



KAZATOMPROM
NATIONAL ATOMIC COMPANY

27 August 2019, Nur-Sultan

OPERATING AND FINANCIAL REVIEW SIX MONTHS ENDED 30 JUNE 2019

This Operating and Financial Review is intended to assist with the understanding and assessment of trends and significant changes related to the operations and financial position of NAC Kazatomprom JSC (“the Company” or “Kazatomprom”).

This report is based on the reviewed condensed interim consolidated financial statements (unaudited) of the Group, in each case without material adjustment, unless otherwise stated. It should be read in conjunction with those statements and the accompanying notes, in addition to the Kazatomprom 30 June 2019 Operations and Trading Update, and other Company reports. All financial data and discussions thereof are based upon the reviewed condensed interim consolidated financial statements (unaudited) prepared in accordance with the International Financial Reporting Standards (“IFRS”), unless otherwise indicated.

In this document, “the Group” refers to the Company and its consolidated subsidiaries, i.e. companies that the Group controls by having (i) the power to direct their relevant activities that significantly affect their returns, (ii) exposure, or rights, to variable returns from its involvement with these entities, and (iii) the ability to use its power over these entities to affect the amount of the Group’s returns. The existence and effect of substantive rights, including substantive potential voting rights, are considered when assessing whether the Group has power over another entity.

The Group, with its Associates and Joint Ventures (“JVs”), are collectively referred to as “the Holding”.

The functional currency of Kazatomprom is the national currency of Kazakhstan, the Kazakhstani Tenge (“KZT”). All references to pounds (“lb”) herein are referring to pounds of uranium oxide (U_3O_8). References to dollars are referring to the United States dollar (“USD”).

Global Depositary Receipts (“GDRs”) of Kazatomprom are listed on the London Stock Exchange (“LSE”), while GDRs and shares are listed on the Astana International Exchange (“AIX”). Kazatomprom’s major shareholder is JSC “Sovereign Wealth Fund “Samruk-Kazyna” (“Samruk-Kazyna”), holding 85.08% of outstanding shares.

Additional information about the Group and its business and operations is available in regularly published documents submitted to the Regulatory News Service of the LSE, and on the AIX and the corporate website (www.kazatomprom.kz).

This document contains forward-looking information (“FLI”). For more information regarding the risks and assumptions associated with FLI, see the Risks and FLI section at the end of the document.

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1.0 CORPORATE OVERVIEW

Kazatomprom is the world's largest producer of natural uranium, with priority access to one of the world's largest uranium resource bases. According to UxC data, the Holding's 2018 uranium production represented approximately 44% of global primary uranium production, and approximately 84% of global uranium production mined using the in-situ recovery ("ISR") mining method.

The Group operates 13 mining assets with 26 uranium deposits, all of which are located in Kazakhstan and mined using the ISR mining method:

- Three wholly-owned uranium producing subsidiaries operating on eight uranium deposits
- Ten uranium producing companies, partly owned by the Group and operating on 18 uranium deposits

Kazatomprom's core business is the mining and marketing of natural uranium products. However, the Group is also present in other stages of the "front-end" nuclear fuel cycle, including uranium dioxide (UO₂) ceramic powder production, and the production of fuel pellets for fuel assemblies used in nuclear power stations. The Group also has access to uranium enrichment services through its interests in the JSC International Uranium Enrichment Centre (10%), and the JSC Uranium Enrichment Centre (50%). In addition, the construction of a fuel assembly plant is currently underway in Kazakhstan which is expected to be operational in 2020.

In addition to uranium operations, the Group includes one wholly-owned subsidiary that is engaged in the manufacture of selected rare metals products, primarily tantalum, niobium and beryllium.

The Group also has subsidiaries that are primarily engaged in providing supporting services to the Uranium segment, such as drilling, transportation and security services.

For more detailed information, please see Kazatomprom's 2018 *Integrated Annual Report*, available on the corporate website at www.kazatomprom.kz.

1.1 Strategy, vision and mission

The Group's Mission is to sustainably develop its uranium deposits and their value chain components in order to create long-term value for all its stakeholders, and the Vision is to become the Partner of choice for the global nuclear fuel industry. To that end, the Group seeks to achieve continued growth and strengthen its position as the leading company in the uranium industry by employing the following strategies:

- focusing on mining operations as a core business;
- following a market-centric approach to uranium production;
- maintaining global leadership in the uranium mining industry through operational excellence;
- continuing to enhance sales and marketing capabilities, and optimizing its contract portfolio;
- retaining a vigilant focus on health, safety and the environment ("HSE");
- balancing shareholder returns and optimal capital structure; and
- expanding in the nuclear value chain with select value-accretive opportunities.

The Group strives to be the first choice in the provision of uranium and related front-end services, focusing on reliability, technical excellence, an outstanding HSE record, and fair dealings with customers.

The Group's Mission highlights:

- **Sustainability** – the Group is committed to the best HSE practices and the management team is focused on continual improvement.
- **Uranium deposits and their value chain components** – the focus of the Group's commercial activities will remain where it has the most significant competitive advantage: uranium mining.
- **Long-term value creation** – The Group runs high-margin, cash generating operations with relatively modest requirements for further expansion capital in its uranium segment. With its conservative debt policy, the Group will therefore seek to return substantial cash flows to its shareholders, whilst preserving a conservative balance sheet structure and comfortable leverage to better position itself to act on market opportunities, should they arise.

2.0 HEALTH, SAFETY AND ENVIRONMENT

Health, safety, environmental protection, and nuclear and radiation safety are the most important priorities of the Company. Realizing that a successful business is built by healthy people who work on safe equipment, the Company continuously improves the quality of industrial safety. In order to effectively improve the safety culture, the HSE department reports directly to the Chief Executive Officer of the Company. A similar approach is applied at subsidiaries throughout the Holding.

2.1 Occupational health and safety

During the first half of 2019 there were two incidents registered at the Group's entities as a result of which four people received minor injuries. There were no incidents that resulted in complete disability or a fatality, and no industrial accidents (uncontrolled explosions, emissions of hazardous substances, or destruction of buildings) occurred during the reviewed period.

To assess the effectiveness of industrial safety measures, the Company uses the LTIFR indicator (Lost-Time Injury Frequency Rate), which reflects the number of incidents that led to the loss of working time per 1,000,000 hours worked.

