows beyond the budgeted period. The discount rate applied to cash flow projections for Refining CGU was 10.7% (2019: 9.6%) and cash flows beyond the 5-year period were extrapolated using 2.2% (2019: 1.9%) growth rate, which is the same as the long-term average growth rate for the industry. The capitalization rate used for residual values was 8.5% (2019: 7.7%). For the purposes of impairment test, the Group updated projected cash flows to reflect the decrease in forecasted refining margins and change in post-tax discount rate. In 2020, based on the results of the test performed, the Group recognized impairment loss of property, plant and equipment and intangible assets of 155,544 million tenge and 6,911 million tenge respectively (2019: 86,946 million tenge and 6,641 million tenge, respectively).

Sensitivity to changes in assumptions:

The additional impairment charges will occur if the weighted average cost of capital increases by more than 2.3 points to 13%, or should the operating profit decrease by more than 28.4%.

EMG CGU

In 2020, EMG carried out an assessment of the recoverable amount of property, plant and equipment and exploration and evaluation assets due to the presence of impairment indicators such as decline in the forecasted oil prices. EMG calculated recoverable amount using a discounted cash flow model for value in use valuation method. The discount rate applied to cash flow projections was equal to 14.4%. The 5-year business plan was used as a primary source of information, which contains forecasts for crude oil production, sales volumes, revenues, costs and capital expenditure.

The result of this assessment indicated that the carrying value of assets exceeded their estimated recoverable amount by 60,440 million tenge, particularly, 44,098 million tenge of property, plant and equipment and 16,342 million tenge of exploration and evaluation assets were impaired in the consolidated statement of comprehensive income.

Sensitivity to changes in assumptions:

The additional impairment charges will occur if the weighted average cost of capital increases by more than 1 point to 15.4% or if the Brent price decreases by more than 1%.

Barges

The recoverable amount of the barges was determined on the basis of value-in-use method. Value-in-use was assessed as the present value of the future cash flows expected to be derived from the barges until the end of the existing and probable contracts at the discount rate of 11.3% (2019: 10.05%). As a result of the test, the Group recognized an impairment loss of 10,297 million tenge for the year ended December 31, 2020 in regards of Sunkar, Barys and Berkut barges (2019: 11,837 million tenge on Sunkar and Berkut).

Satti rig

The recoverable amount of Satti rig was determined on the basis of value-in-use method. Value-in-use was assessed as the present value of the future cash flows expected to be derived from the rig. The forecasted cash flows were based on financial budget approved by the Group management for the period of 2020-2024, and on estimated forecasts for the period of the useful life of the rig till 2041 extrapolated by inflation rates and discounted at 12.5%. As a result of the impairment test, the Group recognised an impairment loss of 24,505 million tenge as at December 31, 2019. As at December 31, 2020, the recoverable value of the Satti rig exceeded its carrying value.

BNT CGU

For the year ended December 31, 2019, the Group recognized an impairment loss of 12,583 million tenge using FVLCD. The impairment was caused due to decrease in oil transshipment volumes in post-prognosis period. As at December 31, 2020, the recoverable value of BNT CGU exceeded its carrying value.

13. FINANCE INCOME / FINANCE COST

FINANCE INCOME

In millions of tenge	2020	2019
Interest income on bank deposits, financial assets, loans and bonds	86,067	99,274
Amortization of issued financial guarantees	6,497	1,974
Total interest income	92,564	101,248
Discount on a loan with non-market interest rate (Note 24)	11,002	7,781
Bonds redemption gain (Note 24)	927	–
Derecognition of loan (Note 24)	–	111,476
Write-off of guarantee due to significant modification	–	13,573
Other	5,260	6,802
	109,753	**240,880**

FINANCE COSTS

In millions of tenge	2020	2019
Interest expense on loans and bonds	239,855	235,728
Interest expense on lease liabilities	3,438	3,916
Interest expense under oil supply agreement	–	19,541
Total interest expense	243,293	259,185
Bonds redemption fee (Note 24)	21,057	–

In millions of tenge	2020	2019
Unwinding of discount on asset retirement obligations, for environmental obligation and other provisions (Note 25)	13,373	13,819
Discount on employee benefits obligations (Note 25)	3,605	3,559
Issued financial guarantees	–	11,341
Other	16,223	29,529
	297,551	**317,433**

14. PROPERTY, PLANT AND EQUIPMENT

In millions of tenge	Oil and gas assets	Pipelines	Refinery assets	Buildings and improve-ments	Machinery and equipment	Vehicles	Other	Capital work in progress	Total
As at January 1, 2019	**1,081,676**	**787,813**	**1,550,680**	**263,204**	**394,602**	**116,561**	**44,124**	**275,986**	**4,514,646**
Foreign currency translation	(2,749)	(173)	(1,115)	(306)	374	(314)	(50)	–	(4,333)
Change in estimate	13,006	12,156	–	27	–	–	19	–	25,208
Additions	48,725	6,370	794	10,615	11,190	5,076	6,400	345,236	434,406
Disposals	(24,598)	(2,161)	(4,100)	(15,970)	(7,534)	(3,455)	(7,200)	(1,088)	(66,106)
Depreciation charge	(85,565)	(28,859)	(121,306)	(17,969)	(37,832)	(11,608)	(10,601)	–	(313,740)
Accumulated depreciation and impairment on disposals	14,198	1,794	4,039	11,148	7,085	3,141	6,733	325	48,463
(Impairment)/ reversal (Note 12)	(4,911)	228	(86,946)	(5,277)	(31,068)	(13,140)	(1,057)	(2,311)	(144,482)
Transfers (to)/from assets classified as held for sale	18	–	(81)	(10,610)	(18,390)	(6,493)	(65)	–	(35,621)
Transfers from /(to) investment property	215		–	16,314	144	–	2,356	(39)	18,990
Transfers from/(to) inventory, net	35	–	4,435	1	362	13	666	3,295	8,772
Transfers from exploration and evaluation assets (Note 15)	1,743		–	–	–	–	–	1,024	2,767
Transfers (to)/from intangible assets (Note 16)	(145)	(35)	(64)	–	–	–	97	(4,587)	(4,699)
Transfers and reclassifications	8,115	26,584	35,325	49,478	138,878	7,856	64,864	(331,100)	–
Net book value as at December 31, 2019	**1,049,763**	**803,717**	**1,381,661**	**300,655**	**457,811**	**97,637**	**106,286**	**286,741**	**4,484,271**
At cost	2,032,972	1,028,456	2,408,000	568,723	841,626	226,215	222,426	336,772	7,665,190

In millions of tenge	Oil and gas assets	Pipelines	Refinery assets	Buildings and improve-ments	Machinery and equipment	Vehicles	Other	Capital work in progress	Total
Accumulated depreciation and impairment	(983,209)	(224,739)	(1,026,339)	(268,068)	(383,815)	(128,578)	(116,140)	(50,031)	(3,180,919)
Net book value as at December 31, 2019	**1,049,763**	**803,717**	**1,381,661**	**300,655**	**457,811**	**97,637**	**106,286**	**286,741**	**4,484,271**
Foreign currency translation	50,582	3,992	39,281	6,928	3,404	2,973	7,033	15,034	**129,227**
Change in estimate	6,785	5,914	–	28	–	–	–	–	**12,727**
Additions	4,738	1,967	2,176	4,455	6,901	5,439	2,561	404,519	**432,756**
Disposals	(17,138)	(18,212)	(10,829)	(4,412)	(4,135)	(1,887)	(2,783)	(2,533)	**(61,929)**
Depreciation charge	(109,846)	(29,297)	(119,746)	(19,746)	(37,922)	(11,085)	(11,163)	–	**(338,805)**
Accumulated depreciation and impairment on disposals	13,876	1,893	10,364	3,352	4,007	1,720	2,521	1,356	**39,089**
Impairment (Note 12)	(37,887)	(731)	(155,544)	(5,101)	(1,366)	(11,766)	(1,750)	(6,768)	**(220,913)**
Transfers to assets classified as held	–	–	(834)	(14,777)	(71,856)	(86)	(228)	(1,400)	**(89,181)**
for sale	42	(28)	1,619	–	264	(54)	532	2,541	**4,916**
Transfers from exploration and evaluation assets (Note 15)	67	–	–	–	–	–	–	–	**67**
Transfers to intangible assets, net (Note 16)	–	–	(96)	–	–	–	(619)	(2,558)	**(3,273)**
Transfers to investment property	–	–	–	(19,207)	–	–	–	–	**(19,207)**
Transfers and reclassifications	122,633	39,542	23,058	37,527	96,713	1,770	9,557	**(330,800)**	**–**
Net book value as at December 31, 2020	**1,083,615**	**808,757**	**1,171,110**	**289,702**	**453,821**	**84,661**	**111,947**	**366,132**	**4,369,745**
At cost	2,232,770	1,063,532	2,537,233	591,757	880,230	235,520	244,801	422,492	8,208,335
Accumulated depreciation and impairment	(1,149,155)	(254,775)	(1,366,123)	(302,055)	(426,409)	(150,859)	(132,854)	(56,360)	(3,838,590)
Net book value as at December 31, 2020	**1,083,615**	**808,757**	**1,171,110**	**289,702**	**453,821**	**84,661**	**111,947**	**366,132**	**4,369,745**

ADDITIONS

In 2020, additions to capital work in progress are mainly attributable to development drilling at OMG, EMG and Karachaganak for the total of 148,593 million tenge, construction of compressor stations at KTG for 113,844 million tenge within the framework of the projects “Beineu-Bozoy-Shymkent and Bukhara-Ural” and reconstruction of “Bozoi” underground gas storage, replacement of “Prorva-Kulsary” and “Uzen-Atyray-Samara” pipeline for 43,247 million tenge at KTO, and overhauls at the plant facilities at Rompetrol Rafinare for 51,617 million tenge.

In 2019, additions to capital work are mainly attributable to development drilling at OMG, EMG and Karachaganak for 181,050 million tenge, the construction of compressor stations at KTG for 67,998 million tenge within the framework of modernization of gas transportation system, the reconstruction of the water pipeline "Astrakhan-Mangyshlak" and the reconstruction of the "Uzen-Atyrau-Samara" oil pipeline for 35,323 million tenge at KTO, overhaul at the Atyrau refinery for 36,972 million tenge and Rompetrol Rafinare for 31,859 million of tenge, respectively.

TRANSFER TO ASSETS HELD FOR SALE

During 2020, the Group reclassified to assets held for sale property and equipment of 89,181 million tenge mainly represented by compressor stations "Korkyt-ata" and "Turkestan". During 2020, the Group sold the compressor station "Turkestan" for the consideration of 43,667 million tenge (Note 29). As at December 31, 2020, assets classified as held for sale is mainly represented by the compressor station "Korkyt-ata" for 42,241 million tenge, the transaction is expected to be completed during 2021.

During 2019, the Group classified as assets held for sale tankers and gas compressor station with net book value of 35,621 million tenge, the latter was sold for the consideration of 32,696 million tenge.

OTHER

For the year ended December 31, 2020, the Group capitalized to the carrying amount of property, plant and equipment borrowing costs related to construction of 2,890 million tenge at the average interest rate of 5.78% (for the year ended December 31, 2019: 2,525 million tenge at the average interest rate of 4.3%) (Note 24).

As at December 31, 2020, the cost of fully depreciated but still in use property, plant and equipment was 517,484 million tenge (as at December 31, 2019: 394,841 million tenge).

As at December 31, 2020, property, plant and equipment with the net book value of 910,216 million tenge (as at December 31, 2019: 1,023,146 million tenge) were pledged as collateral to secure borrowings and payables of the Group.

15. EXPLORATION AND EVALUATION ASSETS

In millions of tenge	Tangible	Intangible	Total
Net book value as at December 31, 2018	**162,813**	**26,987**	**189,800**
Additions	51,385	3,144	54,529
Write-off (Note 12)	(51,546)	(5,522)	(57,068)
Impairment (Note 12)	(171)	–	(171)
Disposal	(1,991)	(653)	(2,644)
Transfer to intangible assets (Note 16)	–	(1,800)	(1,800)
Transfer to property, plant and equipment (Note 14)	(2,767)	–	(2,767)
Change in estimate	9	–	9
Transfers from inventory	9	–	9
Transfers and reclassifications	(5,449)	5,449	–
Net book value as at December 31, 2019	**152,292**	**27,605**	**179,897**
Additions	14,212	787	14,999
Write-off (Note 12)	(19,235)	(572)	(19,807)
Impairment (Note 12)	(12,797)	(3,592)	(16,389)
Trial production	(248)	–	(248)
Transfer to property, plant and equipment (Note 14)	(67)	–	(67)
Net book value as at December 31, 2020	**134,157**	**24,228**	**158,385**

As at December 31, 2020 and 2019 the exploration and evaluation assets are represented by the following projects:

In millions of tenge	December 31, 2020	December 31, 2019
Zhambyl	59,603	58,293
EMG	33,458	41,337
Urikhtau	38,834	35,265
KTG projects	17,366	13,206
Others	9,124	31,796
	158,385	**179,897**

16.INTANGIBLE ASSETS

In millions of tenge	Goodwill	Marketing related intangible assets	Software	Other	Total
Net book value as at December 31, 2018	**100,054**	**33,364**	**13,429**	**26,230**	**173,077**
Foreign currency translation	(1,493)	2,237	(62)	(461)	221
Additions	–	–	5,827	4,599	10,426
Disposals	–	–	(3,725)	(1,678)	(5,403)
Change in estimates	–	–	–	(174)	(174)
Amortization charge	–	–	(5,709)	(5,608)	(11,317)
Accumulated amortization and impairment on disposals	–	–	3,551	527	4,078
(Impairment)/ reversal, net (Note 12)	–	(6,641)	5	396	(6,240)
Transfers from inventory	–	–	–	5	5
Transfers from exploration and evaluation assets (Note 15)	–	–	–	1,800	1,800
Transfer from/(to)property, plant and equipment, net (Note 14)	–	–	4,838	(139)	4,699
Transfers and reclassifications	–	–	1,300	(1,300)	–
Net book value as at December 31, 2019	**98,561**	**28,960**	**19,454**	**24,197**	**171,172**
Foreign currency translation	1,003	2,775	296	1,071	5,145
Additions	–	–	2,855	3,553	6,408
Disposals	–	–	(5,576)	(2,246)	(7,822)
Amortization charge	–	–	(6,494)	(2,804)	(9,298)
Accumulated amortization and impairment on disposals	–	–	5,544	215	5,759
(Impairment)/ reversal, net (Note 12)	–	(6,911)	(270)	931	(6,250)
Transfer from property, plant and equipment, net (Note 14)	–	–	1,925	1,348	3,273
Transfers to assets classified as held for sale	–	–	(24)	–	(24)
Transfers from right-of-use assets	–	–		118	118
Transfers and reclassifications	–	–	2,404	(2,404)	–
Net book value as at December 31, 2020	**99,564**	**24,824**	**20,114**	**23,979**	**168,481**
At cost	210,012	63,722	74,841	100,784	449,359
Accumulated amortization and impairment	(110,448)	(38,898)	(54,727)	(76,805)	(280,878)

In millions of tenge	Goodwill	Marketing related intangible assets	Software	Other	Total
Net book value as at December 31, 2020	**99,564**	**24,824**	**20,114**	**23,979**	**168,481**
At cost	209,009	57,921	70,381	93,290	430,601
Accumulated amortization and impairment	(110,448)	(28,961)	(50,927)	(69,093)	(259,429)
Net book value as at December 31, 2019	**98,561**	**28,960**	**19,454**	**24,197**	**171,172**

Carrying amount of goodwill is allocated to each of the group of cash-generating units as follows:

Cash-generating unit	December 31, 2020	December 31, 2019
Cash-generating unit, Pavlodar refinery	88,553	88,553
Cash-generating units of KMGI	11,011	10,008
Total goodwill	99,564	98,561

In 2020 and 2019, based on the impairment test results, no impairment of Pavlodar refinery or KMGI goodwill was recognized. For the detailed discussion of Pavlodar refinery goodwill impairment test refer to Note 4.