Indicator	Six months ended 30 June		Change
	2018	2019	
LTIFR (per million man-hours)	0.45	0.25	(44)%
Number of accidents	9	4	(56)%
Fatal case	1	-	(100)%

Kazatomprom continuously works with employees of subsidiaries at all levels to improve safety culture and increase compliance with the requirements of industrial safety. Special attention is paid to the use of preventive measures, such as identifying and responding to potentially dangerous situations, as well as conducting behavioral safety audits.

Employees are provided with personal and collective protective equipment in accordance with the needs of their job functions.

In addition to inspections of subsidiaries, the Company works with third party contractors to conduct regular reviews of safety practices.

2.2 Environmental protection, nuclear and radiation safety

It is well known that a major benefit of the ISR mining method is its low environment impact. In contrast to underground and open-pit mining, there are no waste rock piles or significant tailing dams required for ISR mining. As a result, the Group's operations have a minimal impact on land, atmosphere and water supply.

The company employs reliable systems for monitoring the environment and radiation safety at all of its uranium mines.

All activities in the first half of 2019 were carried out in compliance with environmental legislation and in accordance with permits issued by authorized state bodies.

Radiation exposure and nuclear safety remained stable in the first half of 2019, with no exceedances or radiation accidents. All activities were carried out in compliance with the regulatory requirements and guidance on nuclear and radiation safety.

3.0 PRESENTATION OF FINANCIAL INFORMATION

3.1 Segments

During the period under review, the Group operated through the following three principal business segments:

- **Uranium segment** includes uranium mining and processing operations from the Group's mines, the Group's purchases of uranium from the Group's JVs and Associates engaged in uranium production, and external sales and marketing of uranium products. The Uranium segment includes the Group's share in net results of its JVs and Associates engaged in uranium production, as well as results of the Company as the head office of the Group. This segment does not include production and sales of UO₂ powder and fuel pellets.
- **"Ulba Metallurgical Plant" JSC ("UMP") segment** includes production and sales of products containing beryllium, tantalum and niobium, hydrofluoric acid and by-products. This segment is also engaged in the processing of uranium raw materials under tolling arrangements, and the production of UO₂ powder and fuel pellets.
- **Other segment** includes revenue and expenses of the Group's subsidiaries that are primarily engaged in providing supporting services to the Uranium segment, such as drilling, transportation and security services. These businesses are not included within reportable operating segments, as their financial results do not meet the quantitative threshold.

3.2 Consolidation

In addition to the operations of the Company and its consolidated subsidiaries, the Group relies on a number of JOs, JVs and Associates.

- **Subsidiaries** are entities that the Group controls by having (i) the power to direct their relevant activities that significantly affect their returns, (ii) exposure, or rights, to variable returns from its involvement with these entities, and (iii) the ability to use its power over these entities to affect the amount of the Group's returns. The existence and effect of substantive rights, including substantive potential voting rights, are considered when assessing whether the Group has power over another entity.
- **Joint ventures** are entities that are under the joint control of the Group acting collectively with other parties, and decisions over the relevant activities of such entity require unanimous consent of all parties sharing control. The Group's interests in JVs are accounted for using the equity method of accounting.
- **Joint operations** are entities in respect of which the Group has joint control and has rights to their assets and revenues and has obligations relating to their expenses, as well as financial obligations in proportion to the Group's interests. The Group's joint operations (JOs), being JV "Akbastau" JSC and "Karatau" LLP, are consolidated as JOs from 1 January 2018. The Group's interests in JOs are accounted for on a proportional consolidation basis.
- **Associates** are entities over which the Group has, directly or indirectly, significant influence, but not sole or joint control, which is typical for a shareholding of between 20% and 50% of the voting rights. The Group's investments in Associates are accounted for using the equity method of accounting.
- **Equity investments** are entities in which the Group has less than 20% of the voting rights. Equity investments are recognised at fair value as other investments in the Company's consolidated IFRS financial statements.

The following table lists the Group's subsidiaries, JVs, JOs and Associates, as at 30 June 2019. In all cases, the share proportion is equal to the Group's voting rights, with the exception of "Ulba Metallurgical Plant" JSC and "Volkovgeologia" JSC, where the Group has 100% voting rights in each.

Treatment	Name	Share (%)
Uranium Mining and Processing		
Subsidiaries	"Ortalyk" LLP	100.00%
	"Kazatomprom-SaUran" LLP ⁽¹⁾	100.00%
	"RU-6" LLP ⁽¹⁾	100.00%
	"Appak" LLP	65.00%
	"JV "Inkai" LLP ⁽²⁾	60.00%
	"Baiken-U" LLP ^{(4) (5)}	52.50%
	"JV "Khorassan-U" LLP ⁽⁴⁾	50.00%
Joint Ventures	"JV "Budenovskoye" LLP	51.00%
	"Semizbai-U" LLP	51.00%
Joint Operations	"JV "Akbastau" JSC ⁽³⁾	50.00%
	"Karatau" LLP ⁽³⁾	50.00%
	Energy Asia (BVI) Limited ^{(4) (5)}	40.05%
	Power System International Limited (100%) ⁽⁵⁾	9.95%
		50.00%
Associates	"JV "Katco" LLP	49.00%
	"JV "South Mining Chemical Company" LLP	30.00%
	"JV "Zarechnoye" JSC	49.98%
	"Kyzylkum" LLP ⁽⁵⁾	50.00%
	"Zhanakorgan-Transit" LLP ⁽⁶⁾	60.00%
Nuclear Fuel Cycle and Metallurgy		
Subsidiaries	"Ulba Metallurgical Plant" JSC	90.18%
	"ULBA-CHINA Co" Ltd ⁽⁶⁾	100.00%
	"Mashzavod" JSC ⁽⁶⁾	100.00%
	"Ulba FA" LLP ⁽⁶⁾	51.00%
Nuclear Fuel Cycle		
Joint Ventures	"Uranium Enrichment Centre" CJSC	50.00%
	"Ural Electrochemical Integrated Plant" JSC ⁽⁶⁾	25.00%
	"JV "UKR TVS" Closed Joint-Stock Company	33.33%
Investments	"International Uranium Enrichment Centre" JSC	10.00%
Ancillary Operations		
Subsidiaries	"High Technology Institute" LLP	100.00%
	"KazakAtom TH" AG	100.00%
	"KAP-Technology" JSC	100.00%
	"Trading and Transportation Company" LLP	99.99%
	"Volkovgeologia" JSC	90.00%
	"Rusburmash-Kazakhstan" LLP ⁽⁶⁾	49.00%
	"Korgan-KAP" LLP	100.00%
Joint Ventures	"SKZ-U" LLP	49.00%
	"Uranenergo" LLP	79.45%
	"Shieli – Energoservice" LLP ⁽⁶⁾	99.17%
	"Taukent – Energoservice" LLP ⁽⁶⁾	99.95%
	"Uranenergo-PUL" LLP ⁽⁶⁾⁽⁹⁾	100.00%
Associates	"JV "SKZ Kazatomprom" LLP	9.89%