17. BANK DEPOSITS

In millions of tenge	December 31, 2020	December 31, 2019
Denominated in US dollar	324,646	390,598
Denominated in tenge	14,863	21,940
Less: allowance for ECL	(509)	(508)
	339,000	**412,030**

As at December 31, 2020, the weighted average interest rate for long-term bank deposits was 1.07% in US dollars and 1.58% in tenge, respectively (December 31, 2019: 1.08% in US dollars and 2.58% in tenge, respectively).

As at December 31, 2020, the weighted average interest rate for short-term bank deposits was 0.40% in US dollars and 3.10% in tenge, respectively (December 31, 2019: 1.57% in US dollars and 8.33% in tenge, respectively).

In millions of tenge	December 31, 2020	December 31, 2019
Maturities under 1 year	**282,472**	359,504
Maturities between 1 and 2 years	**796**	1,029
Maturities over 2 years	**55,732**	51,497
	339,000	412,030

As at December 31, 2020 bank deposits include cash pledged as collateral of 56,528 million tenge (December 31, 2019: 50,046 million tenge), which are represented mainly by restricted bank accounts designated as a liquidation fund per requirements of subsoil use contracts of 44,497 million tenge (December 31, 2019: 37,916 million tenge).

18. INVESTMENTS IN JOINT VENTURES AND ASSOCIATES

			December 31, 2020		December 31, 2019	
In millions of tenge	Main activity	Place of business	Carrying value	Percentage ownership	Carrying value	Percentage ownership
Joint ventures						
TCO	Oil and gas exploration and production	Kazakhstan	2,793,887	20.00%	2,377,207	20.00%
Kashagan	Oil and gas exploration and production	Kazakhstan	2,256,816	50.00%	2,057,795	50.00%
AGP	Construction and operation of gas pipeline	Kazakhstan	291,086	50.00%	168,086	50.00%
BSP	Construction and operation of gas pipeline	Kazakhstan	156,771	50.00%	101,766	50.00%
MIBV	Oil and gas development and production	Kazakhstan	142,585	50.00%	158,867	50.00%
KRG	Processing and sale of natural gas and refined gas products	Kazakhstan	76,702	50.00%	79,849	50.00%
UGL	Oil and gas exploration and production	Kazakhstan	44,585	50.00%	47,662	50.00%
KGM	Oil and gas exploration and production	Kazakhstan	32,840	50.00%	25,620	50.00%
KOA	Production of crude oil	Kazakhstan	20,886	50.00%	21,438	50.00%
Teniz Service	Design, construction, facilities and offshore oil operations support	Kazakhstan	20,473	48.996%	19,277	48.996%
Valsera	Oil refining	Kazakhstan	2,253	50.00%	12,776	50.00%
Other			43,498		41,014	
Associates						
CPC	Transportation of liquid hydrocarbons	Kazakhstan / Russia	478,134	20.75%	359,173	20.75%
PKI	Exploration, production and processing of oil and gas	Kazakhstan	78,636	33.00%	95,320	33.00%
Other			31,869		24,534	
			6,471,021		**5,590,384**	

All of the above JVs and associates are strategic for the Group's business.

As at December 31, 2020, the Group's share in unrecognized losses of JVs and associates was 19,038 million tenge (December 31, 2019: 17,812 million tenge). The Group's change in share of unrecognized losses of JVs and associates in 2020 was 1,226 million tenge (2019: 59,628 million tenge).

The following table summarizes the movements in the investments in 2020 and 2019:

In millions of tenge	2020	2019
At January 1	**5,590,384**	**4,895,444**
Share in profits of JVs and associates, net (Note 6)	511,195	827,979
Dividends received	(134,772)	(126,461)
Change in dividends receivable	1,680	7,433
Impairment of investments	(30,654)	–
Other changes in the equity of the JVs	21,352	(3,803)
Contribution without change in ownership	1,586	5,889
Disposals, net	(179)	–
Guarantees issued	–	11,162

In millions of tenge	2020	2019
Transfers to assets classified as held for sale	(3,080)	–
Eliminations and adjustments*	2,936	(7,043)
Foreign currency translation	510,573	(20,216)
At December 31	**6,471,021**	**5,590,384**

On October 16, 2015, the Group sold 50% of its shares in Kashagan to Samruk-Kazyna with a right to buy back all or part of the shares effective from January 1, 2018 to December 31, 2020 (further "Option"). On December 20, 2017, the exercise period for the call option was changed to January 1, 2020 and December 31, 2022. As of December 31, 2020 and 2019, the fair value of the option was close to nil

The Amsterdam Court imposed certain restrictions on 50% of shares in Kashagan owned by Samruk-Kazyna (further restrictions). During the restrictions period, these shares of Kashagan cannot be sold, transferred or pledged. As of December 31, 2020 and 2019, the restrictions remained in force and control over the asset was not transferred to the Group.

The following tables illustrate summarized financial information of material JVs, based on financial statements of these entities for 2020:

In millions of tenge	TCO	Kashagan	AGP	BSP	MIBV	KRG
Non-current assets	20,221,619	4,332,838	1,333,611	544,058	468,069	44,681
Current assets, including	908,846	178,797	616,479	147,802	89,172	118,142
Cash and cash equivalents	50,588	117,269	180,065	18,027	5,267	44,459
Non-current liabilities, including	(6,412,967)	(371,651)	(886,363)	(351,719)	(160,711)	(207)
Non-current financial liabilities	(4,061,782)	(40,665)	(692,254)	(335,084)	–	–
Current liabilities, including	(748,064)	(129,128)	(481,556)	(76,155)	(110,186)	(9,212)
Current financial liabilities	(69,558)	(9,691)	(464,699)	(63,101)	(21,306)	–
Equity	**13,969,434**	**4,010,856**	**582,171**	**263,986**	**286,344**	**153,404**
Share of ownership	20%	50%	50%	50%	50%	50%
Goodwill	**–**	**251,388**	**–**	**–**	**–**	**–**
Consolidation adjustments	–	–	–	24,778	(587)	–
Carrying amount of the investments as at December 31, 2020	**2,793,887**	**2,256,816**	**291,086**	**156,771**	**142,585**	**76,702**
Revenue	3,776,155	311,663	727,503	201,524	488,032	167,016
Depreciation, depletion and amortization	(700,929)	(196,789)	(78,212)	(18,222)	(75,609)	(289)
Finance income	3,887	2,250	7,352	–	239	2,293
Finance costs	(58,264)	(24,322)	(54,943)	(14,365)	(9,555)	–
Income tax expense	(371,799)	(11,190)	(90,323)	–	(19,663)	(6,628)
Profit/(loss) for the year from continuing operations	**867,380**	**(13,922)**	**350,677**	**110,010**	**33,498**	**7,785**
Other comprehensive (loss)/ income	1,216,017	411,964	2,964	–	(1,479)	16,232
Total comprehensive income	**2,083,397**	**398,042**	**353,641**	**110,010**	**32,019**	**24,017**
Change in unrecognized share of losses	–	–	–	–	–	–
Dividends received	–	–	53,821	–	32,291	15,155

1. * Equity method eliminations and adjustments represent unrealized income from sale of inventory from JVs to subsidiaries and capitalized borrowing costs on the loans provided by the Company and subsidiaries to JVs

The following tables illustrate summarized financial information of material JVs, based on financial statements of these entities for 2020:

In millions of tenge	UGL	KGM	KOA	Teniz Service	Valsera
Non-current assets	246,111	101,629	46,657	118,818	536,659
Current assets, including	993	24,627	10,837	50,602	99,783
Cash and cash equivalents	833	19,264	1,664	9,046	47,783
Non-current liabilities, including	(115,216)	(35,090)	(6,450)	(15,265)	(488,672)
Non-current financial liabilities	(81,291)	–	–	–	(471,886)
Current liabilities, including	(2,718)	(25,486)	(9,272)	(112,370)	(108,681)
Current financial liabilities	–	–	–	–	(73,012)
Equity	**129,170**	**65,680**	**41,772**	**41,785**	**39,089**
Share of ownership	50%	50%	50%	48.996%	50%
Impairment of the investment	(20,000)	–	–	–	(17,292)
Carrying amount of the investments as at December 31, 2020	**44,585**	**32,840**	**20,886**	**20,473**	**2,253**
Revenue	–	101,595	41,654	260,560	147,569
Depreciation, depletion and amortization	(14)	(27,084)	(7,169)	(215,594)	(36,397)
Finance income	–	511	238	1	17
Finance costs	(16,986)	(1,598)	(544)	(15,377)	(30,195)
Income tax expense	(1,077)	(6,200)	(3,142)	(2,805)	(9,363)
Profit/(loss) for the year from continuing operations	**(20,531)**	**31,245**	**4,897**	**7,941**	**(12,275)**
Other comprehensive (loss)/ income	11,671	4,337	–	–	(420)
Total comprehensive income/ (loss)	**(8,860)**	**35,582**	**4,897**	**7,941**	**(12,695)**
Dividends received	–	10,372	8,000	2,695	4,176

The following tables illustrate summarized financial information of material JVs, based on financial statements of these entities for 2019:

In millions of tenge	TCO	Kashagan	AGP	MIBV	BSP	KRG
Non-current assets	16,276,182	4,087,310	1,395,615	433,950	482,553	10,176
Current assets, including	975,247	273,048	578,072	114,571	171,411	195,666
Cash and cash equivalents	45,128	74,330	136,318	16,091	11,918	83,674
Non-current liabilities, including	(4,137,239)	(499,989)	(1,225,064)	(148,898)	(354,711)	(148)
Non-current financial liabilities	(2,563,353)	(581)	(1,050,532)	(49,553)	(342,836)	–
Current liabilities, including	(1,228,155)	(201,781)	(412,451)	(80,495)	(145,277)	(45,996)

In millions of tenge	TCO	Kashagan	AGP	MIBV	BSP	KRG
Current financial liabilities	(44,762)	(194)	(379,633)	(400)	(119,557)	–
Equity	**11,886,035**	**3,658,588**	**336,172**	**319,128**	**153,976**	**159,698**
Share of ownership	20%	50%	50%	50%	50%	50%
Goodwill	**–**	**228,501**	**–**	**–**	**–**	**–**
Consolidation adjustments	–	–	–	(697)	24,778	–
Carrying amount of the investments as at December 31, 2019	**2,377,207**	**2,057,795**	**168,086**	**158,867**	**101,766**	**79,849**
Revenue	6,231,720	443,545	785,250	836,474	172,894	306,259
Depreciation, depletion and amortization	(874,694)	(175,119)	(74,734)	(70,250)	(16,028)	(280)
Finance income	9,428	5,377	9,674	159	–	2,384
Finance costs	(39,896)	(41,813)	(90,669)	(8,772)	(26,563)	–
Income tax expense	(889,194)	(57,794)	(113,177)	(51,818)	–	(8,625)
Profit for the year from continuing operations	**2,074,701**	**26,228**	**428,204**	**165,766**	**112,387**	**30,311**
Other comprehensive (loss)/ income	(41,327)	(17,880)	–	485	–	(846)
Total comprehensive income	**2,033,374**	**8,348**	**428,204**	**166,251**	**112,387**	**29,465**
Change in unrecognized share of losses	–	–	46,016	–	–	–
Dividends received	–	–	–	61,872	–	–

The following tables illustrate summarized financial information of material JVs, based on financial statements of these entities for 2019:

In millions of tenge	UGL	KGM	KOA	Teniz Service	Valsera
Non-current assets	218,689	118,312	53,020	335,845	564,128
Current assets, including	729	42,245	19,326	51,621	80,995
Cash and cash equivalents	714	37,401	11,947	6,953	41,660
Non-current liabilities, including	(123,902)	(40,343)	(6,533)	(117,580)	(513,735)
Non-current financial liabilities	(94,532)	–	–	–	(507,803)
Current liabilities, including	(192)	(68,975)	(22,937)	(230,542)	(90,320)
Current financial liabilities	–	–	–	(1,360)	(27,035)
Equity	**95,324**	**51,239**	**42,876**	**39,344**	**41,068**
Share of ownership	50%	50%	50%	48.996%	50%
Consolidation adjustments	–	–	–	–	(7,758)
Carrying amount of the investments as at December 31, 2019	**47,662**	**25,620**	**21,438**	**19,277**	**12,776**
Revenue	–	191,297	61,597	257,944	132,246
Depreciation, depletion and amortization	(13)	(50,605)	(11,886)	(194,344)	(25,790)
Finance income	–	227	185	3	21
Finance costs	(27,471)	(1,348)	(91)	(25,434)	(34,425)

In millions of tenge	UGL	KGM	KOA	Teniz Service	Valsera
Income tax expense	(1,688)	(73,148)	113	–	(22,964)
Profit/(loss) for the year from continuing operations	**(37,790)**	**35,121**	**19,445**	**13,760**	**(12,214)**
Other comprehensive loss	(627)	(216)	–	–	(85)
Total comprehensive income/ (loss)	**(38,417)**	**34,905**	**19,445**	**13,760**	**(12,299)**
Dividends received	–	30,183	9,057	4,410	757

The following tables illustrate summarized financial information of material associates, based on their financial statements for 2020:

In millions of tenge	December 31, 2020	
	CPC	PKI
Non-current assets	2,082,957	284,545
Current assets	193,677	67,047
Non-current liabilities	(32,817)	(72,335)
Current liabilities	(134,300)	(20,426)
Equity	**2,109,517**	**258,831**
Share of ownership	20.75%	33%
Goodwill	40,409	–
Impairment of the investment	–	(6,778)
Carrying amount of the investment as at December 31	**478,134**	**78,636**
Revenue	872,851	83,863
Depreciation, depletion and amortization	(184,379)	(26,470)
Finance income	171	252
Finance costs	(12,080)	(2,464)
Income tax expense	(99,572)	5,599
Profit for the year (Note 6)	393,165	(26,702)
Other comprehensive income	180,142	13,223
Total comprehensive income	573,307	(13,479)
Dividends received	–	2,609

The following tables illustrate summarized financial information of material associates, based on their financial statements for 2019:

In millions of tenge	December 31, 2019	
	CPC	PKI
Non-current assets	1,992,524	330,021
Current assets	99,635	55,086
Non-current liabilities	(38,825)	(69,474)
Current liabilities	(499,392)	(26,785)
Equity	**1,553,942**	**288,848**
Share of ownership	20.75%	33%
Goodwill	36,730	–
Carrying amount of the investment as at December 31	**359,173**	**95,320**
Revenue	867,450	131,688
Depreciation, depletion and amortization	(178,032)	(49,236)

In millions of tenge	December 31, 2019	
	CPC	PKI
Finance income	10,720	425
Finance costs	(52,453)	(2,769)
Income tax expense	(111,797)	(20,904)
Profit for the year	341,537	(55,286)
Other comprehensive income	(6,181)	(1,473)
Total comprehensive income	**335,356**	**(56,759)**
Dividends received	–	15,004

The following tables illustrate aggregate financial information of individually immaterial JVs (the Group's proportional share):

In millions of tenge	December 31, 2020	December 31, 2019
Group share in		
Non-current assets	123,063	143,772
Current assets	53,760	52,488
Non-current liabilities	(85,476)	(110,096)
Current liabilities	(65,550)	(62,503)
Goodwill	172	4,050
Impairment of the investment in joint venture	(3,635)	(3,635)
Accumulated unrecognized share of losses	(18,163)	(16,938)
Carrying amount of the investments as at December 31	**43,498**	**41,014**
Profit for the year from continuing operations	25,690	25,069
Other comprehensive income	47	–
Total comprehensive income	25,737	25,069
Unrecognized share of (loss)/income	1,225	13,612

The following tables illustrate aggregate financial information of individually immaterial associates (the Group's proportional share):

In millions of tenge	December 31, 2020	December 31, 2019
Group share in:		
Non-current assets	36,869	30,415
Current assets	56,671	55,185
Non-current liabilities	(8,998)	(10,566)
Current liabilities	(53,548)	(51,374)
Accumulated unrecognized share of losses	(875)	(875)
Carrying amount of the investments as at December 31	**31,868**	**24,534**
Profit/losses for the year from continuing operations	11,442	2,457
Other comprehensive income/ (loss)	6,218	(398)
Total comprehensive income	17,660	2,059

19. INVENTORIES

In millions of tenge	December 31, 2020	December 31, 2019
Materials and supplies (at cost)	108,506	116,327
Refined products (at lower of cost and net realizable value)	56,712	53,974
Gas products (at cost)	32,841	52,566
Crude oil (at cost)	30,006	58,348
	228,065	**281,215**

As at December 31, 2020 inventories of 72,277 million tenge are pledged as collateral (December 31, 2019: 47,863 million tenge).

20. TRADE ACCOUNTS RECEIVABLE AND OTHER CURRENT ASSETS

In millions of tenge	December 31, 2020	December 31, 2019
Trade accounts receivable	455,321	430,125
Trade accounts receivable	(32,500)	(32,368)
Less: allowance for ECL	**422,821**	**397,757**
Other current financial assets		
Other receivables	90,904	91,610
Dividends receivable	2,913	7,582
Less: allowance for ECL	(36,746)	(35,637)
	57,071	**63,555**
Other current non-financial assets		
Advances paid and prepaid expenses	45,497	138,822
Taxes receivable, other than VAT	35,003	52,642
Other	11,867	10,794
Less: impairment allowance	(3,546)	(3,719)
	88,821	**198,539**
Total other current assets	145,892	262,094

As at December 31, 2020 and 2019 the above assets were non-interest bearing. As at December 31, 2020 trade accounts receivable of 155,998 million tenge are pledged as collateral (December 31, 2019: 71,296 million tenge).

Trade accounts receivable is denominated in the following currencies as of December 31, 2020 and December 31, 2019:

In millions of tenge	December 31, 2020	December 31, 2019
Tenge	123,824	118,870
US dollars	235,099	206,155
Romanian Leu	57,637	60,673
Euro	6,059	4,676
Other currency	202	7,383
	422,821	**397,757**

Movements in the allowance for ECL and impairment were as follows:

In millions of tenge	Individually impaired	
	Trade accounts receivable and other current financial assets	Other current non-financial assets
As at December 31, 2018	**70,796**	**4,424**
Charge for the year, net (Note 11)	14,096	42
Written-off	(15,976)	(683)
Transfers and reclassifications	217	(64)
Foreign currency translation	(1,128)	–
As at December 31, 2019	**68,005**	**3,719**
Charge for the year, net (Note 11)	4,225	(65)
Written-off	(9,259)	(108)
Foreign currency translation	6,275	–
As at December 31, 2020	**69,246**	**3,546**

Set out below is the information about credit risk exposure on the Group's trade receivables using a provision matrix:

In millions of tenge	Days past due					
	current	<30 days	30-60 days	61-90 days	>91 days	Total
December 31, 2020						
ECL rate	0.18%	2.94%	2.66%	4.34%	81.01%	
Trade accounts receivable	398,752	12,361	2,844	2,845	38,519	455,321
ECL	(733)	(363)	(76)	(124)	(31,204)	(32,500)
December 31, 2019						
ECL rate	0.12%	1.19%	5.30%	3.37%	82.30%	
Trade accounts receivable	364,869	19,869	5,418	1,871	38,098	430,125
ECL	(427)	(236)	(287)	(63)	(31,355)	(32,368)

21. LOANS AND RECEIVABLES DUE FROM RELATED PARTIES

In millions of tenge	December 31, 2020	December 31, 2019
At amortized cost:		
Loans due from related parties	558,546	509,003
Bonds receivable from Samruk-Kazyna (Note 29)	17,312	16,290
Lease receivable from a joint venture	–	4,458
Other	2,470	–
Less: allowance for ECL	(3,947)	(3,508)
At fair value through profit or loss:	**574,381**	**526,243**
Loans due from related parties	138,024	214,395
Note receivable from a shareholder of a joint venture	–	13,627
	138,024	**228,022**

Total loans and receivables due from related parties	712,405	754,265

Loans and receivables due from related parties are denominated in the following currencies:

In millions of tenge	December 31, 2020	December 31, 2019
Tenge	398,896	380,248
US dollars	310,175	370,593
Other foreign currencies	3,334	3,424
	712,405	754,265

In millions of tenge	December 31, 2020	December 31, 2019
Current portion	27,795	138,719
Non-current portion	684,610	615,546
	712,405	754,265

Movements in the allowance for ECL of loans and receivables due from related parties were as follows:

In millions of tenge	
As at December 31, 2018	**3,963**
Recovered, net	(447)
Foreign currency translation	(8)
As at December 31, 2019	**3,508**
Charged, net	340
Foreign currency translation	99
As at December 31, 2020	**3,947**

22. CASH AND CASH EQUIVALENTS

In millions of tenge	December 31, 2020	December 31, 2019
Term deposits with banks – US dollar	435,119	108,298
Term deposits with banks – tenge	163,820	210,354
Term deposits with banks – other currencies	54,800	6,450
Current accounts with banks – US dollar	397,774	633,231
Current accounts with banks – tenge	75,369	75,168
Current accounts with banks – other currencies	10,370	10,220
Cash in transit	7,508	19,991
Cash-on-hand and cheques	1,138	1,150
Less: ECL	(34)	(410)
	1,145,864	1,064,452

Term deposits with banks are made for various periods of between one day and three months, depending on the immediate cash requirements of the Group.

As at December 31, 2020, the weighted average interest rate for time deposits with banks was 0.37% in US dollars, 7.74% in tenge and 1.44% in other currencies, respectively (December 31, 2019: 2.02% in US dollars, 8.84% in tenge and 0.12% in other currencies, respectively).

As at December 31, 2020 and 2019, cash and cash equivalents were not pledged as collateral.

23.EQUITY

SHARE CAPITAL

Total number of outstanding, issued and paid shares comprises:

	December 31, 2019 and 2020
Number of shares issued and paid, including	610,119,493
Par value of 27,726.63 tenge	137,900
Par value of 10,000 tenge	20,719,604
Par value of 5,000 tenge	59,707,029
Par value of 2,500 tenge	71,104,187
Par value of 2,451 tenge	1
Par value of 1,000 tenge	1
Par value of 921 tenge	1
Par value of 858 tenge	1
Par value of 838 tenge	1
Par value of 704 tenge	1
Par value of 592 tenge	1
Par value of 500 tenge	458,450,766
Share capital (thousands of tenge)	**916,540,545**

As at December 31, 2020 and 2019, the Company had only one class of issued shares. As at December 31, 2020 and 2019, common shares in the number of 239,440,103 were authorized, but not issued. In 2020, there was no issuance of any ordinary share

ADDITIONAL PAID-IN CAPITAL (APIC)

Transfer of pipelines contributed by the Government due to termination of the trust management agreement

In 2020 the Group disposed gas pipeline assets obtained on trust management terms from the Government for 17,323 million tenge due to change in judgements (Note 3). These pipelines were recognised within APIC in prior years. As of disposal date the book value of pipelines was 16,118 million tenge. The difference between cost and book value as of disposal date mainly represents depreciation of the pipelines, and was reversed from retained earnings.

Transfer of difference between par and fair value of the loan received from Samruk-Kazyna to the Company due to the loan settlement

In 2020, the Group transferred the difference between par and fair value of loan received from Samruk-Kazyna of 10,971 million tenge, recognised in 2011 within APIC, to retained earnings due the fact that the loan payable was settled.

Transfer of excess of fair value over nominal value of the loan receivable, contributed by Samruk-Kazyna due settlement

In 2020, the Group transferred 3,519 million tenge, the difference between fair and nominal value of a loan receivable, from APIC to retained earnings. This loan represents the “Kazakhstan Note” receivable from CPC, and which was contributed to the Company in 2015, and fully settled in 2020 (Note 29).

DIVIDENDS

In 2020, based on the decision of Samruk-Kazyna and National Bank of RK, the Company declared and paid-off dividends for 2019 of 133.97 tenge per common share in the total of 81,738 million tenge (2019: declared dividends for 2018 of 60.64 tenge per common share in the total of 36,998 million tenge).

In 2020, the Group declared and paid-off dividends to the non-controlling interest holders of KTO, KMGI and KMG EP in the total amount of 4,856 million tenge and 4,553 million tenge, respectively (2019: 4,138 million tenge and 5,693 million tenge, respectively).

TRANSACTIONS WITH SAMRUK-KAZYNA

In 2020, the Company provided Samruk-Kazyna additional interest-free financial aid tranches of 54,951 million tenge (2019: 54,720 million tenge) under a long-term financial aid agreement signed on December 25, 2015, with a current maturity in 2022 (Note 29). In 2020, the difference between the fair value and nominal amount of the additional tranches of 11,617 million tenge (2019: 14,184 million tenge) was recognized as transactions with Samruk-Kazyna in the consolidated statement of changes in equity.

DISTRIBUTIONS TO SAMRUK-KAZYNA

In 2020, in accordance with the Government decree on housing of the residents, living in Zhana-ozen town, the Group distributed 3,098 million tenge and paid 2,490 million tenge (2019: distributed and paid 568 million tenge).

In 2020, the Group accrued and settled additional distribution of 5,497 million tenge for to Samruk-Kazyna for social facilities construction in Turkestan city (2019: distributed and paid-off 1,773 million tenge and 22,673 million tenge, respectively).

Additionally, in 2020, the Company reversed its distribution to Samruk-Kazyna by 832 million tenge, which was recognised in prior years under the construction project of a kindergarden in Nur-Sultan city.

In 2019, the Company transferred to Samruk-Kazyna proceeds from the sale of its non-core assets of 3,853 million tenge, recognised as distribution to Samruk-Kazyna in accordance with the Government decrees and the decision of the Management Board of Samruk-Kazyna.

In 2019, under the construction project of the Palace of martial arts in Nur-Sultan city, the Group transferred cash of 9,203 million tenge to fulfill its commitments, recognized within distributions to Samruk-Kazyna in 2016-2017.

BOOK VALUE PER SHARE

In accordance with the decision of KASE dated October 4, 2010 financial statements shall disclose book value per share (ordinary and preferred) as of the reporting date, calculated in accordance with the KASE rules.

In millions of tenge	December 31, 2020	December 31, 2019
Total assets	**14,653,287**	14,081,915
Less: intangible assets	168,481	171,172
Less: total liabilities	6,016,608	5,885,259
Net assets	**8,468,198**	**8,025,484**
Number of ordinary shares	610,119,493	610,119,493
Book value per ordinary share	**13.880**	**13.154**

EARNINGS PER SHARE

In 2020 and 2019, the weighted average number of common shares for basic and diluted earnings per share was 610,119,493, and earnings per share in net profit for the period was 282 tenge in 2020, and 1,899 tenge in 2019.

NON-CONTROLLING INTEREST

The following tables illustrate information of subsidiaries in which the Group has significant non-controlling interests:

	Country of incorporation and operation	December 31, 2020		December 31, 2019	
		Non-controlling shares	Carrying value	Non-controlling shares	Carrying value
Rompetrol Downstream S.R.L.	Romania	45.37%	53,065	45.37%	51,591
KTO	Kazakhstan	10.00%	47,314	10.00%	44,733
Rompetrol Petrochemicals S.R.L.	Romania	45.37%	15,338	45.37%	5,518
KMG EP	Kazakhstan	0.28%	5,447	0.30%	9,733
Rompetrol Vega	Romania	45.37%	(15,824)	45.37%	(16,289)
Rompetrol Rafinare S.A.	Romania	45.37%	(185,286)	45.37%	(74,441)
Other			**8,305**		**17,410**
			(71,641)		38,255

The following tables illustrate summarized financial information of subsidiaries on a stand-alone basis, in which the Group has significant non-controlling interests as at December 31, 2020 and for the year then ended:

In millions of tenge	Rompetrol Downstream S.R.L.	KTO	Rompetrol Petrochemicals S.R.L.	KMG EP	Rompetrol Vega	Rompetrol Rafinare S.A.
Summarized statement of financial position						
Non-current assets	101,670	523,992	3,072	1,329,294	30,643	131,929
Current assets	165,467	110,803	31,415	326,047	6,406	41,149
Non-current liabilities	(60,155)	(88,539)	(659)	(81,848)	(26,078)	(80,806)
Current liabilities	(90,026)	(79,066)	(22)	(107,727)	(45,847)	(500,643)
Total equity	116,956	467,190	33,806	1,465,766	(34,876)	(408,371)
Attributable to:						
Equity holder of the Parent Company	63,891	419,876	18,468	1,460,319	(19,052)	(223,085)
Non-controlling interest	53,065	47,314	15,338	5,447	(15,824)	(185,286)
Summarized statement of comprehensive income						
Revenue	495,075	235,222		718,825	58,229	790,412
Profit/(loss) for the year from continuing operations	**2,505**	**73,267**	**1,840**	**127,124**	**4,528**	**(240,657)**
Total comprehensive income/(loss) for the year, net of tax	3,249	69,936	21,642	65,600	1,025	(244,304)
Attributable to:						
Equity holder of the Parent Company	1,775	62,817	11,822	65,403	560	(133,458)
Non-controlling interest	1,474	7,119	9,820	197	465	(110,846)
Dividends declared to non-controlling interests		(4,538)		(16)		
Summarized cash flow information						
Operating activity	10,357	94,608		131,498	4,607	84,236
Investing activity	1,108	(26,354)		(137,375)	(3,110)	(42,881)
Financing activity	(9,736)	(47,434)		(2,717)	(1,643)	(6,675)
Net increase/(decrease) in cash and cash equivalents	**1,729**	**23,366**		**(1,727)**	**(146)**	**34,680**

The following tables illustrate summarized financial information of subsidiaries on a stand-alone basis, in which the Group has significant non-controlling interests as at December 31, 2019 and for the year then ended

In millions of tenge	Rompetrol Downstream S.R.L.	KTO	Rompetrol Petrochemicals S.R.L.	KMG EP	Rompetrol Vega	Rompetrol Rafinare S.A.
Summarized statement of financial position						
Non-current assets	114,262	490,914	3,800	893,471	27,272	102,697
Current assets	135,270	104,433	9,024	1,235,457	9,511	219,194
Non-current liabilities	(56,084)	(78,008)	(643)	(75,452)	(24,905)	(93,091)
Current liabilities	(79,741)	(74,699)	(19)	(167,393)	(47,778)	(392,868)
Total equity	113.707	442.640	12.162	1.886.083	(35.900)	(164.068)
Attributable to: Equity holder of the Parent Company	62,116	397,907	6,644	1,876,350	(19,611)	(89,627)
Non-controlling interest	51,591	44,733	5,518	9,733	(16,289)	(74,441)
Summarized statement of comprehensive income						
Revenue	610,232	239,626		1,119,068	85,831	1,316,167
Profit/(loss) for the year from continuing operations	6,884	56,653	19,830	272,863	10,657	(143,227)
Total comprehensive income/(loss) for the year, net of tax	6,511	53,448	19,471	267,684	10,792	(141,676)
Attributable to: Equity holder of the Parent Company	3,557	48,045	10,637	266,518	5,895	(77,204)
Non-controlling interest	2,954	5,403	8,834	1,166	4,897	(64,472)
Dividends declared to non-controlling interests		(3,999)		(16)		
Summarized cash flow information						
Operating activity	11,581	94,060	1	237,576	3,666	70,429
Investing activity	3,183	(57,033)		(368,188)	(3,541)	(26,015)
Financing activity	(14,590)	(41,853)		(4,457)	(46)	(43,941)
Net increase/(decrease) in cash and cash equivalents	174	(4,630)	1	(139,237)	79	473