¹ The Company transferred its rights and obligations under the subsoil use licenses relating to Kanzhugan, Southern Moinkum, Eastern Mynkuduk and Uvanas deposits, along with the associated production assets to "Kazatomprom-SaUran" LLP and its rights and obligations under the subsoil use licenses relating to the Southern and Northern Karamurun deposits, to "RU-6" LLP, in November 2018.

² The Company increased its interest in JV "Inkai" LLP from 40% to 60%, and accordingly started fully consolidating this entity in its financial statements, with effect from 1 January 2018.

³ JV "Akbastau" JSC and "Karatau" LLP were classified as JOs, with effect from 1 January 2018.

⁴ On 13 December 2018, the Company completed the acquisition of 40.05% shares in EAL and a 16.02% stake in the issued capital of JV "Khorasan-U" LLP from Energy Asia Holdings (BVI) Limited.

As a result of these transactions, the Company increased its interests in "Baiken-U" LLP from 5% to 52.5% (direct ownership 5%, indirect ownership through Energy Asia (BVI) Limited and Power System International Limited (PSIL) 47.5%), its interest in JV "Kyzylkum" LLP from 30% to 50% (direct ownership 30%, indirect ownership through Energy Asia (BVI) Limited and PSIL 20.0%), in JV "Khorasan-U" from 33.98% to 50% (direct ownership).

⁵ The Company holds 100% (direct ownership) in PSIL and 40.05% (direct ownership) in Energy Asia (BVI) Limited. PSIL hold 9.95% (direct ownership) in Energy Asia (BVI) Limited. Energy Asia (BVI) Limited holds 40% (direct ownership) in "Kyzylkum" LLP and 95% (direct ownership) in "Baiken-U" LLP.

⁶ These companies are 3rd level entities for the Company through the interests in subsidiaries, JVs and Associates presented above these companies in the table. The corresponding interests belongs to the 2nd tier entities, not the Company.

The following assets are currently for sale or subject to restructuring:

Treatment	Name	Share (%)
Nuclear and Alternative Energy		
Subsidiaries	"Kazakhstan Solar Silicon" LLP ⁽⁷⁾	100.00%
	"MK KazSilikon" LLP ⁽⁷⁾	100.00%
	"Astana Solar" LLP ⁽⁷⁾	100.00%
	"Uranenergo-PUL" LLP ⁽⁶⁾⁽⁹⁾	100.00%
Auxiliary operations		
Associates	"Caustic" JSC ⁽⁸⁾	40.00%

⁷ The Group plans to sell part of non-core assets, including entities of KazPV project: "Astana Solar" LLP, "MK "KazSilikon" LLP, and "Kazakhstan Solar Silicon" LLP. The conditional sale contract was concluded on 17 May 2019, which provides for the initial sale of 75% of the Group's shareholding in the entities of KazPV project ("Astana Solar" LLP, "MK "KazSilikon" LLP, and "Kazakhstan Solar Silicon" LLP). The Group assesses that there is a high probability that these entities will be sold by the end of 2019 and, accordingly, as at 30 June 2019, the Group presented assets and liabilities of this disposal group as held for sale

⁸ "Caustic JSC" – the Company intends to dispose of its entire block of shares prior to end of 2020.

⁹ "Uranenergo-PUL" LLP is 3rd level entity for the Company through the interests in "Uranenergo" LLP. In June 2019, the General Meeting of Participants of "Uranenergo" LLP approved the sale of "Uranenergo-Pul" LLP. The legal entity is expected to be disposed by the end of 2019.

4.0 SIGNIFICANT FACTORS AFFECTING THE GROUP'S RESULTS OF OPERATIONS

On 13 November 2018 Samruk-Kazyna offered 38,903,491 shares including GDRs, representing approximately 15% of the Company's share capital, in a dual-listing offering on the LSE and AIX. At the date of this document the number of the Company's issued and outstanding shares was 259,356,608, of which 220,661,900 ordinary shares are owned by Samruk-Kazyna (85.08%) and 38,694,708 ordinary shares (including GDRs) are owned by minority shareholders (14.92%).

The significant factors that affected the Group's results of operations during first half of 2018 and first half of 2019, and which the Company expects to continue to affect the Group's results of operations in the future, include:

- the price received for the sale of natural uranium and changes in natural uranium product prices;
- changes in the Group structure;
- the impact of changes in exchange rates;
- taxation, including mineral extraction tax;
- the price and availability of sulfuric acid;
- impact of changes in ore reserves estimates; and
- transactions with JVs and Associates.

4.1 Price received for the sale of natural uranium and changes in natural uranium product prices

Spot market prices for U₃O₈, which is the main marketable product of the Group, have the most significant effect on the Group's revenue. The majority of the Group's revenue is derived from sales of U₃O₈ under contracts with price formulae containing a reference to spot price. In addition to spot prices, the Group's effective realised price depends on the proportion of contracts in the portfolio with a fixed price component in a given period. The average realised price for each period can therefore deviate from the prevailing spot market price. More information regarding the impact of spot market prices on average realised price is provided in section 10.1 *Uranium sales price sensitivity analysis*.

The following table provides the average spot price and average realised price per pound of U₃O₈ for the periods indicated:

(KZT millions)		Six months ended 30 June		Change
		2018	2019	
Average market spot price (per lb U ₃ O ₈) ¹	USD	22.14	26.47	20%
	KZT	7,228	10,039	39%
Average realised price by the Group (per lb U ₃ O ₈)	USD	23.64	26.99	14%
	KZT	7,717	10,239	33%
Average realised price by Kazatomprom (per lb U ₃ O ₈)	USD	23.79	27.43	15%
	KZT	7,768	10,406	34%

¹ Prices per UxC LLC.