24. BORROWINGS

In millions of tenge	December 31, 2020	December 31, 2019
Fixed interest rate borrowings	3,394,958	3,146,477
Weighted average interest rates	5.50%	5.48%
Floating interest rate borrowings	683,490	691,027
Weighted average interest rates (Note 30)	4.38%	5.73%
	4,078,448	**3,837,504**

Borrowings are denominated in the following currencies as of December 31,

In millions of tenge	2020	2019
US dollar	3,669,668	3,555,347
Tenge	318,034	271,776
Russian ruble	85,223	–
Euro	2,319	2,881
Other currencies	3,204	7,500
	4,078,448	**3,837,504**

In millions of tenge	December 31, 2020	December 31, 2019
Current portion	361,556	253,428
Non-current portion	3,716,892	3,584,076
	4,078,448	**3,837,504**

As at December 31, 2020 and as at December 31, 2019, the bonds comprised:

In millions of tenge	Issuance amount	Redemption date	Interest	December 31, 2020	December 31, 2019
Bonds					
Bonds LSE 2020	750 million USD	2033	3.50%	317,474	–
AIX 2019	56 billion KZT	2024	5.00%	45,192	52,843
Bonds LSE 2018	1.5 billion USD	2048	6.375%	631,832	574,230
Bonds LSE 2018	1.25 billion USD	2030	5.375%	530,776	482,393
Bonds LSE 2018	0.5 billion USD	2025	4.75%	212,117	192,764
Bonds LSE 2017	1.25 billion USD	2047	5.75%	516,505	468,940
Bonds LSE 2017	1 billion USD	2027	4.75%	419,390	380,413
Bonds ISE 2017	750 million USD	2027	4.375%	299,934	289,487
Bonds LSE 2017	0.5 billion USD	2022	3.88%	–	191,694
Bonds LSE 2013	1 billion USD	2023	4.40%	–	154,442
Other	–	–	–	**4,593**	**4,518**
Total				2,977,813	2,791,724

In October – November, 2020, the Company made an early full repayment of bonds due 2022 and 2023 with nominal value of 906,564 thousand US dollars (equivalent to 392,214 million tenge). Bond repayment fee was 49 million US dollars (equivalent to 21,057 million tenge) (Note 13).

In October, 2020, the Company placed bonds for 750 million US dollars (equivalent to 321,698 million tenge) at coupon interest rate of 3.5% per annum and due 2033.

In May 2020, KTG made an early partial repayment of bonds placed at ISE for the total amount of 41 million US dollars (equivalent to 17,816 million tenge) with bonds repayment gain of 927 million tenge (Note 13).

In April, 2019, the Company made early repayment of Eurobonds with maturity date of 2044 for 31 million US dollars (equivalent to 11,909 million tenge), including premium, coupon payments and consent fee.

As at December 31, 2020 and as at December 31, 2019, the borrowings comprised

In millions of tenge	Issuance amount	Redemption date	Interest	31 December 2020	31 December 2019
Loans					
The Export-Import Bank of China (EXIM)	1.13 billion USD	2026	6M Libor + 4.10%	287,387	350,042
Development bank of Kazakhstan JSC (DBK) (Note 29)	230 billion KZT	2022-2030	7.00%-13.67%	166,377	138,313
The Syndicate of banks (Unicredit Tiriac Bank, ING Bank, BCR, Raiffeisen Bank)	435 million USD[2]	2021-2023	1M Libor + 2,75%, 1M Libor + 2,50%, 1M Robor + 2,00%, 1M Robor + 1,50%,ON Libor + 2,50%, 1W Libor + 2,50%	118,228	99,554
DBK (Note 29)		2023-2025	6M Libor + 4,00%, 5,00%, 10,99%	107,318	131,022
VTB Bank Kazakhstan and VTB Bank (PJSC)	1.1 billion USD	2023	Key Rate of Central Bank of Russia Federation + 2.15%	85,223	–
Japan Bank for International Cooperation	15 billion RUB	2025	2,19% + CIRR	60,098	65,254
Halyk bank JSC (Halyk bank)	297.5 million USD	2023	5,00%	42,145	38,323
Halyk bank	100 million USD	2024	11,00%	41,207	–
Bank of Tokyo-Mitsubishi UFJ, Ltd (London Branch)	41 billion KZT	2021	COF (0,18%) + 1,50%	38,215	–
ING Bank NV	150 million USD	2021	COF (0,28%) + 2,00%	35,029	–
European Bank for Reconstruction and Development (EBRD)	250 million USD	2026	3M CPI + 50 basis points + 2.15%	33,786	42,940
EBRD	68 billion KZT	2026	6M CPI + 100 basis points + 2.15%	24,278	24,573
Credit Agricole	39 billion KZT	2021	COF (0,29%) + 2,00%	14,862	874

1. 1revolving credit facility
2. 275 million USD with revolving credit facility

In millions of tenge	Issuance amount	Redemption date	Interest	31 December 2020	31 December 2019
The Syndicate of banks (Citibank, N.A. London Branch, Mizuho Bank Ltd., MUFG Bank Ltd., Société Générale, ING Bank and ING Bank N.V.)	200 million USD	2021	3M Libor + 1,35%	–	76,442
Halyk bank	150 million USD	2024	5,25%	–	52,771
Other	–	–	–	**46,482**	**25,672**
Total				1,100,635	1,045,780

In 2020, Atyrau refinery made partial repayment of the loan from Eximbank for 289 million US dollars (equivalent to 112,494 million tenge), including accrued interest.

In 2020, Atyrau refinery and KTG received an additional long-term loan under the loan agreement with DBK for the total amount of 49,609 million tenge and made a partial redemption of existing loans for 27,832 million tenge, including accrued interest.

In 2020, Atyrau refinery and Pavlodar refinery, made a partial repayment of the loan from DBK for 98 million US dollars (equivalent to 39,005 million tenge), including accrued interest.

In November, 2020, KTG received a long-term loan from VTB Bank Kazakhstan and VTB Bank (PJSC) for the total amount of 15,152 million Russian rubles (equivalent to 84,621 million tenge) at the rate of Key Rate of Central Bank of Russia + 2.15% per annum and maturity of 3 years. KTG used proceeds from these loans to make a full early repayment of its syndicated loan of 205 million US dollars (equivalent to 86,971 million tenge), including accrued interest. This syndicated loan was raised to partially fund a strategic project – construction of three compressor stations at MG “Beineu-Bozoi-Shymkent”.

In December, 2020, Atyrau refinery received a long-term loan from Halyk bank for the total amount of 41,089 million tenge with 11% interest rate and maturity of 4 years, and used it to fully refinance its long-term loan from Halyk bank for 144 million US dollars (equivalent to 59,007 million tenge), including accrued interest.

In 2020, KMGI received and repaid short-term loans to finance working capital from Bank of Tokyo-Mitsubishi UFJ, Ltd (London Branch) at the rate of COF (0.18%) + 1.50% for 91 million US dollars (equivalent to 37,539 million tenge).

In 2020, KMGI received and repaid short-term loans to finance working capital from ING Bank NV at the rate of COF (0.28%) + 2.00% for 83 million US dollars (equivalent to 34,409 million tenge).

In 2020, KTG made a partial repayment of the loan from EBRD for the total amount of 12,696 million tenge, including accrued interest.

In 2020, KMGI received and repaid short-term loans to finance working capital from Credit Agricole at the rate of COF (0.29%) + 2.00% for 33 million US dollars (equivalent to 13,655 million tenge).

In 2019, the Company derecognized a loan from partners of the Pearls project under the carried interest arrangement for the total amount of 110,930 million tenge, including an interest of 3,543 million tenge, since the partners of the project decided to voluntarily relinquish the contract area under the Pearls PSA (Note 13).

On January 10, 2019, Atyrau refinery placed bonds at Astana International Exchange (AIX) for the total amount of 56,223 million tenge (equivalent to 150 million US dollars) with interest rate of 5% and maturity of 5 years. On January 10, 2019, Samruk-Kazyna purchased these bonds for 56,223 million tenge. On January 11, 2019, Atyrau refinery received long-term loan from Halyk bank of 150 million US dollars (equivalent to 56,195 million tenge), with 5% interest rate for the first year (since the second year the interest year is 5.25%) and maturity of 5 years.

Proceeds from the borrowings above in the total amount of 300 million US dollars (equivalent to 113,016 million tenge) were used to make an early repayment of loan principal of Atyrau refinery borrowings from DBK, raised to fund a strategic investment project – construction of the aromatic hydrocarbons production unit. In December 2019, Atyrau refinery received long-term loan from DBK of 32,938 million tenge with 7.99% nominal interest rate and maturity of 7 years to finance the oil processing plant modernisation.

In 2019, the Group made an additional repayment of the borrowings from DBK for 77,182 million tenge and the bonds held by DBK (Bonds KASE 2009 with a number of 16 million bonds) for 43,868 million tenge, including accrued interest.

In 2019, Atyrau refinery has made partial repayment of the loan from Eximbank for 197 million US dollars (equivalent to 74,968 million tenge), including accrued interest.

In 2019, KMGI made the repayments to BNP Paribas and partly repaid Syndicated loan a number of other banks amounted to 65 million US dollars (equivalent to 24,821 million tenge), including accrued interest, of its short-term loans used to finance working capital.

In May 2019, KMGI made a full early repayment of its Club loan for 47 million US dollars (equivalent to 17,739 million tenge), including accrued interest.

CHANGES IN LIABILITIES ARISING FROM FINANCING ACTIVITIES:

	2020				2019			
In millions of tenge	Short-term loans	Long-term loans	Bonds	Total	Short-term loans	Long-term loans	Bonds	Total
On January 1	**70,843**	**974,937**	**2,791,724**	**3,837,504**	81,813	1,258,009	2,813,416	4,153,238
Received in cash	169,088	186,641	321,250	676,979	103,608	111,941	56,223	271,772
Repayment of principal in cash	(64,921)	(299,501)		(807,355)	(112,416)	(274,435)	(57,805)	(444,656)
Derecognition of loan (Note13)	–	–	(442,933)	–	–	(111,476)	–	(111,476)
Interest accrued	7,265	64,931	163,890	236,086	4,765	73,495	152,708	230,968
Interest paid	(7,278)	(64,953)	(164,192)	(236,423)	(4,906)	(71,043)	(162,405)	(238,354)
Interest capitalized (Note 14)	–	2,890	–	2,890	–	2,525	–	2,525
Discount (Note 13)	–	(11,002)	–	(11,002)	–	(7,781)	–	(7,781)
Bonds redemption fee (Note 13)	–	–	21,057	21,057	–	–	–	–
Bonds redemption gain (Note 13)	–	–	(927)	(927)	–	–	–	–
Foreign currency translation	4,790	9,164	205,725	219,679	(199)	(422)	(10,332)	(10,953)
Foreign exchange loss/(gain)	4,583	54,367	82,365	141,315	(1,932)	(5,237)	(197)	(7,366)
Other	**–**	**(1,209)**	**(146)**	**(1,355))**	**110**	**(639)**	**116**	**(413)**
On December 31	**184,370**	**916,265**	**2,977,813**	**4,078,448**	**70,843**	**974,937**	**2,791,724**	**3,837,504**
Current portion	184,370	133,094	44,092	361,556	70,843	141,447	41,138	253,428
Non-current portion	–	783,171	2,933,721	3,716,892	–	833,490	2,750,586	3,584,076

COVENANTS

The Group is required to ensure execution of the financial and non-financial covenants under the terms of loan agreements. As of December 31, 2020 and 2019, the Group complied with all financial and non-financial covenants

HEDGE OF NET INVESTMENT IN THE FOREIGN OPERATIONS

As at December 31, 2020 certain borrowings denominated in foreign currency were designated as hedge instrument for the net investment in the foreign operations. These borrowings are being used to hedge the Group's exposure to the US dollar foreign exchange risk on these investments. In 2020, loss of 205,725 million tenge (2019: gain of 10,332 million tenge) on the translation of these borrowings were transferred to other comprehensive income and offset against translation gains and losses of the net investments in foreign operations.

There is an economic relationship between the hedged item and the hedging instrument as the net investment creates a translation risk that will match the foreign exchange risk on the US Dollars borrowings. The Group has established a hedge ratio of 1:1 as the underlying risk of the hedging instrument is identical to the hedged risk component. The hedge ineffectiveness will arise when the amount of the investment in the foreign subsidiary becomes lower than the amount of the fixed rate borrowings. As at December 31, 2020 and 2019, there was no ineffective portion of the hedge.

25. PROVISIONS

In millions of tenge	Asset retirement obligations	Provision for environ-mental obligations	Provision for taxes	Provision for gas transpor-tation	Employee benefit obligations	Other	Total
As at December 31, 2018	116,236	62,978	20,334	28,083	47,479	53,158	328,268
Foreign currency translation	(83)	(167)	(13)	(118)	–	69	(312)
Change in estimate	25,990	(7)	–	–	–	50	26,033
Unwinding of discount (Note 13)	10,005	3,670	–	–	3,559	144	17,378
Provision for the year	4,618	2,888	4,393	–	11,568	40,473	63,940
Recovered	(208)	(4,490)	(5,865)	–	–	(18,116)	(28,679)
Use of provision	(2,164)	(4,526)	(1,147)	–	(3,547)	(16,677)	(28,061)
Transfers and reclassifications	–	–	482	–	–	(1,922)	(1,440)
As at December 31, 2019	**154,394**	**60,346**	**18,184**	**27,965**	**59,059**	**57,179**	**377,127**
Foreign currency translation	2,258	3,706	(1)	2,801	922	5,370	15,056
Change in estimate	13,049	(1,421)	–	–	–	(3)	11,625
Unwinding of discount (Note 13)	11,001	2,242	–	–	3,605	130	16,978
Provision for the year	886	5,454	722	–	13,099	15,857	36,018

In millions of tenge	Asset retirement obligations	Provision for environ-mental obligations	Provision for taxes	Provision for gas transpor-tation	Employee benefit obligations	Other	Total
Recovered	(1,189)	–	(1,451)	–	–	(5,041)	(7,681)
Use of provision	(664)	(5,326)	(7,019)	–	(6,767)	(62,958)	(82,734)
As at December 31, 2020	**179,735**	**65,001**	**10,435**	**30,766**	**69,918**	**10,534**	**366,389**

Provision for gas transportation relates to the Group's commitment on reimbursement of losses incurred by PetroChina International Co. Ltd (PetroChina). Under the agreement of gas borrowing the Group has commitments to PetroChina to reimburse the supported costs and losses incurred by PetroChina due to gas borrowing and its return. Detailed description of significant provisions, including critical estimates and judgments used, is included in Note 4.

Current portion and long-term portion are segregated as follows:

In millions of tenge	Asset retirement obligations	Provision for environ-mental obligation	Provision for taxes	Provision for gas transport-tation	Employee benefit obligations	Other	Total
Current portion	700	8,094	10,435	30,766	5,691	7,549	63,235
Long-term portion	179,035	56,907	–	–	64,227	2,985	303,154
As at December 31, 2020	**179,735**	**65,001**	**10,435**	**30,766**	**69,918**	**10,534**	**366,389**
Current portion	805	7,728	18,184	27,965	6,425	42,431	103,538
Long-term portion	153,589	52,618	–	–	52,634	14,748	273,589
As at December 31, 2019	**154,394**	**60,346**	**18,184**	**27,965**	**59,059**	**57,179**	**377,127**

26. TRADE ACCOUNTS PAYABLE AND OTHER CURRENT FINANCIAL AND NON-FINANCIAL LIABILITIES

In millions of tenge	December 31, 2020	December 31, 2019
Other current financial liabilities		
Due to employees	54,741	51,613
Financial guarantees	5,240	5,866
Dividends payable	195	354
Other	**26,264**	**35,306**
	86,440	93,139
Other current non-financial liabilities		
Contract liabilities	117,956	184,362
Other	**11,065**	**25,515**
Total other financial and non-financial current liabilities	215,461	303,016
Trade accounts payable	**536,922**	667,861

Trade accounts payable is denominated in the following currencies as of December 31:

In millions of tenge	December 31, 2020	December 31, 2019
Tenge	249,108	328,538
US dollars	221,097	280,742
Romanian Leu	44,457	42,740
Euro	6,558	3,196
Other currency	15,702	12,645
Total	536,922	667,861

As at December 31, 2020 and 2019, trade accounts payable and other current financial liabilities were not interest bearing.

27. OTHER TAXES PAYABLE

In millions of tenge	December 31, 2020	December 31, 2019
VAT	90,883	19,376
Mineral Extraction Tax	10,147	19,037
Rent tax on crude oil export	10,054	29,586
Individual income tax	5,746	6,135
Social tax	5,691	4,639
Excise tax	2,239	2,163
Withholding tax from non-residents	1,556	1,873
Other	**3,947**	**3,857**
	130,263	86,666

28. INCOME TAX EXPENSE

As at December 31, 2020 income taxes prepaid of 70,301 million tenge (2019: 54,517 million tenge) are mainly represented by corporate income tax. As at December 31, 2020 income taxes payable of 8,967 million tenge (2019: 13,011 million tenge) are mainly represented by corporate income tax.

Income tax expense comprised the following for the years ended December 31:

In millions of tenge	2020	2019
Current income tax		
Corporate income tax	73,499	146,658
Excess profit tax	(194)	11,291
Withholding tax on dividends and interest income	9,416	12,893
Deferred income tax		
Corporate income tax	546	(1,999)
Excess profit tax	(2,985)	(4,904)
Withholding tax on dividends	26,021	62,241
Income tax expenses	**106,303**	**226,180**

A reconciliation of income tax expenses applicable to profit before income tax at the statutory income tax rate (20% in 2020 and 2019) to income tax expenses was as follows for the years ended December 31:

In millions of tenge	2020	2019
Profit before income tax from continuing operations	278,200	1,384,631
Profit before income tax from discontinued operations	–	6
Statutory tax rate	20%	20%
Income tax expense on accounting profit	**55,640**	**276,926**
Share in profit of JVs and associates	(76,218)	(103,138)
Other non-deductible expenses and non-taxable income	49,874	36,913
Excess profit tax	(3,179)	6,387
Effect of different corporate income tax rates	30,039	13,047
Change in unrecognized deferred tax assets	50,147	(3,955)
Income tax expense	**106,303**	**226,180**

Deferred tax balances, calculated by applying the statutory tax rates effective at the respective reporting dates to the temporary differences between the tax basis of assets and liabilities and the amounts reported in the consolidated financial statements, are comprised of the following at December 31:

In millions of tenge	2020 Corporate income tax	2020 Excess profit tax	2020 Withholding tax	2020 Total	2019 Corporate income tax	2019 Excess profit tax	2019 Withholding tax	2019 Total
Deferred tax assets								
Property, plant and equipment	35,848	–	–	35,848	34,880	–	–	34,880
Tax loss carryforward	591,813	–	–	591,813	556,446	–	–	556,446
Employee benefits related accruals	5,342	–	–	5,342	5,182	82	–	5,264
Impairment of financial assets	13	–	–	13	11	–	–	11
Environmental liability	4,296	–	–	4,296	4,572	256	–	4,828
Other	52,186	–	–	52,186	51,985	3,893	–	55,878
Less: unrecognized deferred tax assets	(582,261)	–	–	(582,261)	(532,114)	–	–	(532,114)
Less: deferred tax assets offset with deferred tax liabilities	(48,647)	–	–	(48,647)	(50,721)	(758)	–	(51,479)
Deferred tax assets	58,590	–	–	58,590	70,241	3,473	–	73,714
Deferred tax liabilities								
Property, plant and equipment	179,394	392	–	179,786	191,989	7,608	–	199,597
Undistributed earnings of JV	–	–	419,083	419,083	–	–	356,581	356,581
Other	5,672	–	–	5,672	4,763	–	–	4,763

In millions of tenge	2020 Corporate income tax	2020 Excess profit tax	2020 Withholding tax	2020 Total	2019 Corporate income tax	2019 Excess profit tax	2019 Withholding tax	2019 Total
Less: deferred tax assets offset with deferred tax liabilities	(48,647)	–	–	(48,647)	(50,721)	(758)	–	(51,479)
Deferred tax liabilities	136,419	392	419,083	555,894	146,031	6,850	356,581	509,462
Net deferred tax liability	77,829	392	419,083	497,304	75,790	3,377	356,581	435,748

Deferred corporate income tax and excess profit tax are determined with reference to individual subsoil use contracts. Deferred corporate income tax is also determined for activities outside of the scope of subsoil use contracts. A deferred tax asset is recognized only to the extent that it is probable that future taxable profits will be available against which the asset can be utilized. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realized. Unrecognized deferred tax asset arising mainly from tax losses carry forward amounted to 582,261 million tenge as at December 31, 2020 (2019: 532,114 million tenge).

Tax losses carry forward as at December 31, 2020 and 2019 in the RK expire for tax purposes after ten years from the date they are incurred.

The movements in the deferred tax liability/ (asset) were as follows:

In millions of tenge	2020 Corporate income tax	2020 Excess profit tax	2020 Withholding tax	2020 Total	2019 Corporate income tax	2019 Excess profit tax	2019 Withholding tax	2019 Total
Net deferred tax liability as at January 1	**75,790**	**3,377**	**356,581**	**435,748**	**77,856**	**8,281**	**295,580**	**381,717**
Foreign currency translation	1,601	–	36,481	38,082	1,112	–	(1,240)	(128)
Tax expense/(income) during the year recognized in profit and loss	546	(2,985)	26,021	23,582	(1,999)	(4,904)	62,241	55,338
Tax income during the year recognized in OCI	(108)	–	–	(108)	(1,179)	–	–	(1,179)
Net deferred tax liability as at December 31	**77,829**	**392**	**419,083**	**497,304**	**75,790**	**3,377**	**356,581**	**435,748**

29. RELATED PARTY DISCLOSURES

TERMS AND CONDITIONS OF TRANSACTIONS WITH RELATED PARTIES

Related party transactions were made on terms agreed between the parties that may not necessarily be at market rates, except for certain regulated services, which are provided based on the tariffs available to related and third parties. Outstanding balances at the year-end are mainly unsecured and interest free and settlement occurs in cash, except as indicated below. The Group recognizes allowances for ECL on amounts owed by related parties.

TRANSACTIONS BALANCES

The following table provides the balances of transactions with related parties as at December 31, 2020 and 2019:

In millions of tenge	December 31,	Due from related parties	Due to related parties	Cash and deposits placed with related parties	Borrowings payable to related parties
Samruk-Kazyna entities	2020	402,272	5,921	–	45,192
	2019	327,597	6,168	–	52,843
Associates	2020	4,345	3,541	–	–
	2019	56,331	3,814	–	–
Other state-controlled parties	2020	4,116	113	126,443	273,695
	2019	6,381	712	192,548	269,335
JVs	2020	357,832	246,555	–	–
	2019	519,351	217,027	–	–

DUE FROM RELATED PARTIES

Samruk-Kazyna entities

As at December 31, 2020 due from Samruk-Kazyna entities is mainly represented by the bonds receivable from the Samruk-Kazyna of 17,265 million tenge, net of ECL (December 31, 2019: 16,241 million tenge) (Note 21) and the financial aid provided to Samruk-Kazyna for 379,159 million tenge, net of ECL (December 31, 2019: 307,568 million tenge) (Note 23).

JVs

As at December 31, 2020 due from JVs were mainly represented by the loans given to BSP of 172,151 million tenge (December 31, 2019: 202,669 million tenge), PKOP of 96,958 million tenge (December 31, 2019: 110,172 million tenge), UGL of 41,066 million tenge (December 31, 2019: 48,752 million tenge) and advances paid to TCO for 16,094 million tenge (December 31, 2019: 92,435 million tenge) under crude oil and LPG purchase contract.

As at December 31, 2020 due to JVs were mainly represented by accounts payable to BSP of 47,821 million tenge (December 31, 2019: 95,908 million tenge) and AGP for gas transportation of 36,625 million tenge (December 31, 2019: 39,323 million tenge), for gas purchases to KRG for 54,985 million tenge (December 31, 2019: 30,477 million tenge), and for crude oil to TCO for 67,578 million tenge (December 31, 2019: nil).

CASH AND DEPOSITS PLACED WITH RELATED PARTIES

Other state-controlled parties

As at December 31, 2020 the cash and deposits placed with related parties are mainly attributable to the deposit placed by the Company for 300 million US dollars (equivalent to 126,273 million tenge) at a market rate (December 31, 2019: 500 million US dollars, equivalent to 192,547 million tenge).

On February 1, 2021, the Company withdraw its deposit for 100 million US dollars (equivalent to 42,422 million tenge). The maturity of the deposit was extended to July 30, 2021.

BORROWINGS PAYABLE TO RELATED PARTIES

Other state-controlled parties

As at December 31, 2020 the borrowings payable to related parties are represented by loans received from DBK by Atyrau refinery, Pavlodar refinery and KTG of 273,695 million tenge (December 31, 2019: 269,335 million tenge) (Note 24).

PROCEEDS FROM LOANS GIVEN TO RELATED PARTIES

In 2020 the Group received proceeds from principal and interest redemption of the loan issued to PKOP for 24,588 million tenge and 5,492 million tenge, respectively (2019: 21,995 million tenge and 7,954 million tenge, respectively), BSP for 48,133 million tenge and 9,336 million tenge, respectively (2019: 25,661 million tenge and 6,327 million tenge, respectively) and proceeds from interest on the CPC for 9,596 million tenge (2019: 12,656 million tenge) and "Kazakhstan Note" for 37,847 million tenge (2019: 47,663 million tenge) (Note 23).

TRANSACTIONS TURNOVER

The following table provides the total amount of transactions, which have been entered into with related parties during 2020 and 2019:

In millions of tenge		Sales to related parties	Purchases from related parties	Interest earned from related parties	Interest incurred to related parties
Samruk-Kazyna entities	2020	13,793	24,316	30,055	2,293
	2019	42,250	20,030	24,054	2,841
Associates	2020	21,000	24,710	2,740	–
	2019	19,565	40,930	8,892	–
Other state-controlled parties	2020	42,880	18,765	12,035	26,567
	2019	7,149	3,540	1,300	20,728
JVs	2020	322,894	1,128,533	31,397	4,763
	2019	307,075	1,511,600	43,324	11,183

SALES TO RELATED PARTIES/ PURCHASES FROM RELATED PARTIES

JVs

In 2020, sales to JVs were mainly represented by transportation and cargo servicing provided to TCO for 34,399 million tenge (2019: 64,246 million tenge), sale of compressor station to BSP for 43,667 million tenge (2019: 32,696 million tenge) (Note 14), transportation charges and oil servicing provided to MangystauMunaiGas, subsidiary of MIBV, for 53,951 million tenge and for 72,251 million tenge, respectively (2019: 59,235 million tenge and 79,281 million tenge, respectively).

In 2020, purchases from JVs were mainly attributable to purchases of crude oil from TCO to perform the oil delivery customer contract for 687,896 million tenge (2019: 1,131,890 million tenge), and transportation services provided by BSP for 201,524 million tenge (2019: 172,894 million tenge) and AGP for 106,160 million tenge (2019: 97,904 million tenge).

KEY MANAGEMENT EMPLOYEE COMPENSATION

Total compensation to key management personnel (members of the Boards of directors and the Management boards) included in general and administrative expenses in the accompanying consolidated statement of comprehensive income was equal to 8,159 million tenge and 11,399 million tenge for the years ended December 31, 2020 and 2019, respectively. Compensation to key management personnel mainly consists of contractual salary and performance bonus based on operating results.

30. FINANCIAL RISK MANAGEMENT, OBJECTIVES AND POLICIES

The Group's principal financial instruments mainly consist of borrowings, loans given, financial guarantees, cash and cash equivalents, bank deposits as well as accounts receivable and accounts payable. The Group is exposed to interest rate risk, foreign currency risk and credit risk. The Group further monitors the market risk and liquidity risk arising from all financial instruments

MARKET RISK

The Group takes on exposure to market risks. Market risks arise from open positions in interest rate, currency, and securities, all of which are exposed to general and specific market movements. The Group manages market risk through periodic estimation of potential losses that could arise from adverse changes in market conditions and establishing appropriate margin and collateral requirements. The sensitivity analyses in the following sections relate to the position as of December 31, 2020 and 2019.

Foreign currency risk

As a result of significant borrowings and accounts payable denominated in the US dollars, the Group's consolidated statement of financial position can be affected significantly by movement in the US dollar / tenge exchange rates. The Group also has transactional currency exposures. Such exposure arises from revenues in the US dollars. The Group has a policy on managing its foreign currency risk in US dollar by matching US dollar denominated financial assets with US dollar denominated financial liabilities. The following table demonstrates the sensitivity to a reasonably possible change in the US dollar exchange rate, with all other variables held constant, of the Group's profit before income tax (due to changes in the cash flows of monetary assets and liabilities). The sensitivity of possible changes in exchange rates for other currencies are not considered due to its insignificance to the consolidated financial results of Group's operations.

In millions of tenge	Increase/ (decrease) in tenge to US dollar exchange rate	Effect on profit before tax
2020	+14%	(335,219)
	(11%)	263,387
2019	+12%	(291,448)
	(9%)	218,586

Interest rate risk

Interest rate risk is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term borrowings with floating interest rates. The Group's policy is to manage its interest rate cost using a mix of fixed and variable rate borrowings.

The following table demonstrates the sensitivity to a reasonably possible change in interest rates, with all other variables held constant, of the Group's profit before income tax (through the impact on floating rate borrowings). There is no significant impact on the Group's equity.

In millions of tenge	Increase/ decrease in basis points	Effect on profit before tax
2020	+1.00	(6,835)
LIBOR	-0.25	1,709
2019		
LIBOR	+0.35	(2,419)
	(0.35)	2,419

Credit risk

The Group trades only with recognized, creditworthy parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivable balances are monitored on an ongoing basis with the result that the Group's exposure to bad debts is not significant. The maximum exposure is the carrying amount as disclosed in Note 13. There are no significant concentrations of credit risk within the Group.

With respect to credit risks arising on other financial assets of the Group, which comprise cash and cash equivalents, bank deposits, loans and receivables from related parties and other financial assets, the Group's exposure to credit risks arises from default of the counterparty, with a maximum exposure equal to the carrying amount of these instruments.

The table below shows the risk profile of the Group's cash and cash equivalents, short-term and long-term deposits held in banks as at 31 December 2020 and 2019 using the Fitch credit ratings, or in their absence, using their equivalent rates in S&P and Moody's:

%	As at 31 December	
	2020	2019
AA- to A+	12%	27%
A to A-	30%	8%
BBB+ to BBB-	16%	22%
BB+ to BB-	41%	39%
B+ to B-	1%	4%

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in raising funds to meet commitments associated with its financial liabilities. Liquidity risk may result from an inability to sell a financial asset quickly at close to its fair value.