For additional details related to specific market developments that influence the pricing of uranium in the first half of 2019, please see the *Kazatomprom 1H19 Operations and Trading Update*, available on the corporate website.

4.2 Change in the Group structure

In the first half of 2018 and 2019, as part of its corporate restructure program developed in connection with the public offering of its securities, the Group completed several transactions that had a significant impact on reported results.

In the first-half results for 2018:

- The Group's ownership interest in JV "Inkai" LLP was increased from 40% to 60% effective 1 January 2018, which resulted in a change in accounting treatment from equity to full consolidation.
- Agreements were signed with Uranium One Inc. under which the Company and Uranium One Inc. have the obligation to purchase all production of JV "Akbastau" JSC and "Karatau" LLP at equitable terms, with financing to the joint arrangements in proportion to their shareholdings. As a result, the

Group's investments in these two operations were reclassified as JOs in the consolidated financial statements, and accounted for by recognising the Group's direct right in joint assets, liabilities, income and expenses in proportion to its ownership effective 1 January 2018.

In accordance with IFRS, the Group assessed the fair values of the assets and liabilities acquired in the above business combinations of JV "Inkai" LLP, JV "Akbastau" JSC and "Karatau" LLP which resulted in a net gain of KZT 313.5 billion being recorded in profit and loss for the six month period ended 30 June 2018.

In the first half results for 2019:

- the Group's ownership interest in Baiken-U LLP, Kyzylkum LLP and JV Khorasan-U LLP increased to 52.5%, 50% and 50%, respectively – before the transaction, those ownership interests were 14.45%, 33.98% and 33.98%, respectively.
- as of 31 December 2018 the Group obtained control over Baiken-U LLP through having majority of the voting rights and representation in the Supervisory Board.
- the Group maintained significant influence over Kyzylkum LLP and JV Khorasan-U LLP as at 31 December 2018 and the Group concluded at that date that no control was obtained over JV Khorasan-U LLP pending participants' approval of changes in the charter of the investee that will enable the Group to exercise the majority of votes.
- in February 2019, the owners of JV Khorasan-U LLP approved changes to the charter documents of that entity, which gave the Group the ability to cast a majority vote at the supervisory board. As a result, the Group obtained control over JV Khorasan-U LLP from that date.

The acquisition of Baiken-U LLP as well as the increase in ownership interest in Kyzylkum LLP and Khorasan-U LLP were reflected in the consolidated financial statements for the year ended 31 December 2018 at provisional (carrying) values. The valuations by an independent appraiser were finalised in the first half 2019. As a result, the statement of financial position as of 31 December 2018 was restated in condensed interim consolidated financial statements.

As at 30 June 2019, the fair value appraisal for the acquired assets and liabilities of JV "Khorassan-U" LLP was completed and the Group recorded a net gain of KZT 54.6 billion in profit and loss for the six months ended 30 June 2019.

In total, the number of the Group's subsidiaries, JVs, JOs and Associates decreased from 44 as at 31 December 2018, to 43 as at 30 June 2019.

- In January 2019, the General Meeting of Participants approved the interim liquidation balance of "ULBA Conversion" LLP. The legal entity is expected to be dissolved by the end of 2019.

4.3 Impact of Changes in Exchange Rates

Fluctuations in the KZT/USD exchange rate can significantly affect the Group's consolidated results of operations, primarily because:

- Uranium spot prices are typically quoted in USD; therefore, most sales contracts and the majority of the Group's consolidated revenues are denominated in USD. As of 30 June 2018 79% of the Group's revenue was denominated in USD, and as of 30 June 2019, that decreased insignificantly to 78%;
- A substantial portion of the Group's expenses, including most of its operating production expenses and over two-thirds of its capital expenditures, are denominated in KZT. The principal expenses of the Group that are not denominated in KZT relate to the purchase of industrial pumps used in ISR operations and the resins used in processing uranium; and
- Most of the Group's borrowings are denominated in foreign currencies. As at 30 June 2019, 88% of the Group's borrowings were denominated in USD.

As most of the Group's revenue is denominated in USD, while a significant share of its costs are in KZT, a weakening of the KZT against the USD generally has a positive effect on the Group's financial performance. However, because the Group has significant outstanding USD-denominated liabilities, the positive effect of an appreciating USD on recorded revenues may be fully or partially offset. In addition, although the Company purchases uranium and uranium products from its JVs and Associates under KZT-denominated contracts, the prices are determined by reference to prevailing spot market prices of U_3O_8 , which are in turn denominated in USD. Accordingly, a significant appreciation of USD would result in a corresponding increase in the KZT-

denominated uranium purchase costs under such contracts.

Where possible, the Group attempts to mitigate the risks associated with exchange rates by matching the currency of its interest payments and financial liabilities, with the currency of its cash flows. Through this matching, the Group is able to naturally hedge without the use of derivatives. For monetary assets and liabilities denominated in currencies other than KZT, the Group attempts to keep its net exposure to an acceptable level by buying or selling such currencies at spot rates when necessary to address short-term imbalances.

In the first half of 2019, the KZT/USD exchange rate fluctuated between KZT 384.2 and KZT 380.5. The following table provides semiannual average rates and half year closing KZT/USD exchange rates, as reported by the National Bank of the Republic of Kazakhstan (NBK) as of 30 June 2018 and 2019.

(KZT millions)		Six months ended 30 June		Change
		2018	2019	
Average exchange rate for the period ¹	KZT / USD	326.49	379.31	16%
Closing exchange rate for the period	KZT / USD	341.08	380.53	12%

¹ The average rates are calculated as the average of the daily exchange rates on each calendar day.

4.4 Taxation and Mineral Extraction Tax (“MET”)

Kazakhstan’s MET is determined by applying a 29% tax charge to the taxable base related to mining production costs (based on a formula - see table below). Taxable expenditures are made up of all direct expenditures associated with mining operations, including wellfield development depreciation charges and any other depreciation charges attributable to direct mining activities, but specifically exclude processing and general and administrative expenses. The MET is calculated separately for each subsoil use license.

The resulting MET paid is therefore dependent upon the cost of mining operations.

The following table provides a summary of taxes accrued by the Group for the periods shown:

(KZT millions unless noted)	Six months ended 30 June		Change
	2018	2019	
Corporate income tax ¹	7,263	15,719	116%
Mineral extraction tax ²	8,374	10,339	23%
Excess profit tax ³	-	-	-
Other taxes and off-budgetary payments ⁴	22,767	26,562	17%
Total tax accrued	38,404	52,620	37%

¹ Applicable rate: 20%; calculation: taxable income (based on tax reporting accounts) multiplied by corporate income tax rate.

² Applicable rate: 18.5% for uranium cost in pregnant solution; calculation: the tax charge is a cost of mining and is based on a deemed 20% profit margin on certain expenditures, and a MET rate of 18.5%. The tax charge of 29% is determined by the following formula: $(1 + 20\%) \times 18.5\% \div (1 - (1 + 20\%) \times 18.5\%)$.

³ Applicable rate: 10–60%. Abolished as of 1 January 2018 for subsoil use licenses relating to solid mineral deposits, including uranium.

⁴ Includes property tax, land tax, transport tax, social tax, off-budgetary payments, VAT and PIT.

Total tax accrued, including corporate income tax, MET and other taxes, increased by 37% as of 30 June 2019, compared to 30 June 2018, due to the increased tax base resulting from higher uranium spot prices and weakening of the KZT, as well as the accounting changes related to the change in the Group structure (see section 4.2 Change in the Group structure).

4.5 Price and availability of sulfuric acid

Extraction of uranium using the ISR mining method requires substantial amounts of sulfuric acid. If sulfuric acid is unavailable, it could impact the Group’s production schedule. Higher prices for sulfuric acid could adversely impact the Group’s profits.

The Group’s weighted average price of sulfuric acid decreased slightly to KZT 21,282 per tonne in the first half of 2019 (from KZT 21,643 per tonne in the first half of 2018). On average in the first half of 2019, the price of sulfuric acid represented about 15% of the Group’s uranium production cost.

4.6 Impact of changes in Ore Reserves estimates

The Group reviews its JORC-compliant estimates of Ore Reserves and Mineral Resources on an annual basis.

As a result, certain Ore Reserves and Mineral Resources may be reclassified annually in accordance with applicable standards. Such reclassifications may have an impact on the Group's financial statements. For example, if a reclassification results in a change to the Group's life of mine plans, there may be a corresponding impact on depreciation and amortization expenses, impairment charges, as well as mine closure charges incurred at the end of mine life.

4.7 Transactions with JVs and Associates

The Company purchases U₃O₈ from its subsidiaries, JVs and Associates, principally at spot price with market-based discounts, which can vary by operation. Purchased volumes generally correspond to the Company's interest in the respective selling entities.

The Group's Uranium segment revenue is primarily composed of two streams:

- the sale of U₃O₈ purchased from operations (JVs and Associates), and
- the sale of U₃O₈ produced by the Company and by its consolidated subsidiaries and JOs.

Cost of sales of purchased uranium is equal to the purchase price from JVs and Associates, which in most cases is the prevailing spot price with certain applicable discounts. The share of results of JVs and Associates represents a significant part of the Group's profits and should be considered accordingly in the assessment of the Group's financial results. In the first half 2019, the weighted average discount on pounds purchased U₃O₈ was 4.2% of the prevailing spot price.

When uranium produced by the Company, consolidated subsidiaries and JOs, is sold, the cost of sales is predominantly represented by the cost of production. For those sales, the full mining margin is therefore captured in the consolidated results of the Group.

The following table provides the volumes purchased by the Company; these volumes were accounted for using the purchase price in the Company's cost of sales for the periods indicated:

(tU)	Six months ended 30 June		Change
	2018	2019	
U ₃ O ₈ purchased from JVs and Associates	1,605	586	(63)%
U ₃ O ₈ purchased from non-controlled investment ¹	669	-	(100)%
Total	2,274	586	(74)%

¹ Non-controlled investment in 2018 was "Baiken-U" LLP with 5% direct ownership by the Company.

The volume of U₃O₈ purchased from JVs, Associates, and non-controlled investments that is accounted for in cost of sales using purchased price, totaled 586 tonnes during the first half of 2019, a decrease of 74% compared to the first half of 2018 mainly due to the changes in the Group structure (see section 4.2 Change in the Group structure). In addition to the purchased volumes from JV's and Associates shown here, the Group also buys uranium from subsidiaries and third parties.

5.0 KEY PERFORMANCE INDICATORS

5.1 Consolidated Financial metrics

(KZT billion)	Six months ended 30 June		Change
	2018	2019	
Group's consolidated revenue	145.0	176.6	22%
Operating profit	16.0	27.1	69%
Net profit	326.4	104.0	(68)%
Gain from reversal of liability under joint operations (one-time effect) ¹	-	17.0	100%
Gain from business combinations (one-time effect)	313.5	54.6	(83)%
Adjusted net profit	12.9	32.3	151%
Earnings per share attributable to owners (basic and diluted), KZT/share	1,255.4	358.2	(71)%
Adjusted EBITDA ²	38.8	73.0	88%
Adjusted attributable EBITDA ³	45.6	58.5	28%
Operating cash flow	(45.0)	111.4	347%

¹ Gain from reversal of liability under joint operations relates to volumes of uranium that were not purchased from joint operations in 2018, and which the Group does not plan to acquire in future, hence this liability, which initially recorded at 31 December 2018, was derecognised in the first half 2019.

² Adjusted EBITDA is calculated by excluding from EBITDA all items not related to the main business and having a one-time effect.

³ Adjusted Attributable EBITDA is calculated as an adjusted EBITDA less the share of the results in the net profit in JVs and Associates plus the share of adjusted EBITDA of JVs and Associates engaged in the uranium segment (except Bundenovskoye JV LLP's EBITDA due to minor effect it has during each reporting period) less non-controlling share of adjusted EBITDA of Appak LLP, Inkai JV LLP, Baikun-U LLP and Khorasan-U JV LLP less any changes in the unrealized gain in the Group.

Consolidated revenue was KZT 176.6 billion as at 30 June 2019, an increase of 22% compared to 30 June 2018, mainly due to an increase in average sales price due to higher spot prices for U₃O₈ and the weakening of the KZT against the USD. This was partially offset by lower sales volumes in 2019 compared to 2018 as described below.