Liquidity requirements are monitored on a regular basis and management ensures that sufficient funds are available to meet any commitments as they arise.

The table below summarises the maturity profile of the Group's financial liabilities as at December 31, 2020 and 2019 based on contractual undiscounted payments.

In millions of tenge	On demand	Due later than one month but not later than three months	Due later than three month but not later than one year	Due later than one year but not later than five years	Due after 5 years*[1]	Total
As at December 31, 2020						
Borrowings*	64,664	15,128	449,943	1,699,247	4,607,751	6,836,733
Trade accounts payable	208,648	318,195	10,079	–	–	536,922
Financial guarantees**	–	16,339	48,734	172,619	313	238,005
Lease liabilities	395	515	16,061	26,236	20,448	63,655
Other financial liabilities	33,377	23,337	24,486	11,096	54,586	146,882
	307,084	**373,514**	**549,303**	**1,909,198**	**4,683,098**	**7,822,197**
As at December 31, 2019						

Borrowings*	68,135	15,905	325,822	1,750,799	4,358,675	6,519,336
Trade accounts payable	255,550	368,492	43,819	–	–	667,861
Financial guarantees**	–	15,953	43,699	207,850	626	268,128
Lease liabilities	4,922	204	5,795	26,026	10,419	47,366
Other financial liabilities	13,249	8,391	8,570	8,207	1,901	40,318
	341,856	**408,945**	**427,705**	**1,992,882**	**4,371,621**	**7,543,009**

Capital management

The primary objective of the Group's capital management is to maximise the shareholder value. The Group manages its capital to ensure that Group will be able to continue as a going concern while maximising the return to stakeholders through the optimisation of the debt and equity balance.

The Company seeks to maintain a prudent capital structure to support its capital investment plans and maintain investment grade credit rating through the cycle.

Maintaining sufficient financial flexibility is considered strategically important to mitigate industry cyclicality while also enabling the pursuit of organic and inorganic investment opportunities. The Company has a comprehensive and disciplined internal approval process for capital expenditures, new projects and debt incurrence.

For the purpose of the Group's capital management, the capital structure of the Group consists of borrowings disclosed in Note 24 less cash (Note 22) and short-term deposits (Note 17) and equity, comprising share capital, additional paid-in capital, other reserves and retained earnings as disclosed in Note 23.

The Group's management regularly reviews the capital structure. As part of this review, management considers the cost of capital and the risks associated with each class of capital. Also to achieve this overall objective, the Group's capital management, among other things, aims to ensure that it meets financial covenants attached to borrowings that define capital structure requirements. There have been no breaches of the financial covenants of any borrowing in the years ended December 31, 2020 and 2019 (Note 24).

In millions of tenge	December 31, 2020	December 31, 2019
Borrowings	4,078,448	3,837,504
less: cash and short-term bank deposits	1,428,336	1,423,956
Net debt	2,650,112	2,413,548
Equity	8,636,679	8,196,656
Capital and net debt	**11,286,791**	**10,610,204**

No changes were made in the overall strategy, objectives, policies or processes for managing capital during the years ended December 31, 2020 and 2019.

FAIR VALUES OF FINANCIAL INSTRUMENTS AND INVESTMENT PROPERTY

The carrying amount of the Group financial instruments and investment property as at December 31, 2020 and 2019 are reasonable approximation of their fair value, except for the financial instruments disclosed below:

1. *The Group excludes from the maturity profile table the borrowings payable to project partners under the carry-in financing agreements, due to the uncertainty of maturity of these loans. As of December 31, 2020, the borrowings due to partners were 7,175 million tenge (December 31, 2019: 2,683 million tenge).
2. ** The Group includes financial guarantees to the maturity profile table, however, the cash outflow in relation to financial guarantees is subject to certain conditions. Financial guarantee is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because of specified debtor fails to make payment when due in accordance with the original or modified terms of debt instrument. In 2020 and 2019 there was no significant instances of financial guarantees execution.

In millions of tenge	December 31, 2020				
	Carrying amount	Fair value	Fair value by level of assessment		
			Level 1	Level 2	Level 3
Bonds receivable from Samruk-Kazyna	17,265	16,916	–	16,916	–
Loans given to related parties at amortised cost, lease receivables from JV	557,116	538,063	–	372,823	165,240
Fixed interest rate borrowings	3,394,958	4,103,404	3,640,931	462,473	–
Floating interest rate borrowings	683,490	699,509	–	699,509	–
Financial guarantee issued	14,910	15,464	–	–	15,464

In millions of tenge	December 31, 2019				
	Carrying amount	Fair value	Fair value by level of assessment		
			Level 1	Level 2	Level 3
Bonds receivable from Samruk-Kazyna	16,241	18,835	–	18,835	–
Loans given to related parties at amortised cost, lease receivables from JV	510,002	506,868	–	304,422	202,446
Fixed interest rate borrowings	3,146,477	3,576,082	3,172,400	403,682	–
Floating interest rate borrowings	691,027	714,271	–	714,271	–
Financial guarantee issued	20,189	20,189	–	–	20,189

The fair value of bonds receivable from the Samruk-Kazyna and other debt instruments have been calculated by discounting the expected future cash flows at market interest rates.
All financial instruments for which fair value is recognized or disclosed are categorized within the fair value hierarchy, based on the lowest level input that is significant to the fair value measurement as a whole, as follows:

- Level 1 – quoted (unadjusted) market prices in active markets for identical assets or liabilities;
- Level 2 – valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable;
- Level 3 – valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

There were no transfers between Level 1 and Level 2 during the reporting period, and no transfers into or out of Level 3 category.

For assets and liabilities that are recognized at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period. There were no changes in the Group's valuation processes, valuation techniques, and types of inputs used in the fair value measurements during the year.

The significant unobservable inputs used in the fair value measurements categorized within Level 3 of the fair value hierarchy are shown below:

	Valuation technique	Significant unobservable inputs	Range as of December 31,	
			2020	2019
Loans given to related parties at amortised cost, lease receivables from JV	discounted cash flow method	Interest/discount rate	7.54%-9.9%	4.5%-9.1%
Financial guarantee issued			4.9%	4.1%

31. CONTINGENT LIABILITIES AND COMMITMENTS

OPERATING ENVIRONMENT

Kazakhstan continues economic reforms and development of its legal, tax and regulatory frameworks as required by a market economy. The future stability of the Kazakhstan economy is largely dependent upon these reforms and developments and the effectiveness of economic, financial and monetary measures undertaken by the Government.

COMMODITY PRICE RISK

The Group generates most of its revenue from the sale of commodities, primarily crude oil and oil products. Historically, the prices of these products have been volatile and have fluctuated widely in response to changes in supply and demand, market uncertainty, the performance of the global or regional economies and cyclicality in industries. Prices may also be affected by the Government actions, including the imposition of tariffs and import duties, speculative trades, an increase in capacity or oversupply of the Group's products in its main markets. These external factors and the volatility of the commodity markets make it difficult to estimate future prices. A substantial or extended decline in commodity prices would materially and adversely affect the Group's business and the consolidated financial results and cash flows of operations. The Group mainly does not hedge its exposure to the risk of fluctuations in the price of its products.

TAXATION

Kazakhstan's tax legislation and regulations are subject to ongoing changes and varying interpretations. Instances of inconsistent opinions between local, regional and national tax authorities are not unusual, including opinions with respect to IFRS treatment of revenues, expenses and other items in the financial statements. The current regime of penalties and interest related to reported and discovered violations of Kazakhstan's tax laws are severe. Due to uncertainties associated with Kazakhstan's tax system, the ultimate amount of taxes, penalties and interest, if any, may be in excess of the amount expensed to date and accrued at December 31, 2020. As at December 31, 2020, Management believes that its interpretation of the relevant legislation is appropriate and that it is probable that the Group's tax positions will be sustained, except as provided for or otherwise disclosed in these consolidated financial statements.

Transfer pricing control

Transfer pricing control in Kazakhstan has a very wide scope and applies to many transactions that directly or indirectly relate to international business regardless of whether the transaction participants are related or not. The transfer pricing legislation requires that all taxes applicable to transaction participants are related or not. The transfer pricing legislation requires that all taxes applicable to a transaction should be calculated based on market price determined in accordance with the arm's length principle. The law on transfer pricing came into force in Kazakhstan from January 1, 2009. The law is not explicit and there is little precedence with some of its provisions. Moreover, the law is not supported by detailed guidance for application of transfer pricing control to various types, as a result, there is a risk that the tax authorities may take a position that differs from the Group's position, which could result in additional taxes, fines and interest. As at December 31, 2020 management believes that its interpretation of the transfer pricing legislation is appropriate and that it is probable that the Group's positions with regard to transfer pricing will be sustained.

Environmental audit at EMG

Since 2018, EMG has been subject to three ecological audits for the periods from November 2017 to December 2018, and received a notification for damages caused by ecological violations.

As at January 1, 2019 the provision on this case was at 26,070 million tenge. In 2019, EMG filed for tax return of 10,420 million tenge and increased provisions for this amount. In the meantime, to avoid late payment penalties, EMG paid-off 6,472 million tenge. Also, in 2019, the court ruled to decrease the amount of fines, and accordingly EMG reversed 25,433 million tenge, net. As a result, the provision amounted to 4,585 million tenge as at December 31, 2019.

During 2020, EMG reversed 658 million tenge, net, and settled 3,364 million tenge, thus, as of December 31, 2020, the provision was 563 million tenge.

Comprehensive tax audit at Atyrau refinery for 2015- 2017

On December 15, 2020, based on 2015-2017 comprehensive tax audit, Atyrau refinery received additional tax assessment for VAT for 9,257 million tenge, including penalties, and reduction in tax carry-forward losses for 29,026 million tenge. Atyrau refinery has not agreed with tax audit results, and, on January 28, 2021, sent an appeal to the RK Ministry of finance. The Group believes that the risk of additional tax assessment is remote, as such, the Group did not recognize any provisions as of December 31, 2020.

Legal issues and claims

Sign-off of settlement agreement between KMG Drilling and the Consortium (the KMG Drilling - Consortium case)

As of December 31, 2019, KMG Drilling provisioned of 90 million US dollars (equivalent to 34,132 million tenge) (Note 11) in the annual consolidated financial statements of the Group for the year ended December 31, 2019, in relation to the arbitrage dispute with the Consortium of companies (Ersai Caspian Contractor LLP and Caspian Offshore and Marine Construction LLP) over the jack-up rig construction contract dated July 5, 2012.

On July 15, 2020, KMG Drilling and the Consortium signed-off a final settlement agreement on the dispute with a slight increase in settlement amount by 0.4 million US dollars.

On November 17, 2020, the full settlement amount of 90.4 million US dollars (equivalent to 38,821 million tenge at transaction date) was paid-off by KMG Drilling, accordingly, as of December 31, 2020, the case is closed.

Resolution of civil litigation at KMGI

On December 5, 2019, the Prosecutor's Office of Romania (further the POR) issued an ordinance according to which charges related to the disputes between the Romanian Government and KMGI were dismissed due to expiration of the statute of limitations.

Three following plaintiffs filed a complaint against the above POR's decision:

4. The Romanian Privatization Agency on the improper fulfillment by KMGI of the post-privatization requirements for obligations of Petromidia Refinery and Vega Refinery in 2013-2014 for 30 million US dollars;
5. Faber Invest & Trade Inc. (further Faber), the non-controlling shareholder of KMGI subsidiaries, who challenged decisions of KMGI as a shareholder of Rompetrol Rafinare S.A. for 55 million US dollars;
6. Mr. Stephenson George Philip, the former director of KMGI.

On December 27, 2019, KMGI appealed against the ordinance and required the case to be dismissed on merits, not expiration of statute of limitations.

On July 10, 2020, the Supreme Court issued a final decision according to which all the complaints against the POR's decision was rejected.

However, Faber has resumed one of the previous filings, which challenged the increase in the Rompetrol Rafinare Constanta, the KMGI subsidiary, share capital of 2003-2005. The hearing was held on November 10, 2020, however, no final decision was made. The next hearings are scheduled to be on March 16, 2021.

The Group believes that its position with regard to the new Faber filing will be sustained similar to the matters resolved in 2020 in favour of the Group, and as such, the Group did not recognize any provisions as of December 31, 2020.

Resolution of the possible breach of anti-monopoly regulations at Atyrau refinery

The Department of the Committee for protection and development of competition of the Ministry of national economy of the RK for the Atyrau region (hereinafter the Department) has conducted an antimonopoly investigation against Atyrau refinery.

On July 9, 2020 the Department finalized investigation results, and concluded that the third-party services were enforced into previous period tolling contracts (January 2016 - August 2018), which breaches RK anti-monopoly legislation.

On August 5, 2020 the Department issued an order to remedy alleged breach, and took this case to the Administrative court. The Department's order was appealed by Atyrau refinery in the Civil court. Additionally, Atyrau refinery made a petition to the Administrative court to suspend proceedings until the Civil court decision was made. This petition was accepted by the Administrative court.

On September 10, 2020, the Civil court ordered that the investigation results were unlawful and terminated the proceedings. This order was appealed against by the Department at the Appeal court, but on November 24, 2020 the case resolved in favour of Atyrau refinery. In the meantime, on October 19, 2020, the Administrative court terminated administrative proceedings due to the absence of administrative offence, as such, as at December 31, 2020 the case is closed in favour of the Group.

DISPUTES REGARDING THE CALCULATION OF THE PROPORTION OF PROFIT OIL SHARING WITH THE RK (KARACHAGANAK)

According to the Karachaganak Final Production Sharing Agreement (FPSA), the Karachaganak project Profit oil sharing is regulated by the Fairness Index. In the second quarter of 2014, the economics of the Karachaganak project reached a level where the trigger on the Fairness Index "worked" and the proportion in the Profit oil sharing changed in favour of the RK.

In addition, from August 20, 2014, the Ministry of Energy of the RK (MinEnergy) used to notify quarterly the Contracting Companies, participants of FPSA, (the Contracting Companies) of disagreement regarding the presented calculation of the proportion of the Profit oil sharing.

On December 30, 2016, a legally non-binding Memorandum of Understanding was signed between the RK and the Contracting Companies.

On July 17, 2020, the RK and the Contracting Companies signed-off settlement agreement regarding the calculation of the proportion of Profit oil sharing. According to this agreement, Karachaganak is exempt from obligation to pay the financial contribution and reimburse arbitration costs.

On December 11, 2020, the RK and the Contracting Companies signed-off the dispute closure agreement, as such as of December 31, 2020, the case is closed, and the Group has no due commitments.

COST RECOVERY AUDITS

Under the base principles of the production sharing agreements, the Government transferred to contractors the exclusive rights to conduct activities in the subsurface use area, but did not transfer rights to this subsurface use area either to ownership or lease. Thus, all extracted and processed oil (i.e. the hydrocarbons produced) are the property of the Government. Works are carried out on the basis of compensation and the Government pays to the contractors not in cash but in the form of the portion of oil production, thereby allowing the contractors to recover their costs and earn profit.

In accordance with the production sharing agreements, not all costs incurred by the contractors could be reimbursed. Certain expenditures need to be approved by the authorized bodies. The authorized bodies conduct the cost recovery audits.

In accordance with the costs recovery audits completed prior to December 31, 2020, certain amounts of the costs incurred by contractors were assessed as non-recoverable. The parties to the production sharing agreements are in negotiations with respect to the recoverability of those costs.

As of December 31, 2020 the Group's share in the total disputed amounts of costs is 1,078 million US dollars (equivalent to 453,641 million tenge as at reporting date) (2019: 1,052 million US dollars, equivalent to 402,474 million tenge as at reporting date), including its share in the joint venture. The Group and its partners under the production sharing agreements are in negotiation with the Government with respect to the recoverability of these costs.