The operating profit as at 30 June 2019 was KZT 27.1 billion, an increase of 69% compared to 30 June 2018. The increase in operating profit was mainly due to the weakening of the KZT against the USD and higher average sales price. The increase was also due to the change in the Group structure (see section 4.2 Change in the Group structure), which led to an increase in the share of uranium produced by the Company, consolidated subsidiaries and JOs. For those sales, the full mining margin is therefore captured in the consolidated results of the Group.

Net profit for the 2019 half year was KZT 104.0 billion, a decrease of 68% compared to 30 June 2018. A significant portion of the year-over-year decrease is associated with one-time effects of transactions in both years, particularly the inclusion of JV "Inkai" LLP, "Karatau" LLP, JV "Akbastau" JSC in the consolidation in 2018 and JV "Khorasan-U" LLP in 2019 (see section 4.2 Change in the Group structure). The one-time effects of these transactions increased net income by KZT 313.5 billion and KZT 54.6 billion as at 30 June 2018 and 30 June 2019 respectively. Also, as of 30 June 2019 there was a gain from reversal of a liability, which was initially recorded at 31 December 2018, under joint operations in the amount of KZT 17.0 billion. This gain related to volumes of uranium that were not purchased from JOs in 2018, and which the Group does not plan to acquire in the future, hence this liability was reversed in the first half of 2019. Adjusting for those effects, adjusted net profit was KZT 32.3 billion, an increase of 151% compared to 30 June 2018.

Adjusted EBITDA totaled KZT 73.0 billion as at 30 June 2019, an increase of 88% compared to 30 June 2018, while adjusted attributable EBITDA was KZT 58.5 billion as at 30 June 2019, an increase of 28% compared to 30 June 2018. The changes were mainly driven by increased operating profit and the change in the Group structure (see section 4.2 Change in the Group structure).

Operating cash flows totaled KZT 111.4 billion, an increase of 347% compared to 30 June 2018, mainly due to changes in working capital, an increase in the spot price for U₃O₈, and the weakening of the KZT against the USD (see section 8.4.1 Cash Flows from Operating Activities).

5.2 Uranium segment production and sales metrics

		Six months ended 30 June		Change
		2018	2019	
Production volume of U ₃ O ₈ (100% basis)	tU	10,905	10,800	(1)%
Production volume of U ₃ O ₈ (attributable basis) ¹	tU	5,771	6,226	8%
U ₃ O ₈ sales volume (consolidated)	tU	5,579	5,425	(3)%
Including KAP U ₃ O ₈ sales volume ²	tU	5,167	4,608	(11)%
Group inventory of finished goods (U ₃ O ₈)	tU	11,635	10,374	(11)%
KAP inventory of finished goods (U ₃ O ₈) ³	tU	10,095	8,407	(17)%
Average sales price of the Group	KZT/kg	20,063	26,620	33%
Average sales price of the Group	USD/lb	23.64	26.99	14%
Average weekly spot price	USD/lb	22.14	26.47	20%
Average month-end spot price	USD/lb	21.78	25.92	19%

¹ the Production volumes of U₃O₈ (attributable basis) is not equal to the volumes purchased by Company and THK.

² KAP sales volume (incl. in Group): includes only the total external sales of KAP HQ and Trade House KazakAtom AG (THK). Intercompany transactions between KAP HQ and THK are not included.

³ KAP inventory of finished goods (incl. in Group): includes the inventories of KAP HQ and Trade House KazakAtom AG (THK). Intercompany transactions between KAP HQ and THK are not included.

Production volumes of U₃O₈ on a 100% basis decreased by 1% as at 30 June 2019, compared to 30 June 2018. Production was lower as was expected based upon the production plans at various operations. Production attributable to Kazatomprom was higher in 2019 due primarily to higher 2019 production levels set by subsoil use contracts (as expected and previously disclosed), different production levels at various assets and the mix of ownership interest in each asset, and the change in the Group structure (see section 4.2 Change in the Group structure).

Consolidated U₃O₈ sales volumes as at 30 June 2019 totaled 5,425 tonnes, a decrease of 3% compared to 30 June 2018. Sales volumes through the first half of 2019 were lower than in 2018, but in line with 2019 annual expectations. Allocation of sales volumes between fiscal quarters can vary substantially, due to variable timing of customer delivery requests and physical delivery dates.

Consolidated Group inventory of finished U₃O₈ products at 30 June 2018 amounted to 10,374 tonnes, which is 11% lower than at 30 June 2018. At the KAP level, inventory of finished U₃O₈ products was 8,407 tonnes, a decrease of 17% compared to 30 June 2018. The lower inventory levels are in line with the Company's target to maintain an optimum inventory level of approximately six to seven months of annual attributable production.

The average sales price in KZT realized by the Group in the first half of 2019 was KZT 26,620 per kg (26.99 USD/lb), an increase of 33% compared to 30 June 2018 due to an increase in the average spot price for uranium products and the weakening of the KZT against the USD.

5.2.1 Uranium segment production by operation

The information presented in the table below shows total production of uranium at each asset (100% basis).

(tU as U ₃ O ₈)	Six months ended 30 June		Change
	2018	2019	
Ortalyk LLP	837	716	(15)%
Kazatomprom-SaUran LLP	758	633	(16)%
RU-6 LLP	426	471	11%
Appak LLP	439	449	2%
JV Inkai LLP	1,315	1,480	13%
Semizbay-U LLP	457	443	(3)%
Karatau LLP	937	1,241	32%
JV Akbastau JSC	789	778	(1)%
JV Zarechnoye JSC	398	391	(2)%
JV Katco LLP	1,673	1,536	(8)%
JV Khorassan-U LLP	757	735	(3)%
JV SMCC LLP	1,271	1,206	(5)%
Baiken-U LLP	848	721	(15)%
Total	10,905	10,800	(1)%

5.3 Uranium segment financial metrics

(KZT billion unless noted)		Six months ended 30 June		Change
		2018	2019	
Average exchange rate for the period	KZT/USD	326.5	379.3	16%
Uranium segment revenue		113.7	145.1	28%
Including U ₃ O ₈ sales proceeds (across the Group)		111.9	144.4	29%
Share of a revenue from uranium products	%	77%	82%	6%
Attributable Cash cost (C1)	USD/lb	12.22	9.86	(19)%
Attributable All-In Sustaining cost (AISC)	USD/lb	16.28	13.27	(18)%
Capital expenditures of mining companies (100% basis) ¹		30.5	26.0	(15)%

¹ Excludes liquidation funds and closure costs and includes expansion investments. Note that in section 6.0 Capital Expenditures Review total results includes liquidation funds and closure cost.