KAZAKHSTAN LOCAL MARKET OBLIGATION

The Government requires oil companies in the RK to supply a portion of the products to meet the Kazakhstan domestic energy requirement on an annual basis, mainly to maintain oil products supply balance on the local market and to support agricultural producers during the spring and autumn sowing and harvest campaigns.

Kazakhstan local market oil prices are significantly lower than export prices and even lower than the normal domestic market prices determined in an arm-length transaction. If the Government does require additional crude oil to be delivered over and above the quantities currently supplied by the Group, such supplies will take precedence over market sales and will generate substantially less revenue than crude oil sold on the export market, which may materially and adversely affect the Group's business, prospects, consolidated financial position and performance.

In 2020, in accordance with its obligations, the Group delivered 6,401 thousand tons of crude oil (2019: 6,224 thousand tons), including its share in the JVs and associates, to the Kazakhstan market.

COMMITMENTS UNDER SUBSOIL USE CONTRACTS

As at December 31, 2020, the Group had the following commitments related to minimal working program in accordance with terms of licenses, production sharing agreements and subsoil use contracts, signed with the Government, including its share in JVs and associate:

In millions of tenge	Capital expenditures	Operational expenditures
Year		
2021	254,859	37,884
2022	94,841	3,625
2023	6,774	3,671
2024	5,003	2,994
2025-2048	5,448	32,221
Total	366,925	80,395

OIL SUPPLY COMMITMENTS

As of December 31, 2020, the Group had commitments under the oil supply agreements in the total amount of 8.2 million ton (December 31, 2019: 12.8 million ton), including its share in JV commitments.

OTHER CONTRACTUAL COMMITMENTS

As at December 31, 2020, the Group, including its share in JVs commitments, had other capital commitments of approximately 196,531 million tenge (as at December 31, 2019: 335,609 million tenge), related to acquisition and construction of long-lived assets.

As at December 31, 2020, the Group had commitments in the total amount of 232,136 million tenge (as at December 31, 2019: 78,677 million tenge) under the investment programs approved by the joint order of Ministry of Energy of RK and Committee on Regulation of Natural Monopolies and Protection of Competition of the Ministry of National Economy of RK (hereinafter – the CRNM) to facilitate production units.

Unfulfilled contractual commitments of KTO and KCP under investment programs

KTO and KCP have not fulfilled their investment programs related to previous years (2015-2019) for 26,552 million tenge and 14,477 million tenge (the Group share), respectively. These amounts were not included to the commitments of the Group as of December 31, 2020, due to the following:

- with regard to KTO, unfulfilled amount in accordance with legislation on natural monopolies of RK was accounted for within tariffs for oil pumping to the domestic market for 2021-2025 by CRNM;
- with regard to KCP, the CRNM applied temporary compensating tariffs for oil pumping from October 2020 till September 2022, this was challenged by KCP at court. On December 23, 2020, KCP won the case. However, on January 26, 2021, CRNM appealed against the court decision and the application of tariffs is postponed until the court decision is released.

NON-FINANCIAL GUARANTEES

As of December 31, 2020 and 2019, the Group has outstanding performance guarantees issued in favour of third parties whereas it provides guarantee should its subsidiary, JV or associate fail to perform their obligations under the natural gas purchase-sale, transportation and other agreements.

As of December 31, 2020, the management of the Group believes that there were no expected cases of non-performance from the guaranteed parties and, accordingly, no obligations related to the above stated non-financial contingencies were recognized.

32. SEGMENT REPORTING

The Group's operating segments have their own structure and management according to the type of the produced goods and services provided. Moreover, all segments are strategic directions of the business which offer different types of the goods and services in different markets. The functions have been defined as the operating segments of the Group because they are segments a) that engages in business activities from which revenues are generated and expenses incurred; b) whose operating results are regularly reviewed by the Group's chief operating decision makers to make decisions.

The Group's activity consists of four main operating segments: exploration and production of oil and gas, oil transportation, gas trading and transportation, refining and trading of crude oil and refined products. The Group presents the Company's activities separately in Corporate segment, since the Company performs not only the functions of the parent company, but also carries out operational activities. The remaining operating segments have been aggregated and presented as other operating segment due to their insignificance.

Disaggregation of revenue by types of goods and services is presented in Note 5 to the financial statements.

Disaggregated revenue type Sales of crude oil and gas mainly represents sales made by the following operating segments: Gas trading and transportation of 790,642 million tenge (2019: 874,505 million tenge) and Refining and trading of crude oil and refined products of 1,676,749 million tenge (2019: 3,092,437 million tenge).

Disaggregated revenue type Sales of refined products mainly includes revenue of operating segments such as Refining and trading of crude oil and refined products of 989,881 million tenge (2019: 1,665,356 million tenge), Sales of crude oil and gas of 3,910 million tenge (2019: 4,166 million tenge) and Corporate of 333,100 million tenge (2019: 352,056 million tenge).

Segment performance is evaluated based on revenues, net profit and EBITDA, which are measure on the same basis as in the consolidated financial statements.

EBITDA is a supplemental non-IFRS financial measure used by management to evaluate segments performance, and is defined as earnings before DD&A, impairment of property, plant and equipment, intangible assets, exploration and evaluation assets, exploration expense, impairments of JVs and associates, finance income and expense, income tax expense.

EBITDA, % is calculated as EBITDA of each reporting segment divided by the total EBITDA.

Eliminations represent the exclusion of intra-group turnovers. Inter-segment transactions were made on terms agreed to between the segments that may not necessarily be at market rates, except for certain regulated services, which are provided based on the tariffs available to related and third parties.

GEOGRAPHIC INFORMATION

The Group's property, plant and equipment (Note 14) are located in the following countries:

In millions of tenge	2020	2019
Kazakhstan	3,730,070	3,751,128
Other countries	639,675	733,143
	4,369,745	4,484,271

The following represents information about assets and liabilities and profit and loss of operating segments of the Group for 2020:

In millions of tenge	Exploration and production of oil and gas	Oil transportation	Gas trading and transportation	Refining and trading of crude oil and refined products	Corporate	Other	Elimination	Total
Revenues from sales to external customers	8,981	216,843	931,073	2,955,444	334,092	109,604	–	4,556,037
Revenues from sales to other segments	868,731	91,497	14,447	327,229	36,945	83,314	(1,422,163)	–
Total revenue	877,712	308,340	945,520	3,282,673	371,037	192,918	(1,422,163)	4,556,037
Cost of purchased oil, gas, petroleum products and other materials	(29,528)	(13,301)	(378,862)	(2,739,382)	(185,884)	(32,844)	1,102,735	(2,277,066)
Production expenses	(297,934)	(124,041)	(84,644)	(202,820)	(126,431)	(139,308)	234,392	(740,786)
Taxes other than income tax	(194,328)	(12,891)	(15,237)	(15,188)	(24,994)	(7,107)	186	(269,559)
Transportation and selling expenses	(118,054)	(8,019)	(321,042)	(62,381)	(7,752)	–	59,062	(458,186)
General and administrative expenses	(30,219)	(16,775)	(24,507)	(46,690)	(51,053)	(25,096)	24,132	(170,208)
Share in profit of joint ventures and associates, net	182,572	93,525	231,337	(1,373)	–	5,134	–	511,195
EBITDA	**390,221**	**226,838**	**352,565**	**214,839**	**(25,077)**	**(6,303)**	**(1,656)**	**1,151,427**
EBITDA, %	**34%**	**20%**	**30%**	**19%**	**(2%)**	**(1%)**	**0%**	
Depreciation, depletion and amortization	(118,157)	(39,253)	(42,856)	(146,764)	(3,200)	(10,053)	–	(360,283)
Finance income	106,079	3,943	21,766	18,285	99,245	11,760	(151,325)	109,753

In millions of tenge	Exploration and production of oil and gas	Oil transportation	Gas trading and transportation	Refining and trading of crude oil and refined products	Corporate	Other	Elimination	Total
Finance costs	(16,934)	(5,180)	(36,911)	(87,043)	(269,715)	(11,694)	129,926	(297,551)
Impairment of property, plant and equipment, intangible assets, exploration and evaluation assets	(61,908)	(10,534)	199	(164,736)	(2,279)	(4,436)	–	(243,694)
Exploration expense	(19,807)	–	–	–	–	–	–	(19,807)
Impairment of investments in joint ventures and associates	(30,654)	–	–	–	–	–	–	(30,654)
Income tax expenses	(60,988)	(18,462)	(21,027)	4,028	(8,306)	(1,548)	–	(106.303)
Net profit for the year	**171,149**	**161,288**	**268,040**	**(227,818)**	**(189,273)**	**(19,546)**	**8,057**	**171,897**
Other segment information								
Investments in joint ventures and associates	5,371,371	515,025	525,626	34,122	–	24,877	–	6,471,021
Capital expenditures	167,609	48,900	125,608	84,649	11,811	15,586	–	454,163
Allowances for obsolete inventories, ECL on trade receivables, loans and receivables from related parties, other current financial assets and impairment of other current non-financial assets	(4,495)	(6,457)	(7,240)	(46,112)	(25,141)	(9,254)	–	(98,699)
Assets of the segment	**7,861,383**	**1,189,807**	**2,405,880**	**2,654,458**	**1,302,283**	**263,518**	**(1,024,042)**	**14,653,287**
Liabilities of the segment	**814,551**	**198,810**	**921,668**	**1,704,835**	**3,269,893**	**105,549**	**(998,698)**	**6,016,608**

The following represents information about assets and liabilities and profit and loss of operating segments of the Group for 2019:

In millions of tenge	Exploration and production of oil and gas	Oil transportation	Gas trading and transportation	Refining and trading of crude oil and refined products	Corporate	Other	Elimination	Total
Revenues from sales to external customers	7,592	236,485	1,102,110	5,035,188	352,056	125,425	–	6,858,856
Revenues from sales to other segments	1,302,744	100,253	965	540,947	78,121	87,505	(2,110,535)	–
Total revenue	1,310,336	336,738	1,103,075	5,576,135	430,177	212,930	(2,110,535)	6,858,856
Cost of purchased oil, gas, petroleum products and other materials	(33,719)	(13,666)	(490,142)	(4,972,915)	(212,655)	(33,252)	1,842,605	(3,913,744)
Production expenses	(295,687)	(149,033)	(71,978)	(203,864)	(110,379)	(145,595)	254,843	(721,693)
Taxes other than income tax	(379,725)	(13,287)	(17,388)	(13,584)	(22,417)	(7,894)	–	(454,295)
Transportation and selling expenses	(123,725)	(1,145)	(272,174)	(69,264)	(7,137)	(3)	53,046	(420,402)
General and administrative expenses	(15,439)	(15,877)	(35,900)	(45,247)	(35,244)	(71,175)	4,915	(213,967)
Share in profit of joint ventures and associates, net	500,737	75,474	242,336	(3,248)	–	12,680	–	827,979
EBITDA	**962,778**	**219,204**	**457,829**	**268,013**	**42,345**	**(32,309)**	**44,874**	**1,962,734**
EBITDA, %	**49%**	**11%**	**23%**	**14%**	**2%**	**(2%)**	**2%**	
Depreciation, depletion and amortization	(94,432)	(39,257)	(41,567)	(143,875)	(4,177)	(14,116)	–	(337,424)
Finance income	202,592	7,298	29.589	43,975	130,878	10,729	(184,181)	240,880
Finance costs	(21,460)	(7,095)	(43.443)	(127,391)	(264,841)	(8,333)	155,130	(317,433)
Impairment of property, plant and equipment, intangible assets, exploration and evaluation assets	(6,550)	(24,783)	816	(93,161)	(11)	(27,062)	–	(150,751)
Exploration expense	(57,068)	–	–	–	–	–	–	(57,068)

In millions of tenge	Exploration and production of oil and gas	Oil transportation	Gas trading and transportation	Refining and trading of crude oil and refined products	Corporate	Other	Elimination	Total
Income tax expenses	(138,762)	(20,825)	(39,917)	(12,241)	(12,923)	(1,512)	–	(226,180)
Net profit for the year	**842,496**	**136,906**	**362,344**	**(36,553)**	**(119,657)**	**(68,083)**	**41,004**	**1,158,457**
Other segment information								
Investments in joint ventures and associates	4,788,314	384,173	350,732	40,304	–	26,861	–	5,590,384
Capital expenditures	256,725	44,926	91,744	79,492	14,323	18,098	–	505,308
Allowances for obsolete inventories, ECL on trade receivables, loans and receivables from related parties, other current financial assets and impairment of other current non-financial assets	(3,146)	(5,173)	(9,991)	(46,020)	(22,297)	(9,903)	–	(96,530)
Assets of the segment	**7,504,518**	**1,080,046**	**2,195,386**	**2,854,018**	**1,480,009**	**454,084**	**(1,486,146)**	**14,081,915**
Liabilities of the segment	**748,226**	**204,540**	**956,917**	**1,771,290**	**3,453,634**	**117,899**	**(1,367,247)**	**5,885,259**

33. SUBSEQUENT EVENTS

Proceeds from new borrowings and settlement of existing borrowings:

The Atyrau refinery:
- on January 5 and 11, 2021, received long-term loans from Halyk Bank, in order to refinance its existing loan from DBK of 53,627 million tenge.
- on January 14, 2021, made an early redemption of the loan received from Eximbank for 79 million US dollars (equivalent to 33,133 million tenge), including interest.
- on January 15, 2021, paid the principal and coupon payments of the bond received from Samruk-Kazyna in total of 7,387 million tenge.
- on January 21, 2021, made an early redemption of the loan received from DBK for 10,889 million tenge, including interest.
- on January 21, 2021, made a full early redemption of the loan from DBK for total of 142 million US dollars (equivalent to 59,451 million tenge), including interest.

In February, 2021, KMGI received a short-term loan from Cargill, a financial institute based in the United States, for 50 million US dollars (equivalent to 21,187 million tenge).

Litigation:

On February 19, 2021, a Decision was issued of the arbitration proceedings on the claim of KTG against the partners of the North Caspian project on gas price calculus from the Kashagan field. The decision was issued in favour of KTG. In accordance with the Decision, the court ordered the parties to make their calculations within 30 days on the basis of the principles established by the Decision and calculate the amounts payable to KTG, including legal costs. The final amounts are not yet estimated, thus, as at the reporting date the Group did not recognise the effects of this case in its consolidated financial statements.

APPENDICES

CORPORATE GOVERNANCE CODE COMPLIANCE REPORT FOR 2020

Report on compliance / non-compliance with the principles and provisions of the Corporate Governance Code (the "Code") of JSC NC "KazMunayGas" ("KMG") approved by resolution of the Sole Shareholder of KMG on 27 May 2015 (Minutes No. 22/15) and developed in furtherance of item 6 of the Code, and covers information on KMG's compliance / non-compliance with the principles and provisions of the Code.

In general, at year-end 2020, KMG was in compliance of the provisions and principles of the Code, taking into account the following aspects:

In line with item 2 of Chapter 1 of Section 2 of the Code "It is recommended to provide the optimal asset structure for the Fund's Organizations. The parent company can be established in the form of a joint stock company in the Holding company. Other organizations are recommended to be established in the form of limited liability partnerships. In the Organizations that have been already established in the form of a joint stock company, it is recommended to consider the possibility of reorganization in the form of a limited liability company with account of economic, legal and other aspects and interests of the Fund Group. When creating new Organizations, the preferred legal form is a limited liability partnership. Creation of new Organizations in the form of a joint stock company is allowed in exceptional cases, such as planned in the future transfer of the Organization's shares to the Stock Exchange Market.".