Consolidated U₃O₈ sales were KZT 144.4 billion as at 30 June 2019, an increase of 29% compared to 30 June 2018, mainly due to an increase in average sales price reflecting a higher spot price for U₃O₈ and weakening of the KZT against the USD.

Attributable Cash cost (C1) and All-In-Sustaining costs (AISC) (in USD equivalent) decreased by 19% and 18% respectively as at 30 June 2019, compared to 30 June 2018. The decreases were primarily due to weakening of the KZT against the USD, the change in the Group structure (see section 4.2 Change in the Group structure) and continued cost optimization efforts.

Capital expenditures of mining companies (on 100% basis) totaled KZT 26.0 billion, a decrease of 15% compared to 30 June 2018, mainly due to the changes in the timing of spending on projects for future expansion at some of the mining assets, and continued cost optimization programs (see section 6.0 Capital Expenditures Review).

5.4 UMP Segment sales metrics

Rare metals products		Six months ended 30 June		Change
		2018	2019	
Beryllium products	KZT/kg	10,063	9,793	(3)%
	Sales, tonnes	736.75	848.16	15%
Tantalum products	KZT/kg	101,169	81,702	(19)%
	Sales, tonnes	72.69	47.05	(35)%
Niobium products	KZT/kg	26,041	602,450	2213%
	Sales, tonnes	7.75	0.08	(99)%

Sales of beryllium products increased by 15% as at 30 June 2019, compared to 30 June 2018, due to an increase in demand. Sales price decreased by 3% in 2019 mainly related to lower prices in the non-ferrous metal markets.

Lower sales volumes and sales prices for tantalum products as at 30 June 2019, compared to the same period in 2018, were due to lower consumer demand for tantalum ingots and chips.

Sales of niobium products at 30 June 2019 decreased substantially compared to the similar period in 2018 due to a reduction in the quantity of orders for niobium alloying additives and for niobium-containing sublimates. However, the smaller quantity of products sold were more highly refined and of greater value than the types of products sold in 2018, resulting in a higher selling price.

UO ₂ powder and Fuel pellets		Six months ended 30 June		Change
		2018	2019	
Fuel pellets	Sales, tonnes	31.3	23.7	(24)%
Dioxide from scraps	Sales, tonnes	8.3	22.5	171%

Sales of fuel pellets as at 30 June 2019 decreased to 23.7 tonnes, 24% lower than at 30 June 2018 due to decreased amounts of toll services according to customer agreements.

The increase in sales volumes of dioxide from scraps is due to the processing of the carry-over stocks from 2018 of customer-supplied raw materials.

5.5 Other Segments financial metrics

(KZT billion)		Six months ended 30 June		Change
		2018	2019	
Revenue ¹		37.0	40.9	11%
Including external revenue		15.6	16.7	7%
Cost of sales ¹		(35.2)	(38.8)	10%
Gross profit ¹		1.8	2.1	17%

¹ All indicators include intra-group transactions (eliminations), for more details see the Condensed interim consolidated Financial Statements.

Other segments include services such as drilling, transportation of commodities and sulfuric acid, security services, R&D and training, which are all provided to mining entities.

Total revenue from Other segments was KZT 40.9 billion as at 30 June 2019, which was 11% higher compared to 30 June 2018. External revenue from Other segments represented about 9% of the Group's total consolidated revenue at 30 June 2019, compared to about 11% to 30 June 2018. An increase in Other segments gross profit was mainly due to the increase of sales of purchased goods based on customer demand.

6.0 CAPITAL EXPENDITURES REVIEW

The main capital expenditures of the Group are incurred by subsidiaries, JO's, JVs and Associates engaged in the mining of natural uranium. Such expenditures are comprised of the following key components:

- well construction costs;
- expansion costs, which typically include expansion of processing facilities, extension of services and transport routes to new wellfield areas, implementation of new systems and processes;
- sustaining capital – largely reflecting recurring, infrastructure, maintenance and equipment replacement related costs which are assumed to cease three years prior to cessation of production; and
- liquidation fund contributions and mine closure costs – which are not included in the calculation of AISC.

The following table provides the capital expenditures for the Group's subsidiaries, JVs and Associates engaged in uranium mining for the periods indicated. Capital expenditure amounts shown were derived from stand-alone management information of certain entities within the Group on an unconsolidated basis, and they are therefore not comparable with or reconciled to the amounts of additions to property, plant and equipment as presented in the Financial Statements. Investors are strongly cautioned to not place undue reliance on capital expenditure information, as it represents unaudited unconsolidated financial information on an accounting basis which is not in compliance with IFRS.

(KZT millions)	Owner ship	30 June 2018				30 June 2019				
		WC ¹	S ²	LF/C ³	Total	WC ¹	S ²	LF/C ³	Total	
Ortalyk LLP	100%	796	2,013	27	2,836	100%	940	63	-	1,003
Kazatomprom-SaUran LLP	100%	3,324	230	(693)	2,861	100%	1,678	39	225	1,942
RU-6 LLP	100%	921	141	(243)	819	100%	845	172	114	1,131
Appak LLP	65%	224	136	(0)	360	65%	181	66	8	255
JV Inkai LLP	40%	2,809	1,582	5	4,396	60%	4,080	578 ⁴	(2)	4,656
Semizbay-U LLP	51%	1,158	39	37	1,234	51%	782	1,423	36	2,241
Karatau LLP	50%	892	601	0	1,493	50%	1,205	836 ⁴	(0)	2,041
JV Akbastau JSC	50%	921	393	1	1,315	50%	1,040	110	52	1,202
JV Zarechnoye JSC	49.98%	2,019	178	3	2,200	49.98%	1,771	77	-	1,848
JV Katco LLP	49%	3,578	1,865	788	6,231	49%	4,423	1,032 ⁴	600	6,055
JV Khorassan-U LLP	34%	2,454	76	4	2,534	50%	1,003	75	-	1,078
JV SMCC LLP	30%	1,548	210	108	1,866	30%	1,746	175	(160)	1,761
Baiken-U LLP	5%	1,589	757	9	2,355	52.5%	1,529	83	10	1,622
Total of mining assets		22,233	8,222	45	30,500		21,223	4,729	883	26,835

¹ Well construction

² Sustaining

³ Liquidation fund / closure

⁴ Includes total expansion investments in amount of KZT 1.2 billion.