These requirements of the Code were generally complied with in KMG during the reporting period. On 30 December 2015, the Government of the Republic of Kazakhstan by its Decree No. 1141 approved a Comprehensive Privatisation Plan for 2016-2020 including 73 KMG Group companies. Under the privatisation and divestment programmes, the number of legal entities in the KMG Group is being reduced. On November 5, 2020 by the decision of the Board of Directors of KMG (Minutes Nº 13/2020) a new Action Plan for the transition to the target asset structure of KMG group of companies was approved. The work on simplification of the KMG group assets structure is also carried out, including through liquidation / reorganization of sub-holdings. In 2020, measures on voluntary liquidation of the sub-holding KazMunayGas Exploration Production JSC were continued, pursuant thereto in 2020 KMG acquired 8 companies from KazMunayGas Exploration Production JSC. The number of sold / liquidated KMG's assets in 2020: sold - 3 companies, liquidated - 2 companies, reorganized - 1 company. When creating new legal entities with fifty or more percent of their voting shares/stake directly or indirectly held by Samruk-Kazyna JSC on the right of ownership or trust management, KMG gives preference to their creation in the legal form of a limited liability partnership as recommended by the Code. In 2020, no legal entities in the form of a joint stock company were created. At the same time, the work on optimization of the structure of KMG group assets will continue in accordance with the approved plans / programs.

In line with item 14 of Chapter 1 of Section 2 of the Code "Boards of Directors of the Fund and Organizations ensure the implementation of these standards and their observation. All officials and employees of the Fund and the Organizations must sign a statement confirming their familiarization with the Code of Business Ethics and regularly reaffirm their knowledge of the Code.".

These requirements of the Code were generally complied with at KMG as of 31 December 2020. As per recommendations made by the independent consultant PricewaterhouseCoopers LLP following the diagnostics of corporate governance of KMG, a revised Code of Business Ethics was developed and approved by the Board of Directors (Minutes No. 18/2018 dated 29 November 2018). In the reporting period, the Ombudsman Office of KMG developed and sent to the employees of KMG "Memo on ethical standards of the Code of Business Ethics" for study and practical application, as well as released a video clip with the Ombudsman's appeal to the employees of KMG to explain the ethical standards. In order to assess the KMG employees' knowledge of the Code of Business Ethics, the Human Resources Management Department jointly with the Ombudsman Office organized relevant training and testing of KMG employees' knowledge on its results. During the reporting period, 524 employees of KMG were trained and tested, which is 85% of the total number of KMG employees. In 2021, it is planned to organize the training process for 15% of KMG employees who did not receive training in 2020, as well as for newly hired KMG employees.

In line with item 3 of Chapter 2 of Section 2 of the Code "The Boards of Directors of the Companies have full autonomy in decision-making within their competence, established by the Charter of Companies.".

These requirements of the Code were generally complied with in KMG during the reporting period. Pursuant to item 4 of the KMG Charter, KMG's financial and production activities are carried out based on economic independence; pursuant to item 13 of the KMG Charter, KMG's objective is to generate net income from independent economic activity; pursuant to item 24 of the KMG Charter, KMG resolves all issues related to the planning of production activities, salaries, materials and technical supply, social development, income distribution, recruitment, placement and staff retraining independently. At the same time, the Law of the Republic of Kazakhstan "On Sovereign Welfare Fund" and certain Samruk-Kazyna JSC documents (Corporate Standard on Investment activity of Samruk-Kazyna JSC and legal entities with fifty or more percent of their voting shares/stake directly or indirectly held by Samruk-Kazyna JSC as amended on 17 March 2020, minutes No. 09/20; Guidelines for approving the appointment and early termination of the authority of the heads of executive bodies of companies of Samruk-Kazyna JSC as approved by resolution of the Management Board of Samruk-Kazyna JSC on 26 December 2019, Minutes No. 42/19, List of organizations in the Samruk-Kazyna JSC group whose all voting shares/stake are directly or indirectly owned by the companies of Samruk-Kazyna JSC, in which the heads of executive bodies of those companies are appointed and removed by the boards of directors of the companies in agreement with the Management Board of Samruk-Kazyna JSC (approved by resolution of the Management Board of Samruk-Kazyna JSC on 12 December 2012, Minutes No. 56/12), stipulate procedures that restrict the KMG Board of Directors' full independence in the decision-making process (including the conclusion of M&A transactions and the appointment of heads of executive bodies of KMG subsidiaries and affiliates).

In line with item 5 of Chapter 3 of Section 2 of the Code "Sustainable development should be integrated in:

1. management system;
2. development strategy;
3. key processes, including risk management, planning (long-term (strategy), medium-term (5-year development plan) and short-term (annual budget) periods), accountability, risk management, HR management, investments, operational activities and other as well as in the decision-making process at all levels - from bodies (General Meeting of shareholders (the Sole Shareholder), Board of Directors, Executive Body), to ordinary employees.".

This requirement of the Code was generally complied with in KMG during the reporting period. By the resolution of KMG's Board of Directors the Sustainability Management System Guidelines were approved in 2020, which includes a description of the organization of the stakeholder engagement process, integration of sustainability principles into key processes and monitoring, annual reporting on sustainable development, implementation of priority areas (initiatives) in the field of sustainable development, development and maintenance of a culture of sustainable development, risk identification and assessment, documentation management, measuring performance in the area of sustainable development. At the same time, the work on the integration of sustainable development into key processes will continue.

In line with item 6 of Chapter 5 of Section 2 of the Code "The Fund and Organization must have succession plans of appointments to the Board of Directors in order to maintain business continuity and progressive renewal of the Board of Directors.".

This requirement of the Code was generally complied with in KMG during the reporting period. The issue on the Succession Policy for members of the Board of Directors of JSC NC "KazMunayGas" was brought to the meeting of the Nomination and Remuneration Committee of the Board of Directors of KMG in November 2019 (Minutes No. 6/2019 dated November 6-7, 2019). This was the first step in the development of the succession plan for members of the KMG Board of Directors. At the meetings of the KMG Board of Directors' Nomination and Remuneration Committee No.3/2020 dated 12 February 2020 and No.5/2020 dated 31 March 2020, the issue «on the Succession Plan for the Board of Directors» was considered. At the same time, the relevant work is planned to be completed in 2021 based on the results of an external assessment of the Board of Directors and its Committees in order to take into account the results of an independent assessment of the Company's Board of Directors in the formation of the succession plan for the members of the Board of Directors.

In line with item 12 of Chapter 5 of Section 2 of the Code "The recommended frequency of meetings of the Board of Directors is 8-12 meetings per year.".

This requirement of the Code was generally complied with in KMG during the reporting period. 16 meetings were held in 2020. Of them:

- regular face-to-face meetings with personal presence of the members of the Board of Directors - 1;
- information session on KMG's development strategy via videoconferencing - 1;
- regular meetings held via videoconferencing - 11;
- extraordinary meetings held via videoconferencing - 3.

The reduction in the number of meetings of the Board of Directors with the personal presence of members of the Board of Directors in the reporting year is associated with the pandemic of coronavirus infection. Compared with 2019, the total number of meetings of the Board of Directors decreased from 18 to 16, compared with 2018 - from 20 to 16, which indicates a positive trend.

In line with item 15 of Chapter 5 of Section 2 of the Code "With respect to the Corporate Secretary, the Organization develops a program of induction and succession planning.".

This requirement of the Code was not complied with in KMG during the reporting period. In 2020 there was a significant reduction in the number of employees of KMG Corporate Secretary Service, which resulted in unscheduled outflow of employees, and in this regard, in the reporting period the Corporate Secretary Service was focused on the priority tasks of the Company within the framework of improvement of corporate governance, and some direct activities of the unit were postponed due to insufficient resources. Activities on development of an induction and succession planning programme in relation to the Corporate Secretary are included in the Corporate Secretary Service's work plan for 2021.

In line with item 7 of Chapter 6 of Section 2 of the Code "The Board of Directors in cooperation with the Audit Committee are responsible for annual assessment of risk management and internal control system's efficiency.".

This requirement of the Code was generally complied with in KMG during the reporting period. In accordance with Section 6.2.7 of the Policy on the Corporate Risk Management System of JSC NC "KazMunayGas" and its subsidiaries and affiliates approved by resolution of the Board of Directors of KMG dated 13 December 2016 (Minutes No. 17/2016), the Internal Audit Service of KMG assesses the effectiveness of the risk management process, notifies the Board of Directors of KMG of significant deficiencies in the corporate risk management system of KMG, and develops recommendations for improving the risk management process. As part of the ongoing monitoring of the implementation of KMG's Internal Audit Service recommendations, from December 21, 2020 to January 22, 2021 a post-audit was carried out on the results of the audit of the risk management process of KMG and its subsidiaries and affiliates conducted in 2016.

MAJOR AND INTERESTED-PARTY TRANSACTIONS

MAJOR TRANSACTIONS[1]

In the reporting period, no transactions recognised as major transactions under the Law of the Republic of Kazakhstan On Joint Stock Companies and KMG's internal documents were made by the Board of Directors or the General Shareholders' Meeting.

INTERESTED PARTY TRANSACTIONS[2]

In the reporting period, no transactions recognised as interested party transactions under the Law of the Republic of Kazakhstan On Joint Stock Companies and KMG's internal documents were made by the Board of Directors or the General Shareholders' Meeting. In the second half of 2020, KMG made an interested party transaction whose terms remain a trade secret.

1. In accordance with the Law On Joint-Stock Companies of the Republic of Kazakhstan, a major transaction is a transaction or a series of interrelated transactions resulting in the (potential) acquisition or disposal of property by a company, the value of which amounts to twenty-five percent or more of the total book value of such company's assets
2. In accordance with the Law On Joint Stock Companies of the Republic of Kazakhstan, interested-party transactions are transactions resulting in the acquisition or disposal of property that values ten percent or more of the total book value of the company's assets

GLOSSARY

1P reserves - Proved reserves

2P reserves - Proved plus Probable reserves

3P reserves - Proved plus Probable plus Possible reserves

4ICP - Fourth Injection Compressor Project

5TL - 5th Trunkline

A&M - Agriculture & Mechanical

AC- Audit Committee

AG - Amangeldy Gas LLP

AGP - Asia Gas Pipeline

AIFC - Astana International Financial Centre

APG - Associated petroleum gas

APC - The Automated Process Control

BSc - Bachelor of Science

BCMS - business continuity management system

BATNEEC - Best Available Techniques not

Entailing Excessive Costs

BTUs - quadrillion

BP - British Petroleum

bln - billion

bcf - billion cubic feet

bln m3 - billion cubic meters

BGR-TBA - Bukhara gas-bearing region - Tashkent-BishkekAlmaty

BSGP - Beineu-Shymkent Gas Pipeline

BTUs - quadrillion

Code - KMG Corporate Governance Code

CFO - Chief Financial Officer

CDP - Carbon Disclosure Project

CPC - Caspian Pipeline Consortium

CFO - Cash flow from operating activities

CJSC - Closed joint-stock company

CNODC - China National Oil and Gas Exploration and Development Company

CFO - Chief Financial Officer

CNG - compressed natural gas

CNPC - China National Petroleum Corporation

CRMS - the corporate risk management system

CFA - Chartered Financial Analyst

Code - KMG Corporate Governance Code

COVINA - Companhia Vidreira Nacional

CDP - Carbon Disclosure Project

CNG - Compressed natural gas

Capex - Capital expenditures

CITIC - China International Trust and Investment Corporation

DBK - Development Bank of Kazakhstan

DTP - Digital Transformation Program

D&O - Directors and Officers

EP - Exploration & Production

ENPF - JSC Unified Accumulative Pension Fund

ESG - Environmental, social and corporate governance

ECB - European Central Bank

EIA - Environmental Impact Assessment Exporting Countries

EBITDA - Earnings before interest, taxes, depreciation and amortization

EIA - Electronic Industries Alliance

ESG - Environmental Social Governance

EDP - Electricidade de Portugal

E&E - exloration and evaluation

EY - Ernst & Young

FCF - Free cash flow

FDI - Foreign direct investment

FAR - Fatality Accident Rate

FGP - the Future Growth Project

FPSA - the Final Production Sharing Agreement

FC - Finance Committee

GJ - gigajoule

Gcal - gigacalorie

GHG - Greenhouse gas

GPS - Global Positioning System

GGFR - Global Gas Flaring Reduction Partnership

GRI - Global Reporting Initiative

GDP - Gross Domestic Product

GRI - Global Reporting Initiative's

G&A - General and administrative

GTU - Gas Treatment Unit

GHG - Greenhouse Gas

HDPE - high-density polyethylene

HSE - Health, safety and environment

HSE & SD Com - Health, Safety, Environment and Sustainable

Development Committee

ICA - Intergas Central Asia

IPO - Initial public offering

IMF - International Monetary Fund

IT - Information Technology

IOGP - International Association of Oil & Gas Producers

ISO - International Organization for Standardization

IPIECA - International Petroleum Industry Environmental Conservation Association

IFRS - International Financial Reporting Standards

ICS - internal control system

IAS - Internal Audit Service

INED - Independent Non-Executive Director

JSC - Joint stock company

JV - Joint venture

JM - Jerónimo Martins

KMG - Joint stock company National company KazMunaiGas

KTO - KazTransOil

KCP - Kazakhstan-China Pipeline

KMG EP - KazMunaiGas Exploration Production

KMGI - Kazmunaigas International

KPI - Key performance indicator

KMTF - Kazmortransflot

KZT - Kazakhstan tenge

KTG - KazTransGas

KTGA - KazTransGas Aimak

kWh - Kilowatt-hour

KPI - Key Performance Indicators

KTL - Complex Technology Lines

KRI - key risk indicator

KASE- Kazakhstan Stock Exchange JSC

KGDBN - KPC Gas Debottlenecking Project

LNG - liquefied natural gas

LDPE - low-density polyethylene

LPG - Liquefied petroleum gas

LLP - limited liability Partnership

LTIR - Lost Time Incident Rate

LLB - Bachelor of laws

MMboe - million barrels of oil equivalent

mln - million

MBA - Master in Business Administration MMtoe= million tonnes

of oil equivalent

MIT - Massachusetts Institute of Technology

thous. - thousand

MS - Management system

MRM - Maintenance and repair management

MVP - The Minimum Viable Product

MT - MunaiTas

MNC - Offshore Oil Company

M&A - Mergers and Acquisitions

mln tonnes - million tonnes

NBK - the National Bank of Kazakhstan

NC - National company

NCOT - National oil transportation company

NED - Non-Executive Director

NCS PSA - The North Caspian Sea Production Sharing Agreement

NMC - National Mining Company

NOGC - National Oil and Gas Company

NMSC - National Maritime Shipping Company

NYSE - New York Stock Exchange

NRC - Nomination and Remuneration Committee

NCOC - North Caspian Operating Company

OHSAS - Occupational Health and Safety Assessment Series

OECD - Organisation for Economic Co-operation and Development

OPEC - The Organization of the Petroleum

OGPP - Orenburg Gas Processing Plant

OJSC - Open joint stock company

plc- Public limited company

PRMS - Petroleum Resources Management System

PJSC - Public joint-stock company

PKOP - PetroKazakhstan Oil Products LLP

PSA - Production Sharing Agreement

ROACE - Return on Avarage Capital Employed

R&D - Research and Development

SJSC - State joint stock company

SPE - Society of Petroleum Engineers

SSI - Social Stability Index

SACP - stand-alone credit profile

Samruk-Kazyna JSC, the Fund - Sovereign Wealth, Fund Samruk-Kazyna Joint-Stock Company

SDG - Sustainable Development Goals

SEP - Stanford Executive Program

S&P - Standard & Poor's

SACP - Stand-alone credit profile

SPMC - Strategy and Portfolio Management Committee

TCO - Tengizchevroil

UN - United Nations

UNGC - UN Global Compact

UGS - underground gas storage

USD - United States dollar

UK - United Kingdom

WWF - World Wide Fund for Nature

WPMP - the Wellhead Pressure Management Project

WEC - World Energy Council

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