In order to achieve the planned levels of production, the Group's mining companies assess the required level of wellfield and mining preparation based on the availability of reserves. These costs relate to the capitalized costs of maintaining the sites, with the main component being wellfield construction.

(KZT millions)	Six months ended 30 June		
	2018	2019	Change
Well construction	22,233	21,223	(5)%
Sustaining	8,222	3,522 ¹	(57)%
Total wellfield construction and sustaining costs	30,455	24,745	(19)%

¹ Excludes total expansion investments of KZT 1.2 billion.

Wellfield construction and sustaining costs for the 13 mining entities as at 30 June 2019 amounted to KZT 24.7 billion, which is 19% lower than at 30 June 2018. The change was mainly due to changes in the timing of spending for projects related to future expansion at some of the mining assets and constant cost optimization efforts. A 5% decrease in the cost of well construction is related to lower piping costs and higher pump prices, combined with weakening of the KZT against the USD.

The information presented in the table below reflects the wellfield development depreciation (commonly known as PGR), property, plant and equipment, and depreciation and amortization data for each mining asset as at 30 June 2019:

(KZT million unless noted)	PGR volumes (tU)	PGR	Exploration value	Historical cost of PPE (excl. wellstock) at the beginning of period	Carrying amount of PPE (excl. wellstock) at the end of period	D&A (excl. wellstock)
Ortalyk LLP	3,085	9,754	1,011	18,206	12,334	453
Kazatomprom-SaUran LLP	4,142	11,663	2,830	15,028	5,984	573
RU-6 LLP	2,872	6,846	-	4,799	2,827	156
Appak LLP	1,945	3,305	2,097	8,239	4,082	223
JV Inkai LLP	5,458	23,214	18,434	95,962	59,064	1,211
Semizbay-U LLP	2,403	5,051	29	17,707	8,978	402
Karatau LLP	2,250	6,172	3,111	23,531	11,907	659
JV Akbastau JSC	2,438	4,532	6,850	10,932	7,410	209
JV Zarechnoye JSC	2,263	8,376	600	8,392	2,631	317
JV Katco LLP	4,779	22,746	4,408	51,282	17,390	1,232
JV Khorassan-U LLP	3,596	8,436	9,678	14,857	9,939	334
JV SMCC LLP	4,409	9,726	6,384	19,366	11,543	887
Baiken-U LLP	2,922	8,790	6,922	19,360	10,679	542

7.0 FINANCIAL ANALYSIS

All comparisons in this section are performed on the basis of six months ended 30 June 2019 to six months ended 30 June 2018.

The table below shows financial information related to the consolidated results of the Group as of 30 June 2018 and 2019:

(KZT millions)	Six months ended 30 June		Change
	2018 (restated)	2019	
Revenue	145,029	176,555	22%
COGS	(113,106)	(129,596)	15%
Gross profit	31,923	46,959	47%
Selling expenses	(3,361)	(4,108)	22%
G&A	(12,573)	(15,757)	25%
Operating profit	15,989	27,094	69%
Other income/(loss), including:	307,769	71,357	(77)%
Gain from reversal of liability under joint operations (one-time effect)	-	16,998	100%
Net gain from business combinations (one-time effect)	313,517 ¹	54,649	(83)%
Share in the results of Associates	6,948	9,404	35%
Share of JVs' results	(1,905)	4,599	341%
Pre-tax income	328,801	112,454	(66)%
Corporate income tax	(3,513)	(8,498)	142%
Income from discontinued operations	1,103	-	(100)%
Net profit	326,391	103,956	(68)%
Adjusted Net profit (net of one-time effect)	12,874	32,309	151%

¹ Includes the gain in amount of KZT 5 million from other investments.

Net profit of the Group in both periods is significantly affected by transactions related to changes in the Group structure (see section 4.2 Change in the Group structure):

At 30 June 2018:

- a gain from the increased interest in JV "Inkai" LLP of KZT 95,929 million
- a gain from the change of classification of "Karatau" LLP and JV "Akbastau" JSC to joint operations of KZT 124,632 million and KZT 92,951 million respectively

At 30 June 2019:

- a gain from the increased interest in JV "Khorassan-U" LLP of KZT 54,649 million

Also, in the first half of 2019 there was a gain from reversal of liability under joint operations of KZT 16,998 million, which is also considered as one-time effect.

7.1 Revenue

The main revenues by source as at 30 June 2019 compared to 30 June 2018, are presented in the table below:

(KZT millions)	Six months ended 30 June			Proportion six month ended 30 June	
	2018	2019	Change	2018	2019
Uranium products	112,889	145,710	29%	78%	83%
Beryllium products	7,414	8,306	12%	5%	5%
Tantalum products	7,353	3,844	(48)%	5%	2%
Others	17,373	18,695	8%	12%	10%
Total Revenue	145,029	176,555	22%	100%	100%

7.2 Cost of sales

Cost of sales totaled KZT 129,596 million as at 30 June 2019, an increase of 15% compared to 30 June 2018. The increase was mainly due to the change in the Group structure (see section 4.2 Change in the Group structure) and the consequent recognition of acquired assets at fair values that led to higher depreciation and amortisation of property, plant and equipment.

The table below illustrates the Group's cost of sales for 30 June 2018 and 30 June 2019 by component:

(KZT millions)	Six months ended 30 June		Change	Proportion six month ended 30 June	
	2018	2019		2018	2019
Materials and supplies	63,713	71,801	13%	56%	55%
Wages and salaries	11,072	10,407	(6)%	10%	8%
Processing and other services	5,698	7,226	27%	5%	6%
Depreciation and amortisation	18,322	26,113	43%	16%	20%
Taxes other than income tax	9,362	8,845	(6)%	8%	7%
Other	4,939	5,204	5%	5%	4%
Cost of Sales	113,106	129,596	15%	100%	100%

The cost of materials and supplies was KZT 71,801 million as at 30 June 2019, an increase of 13% compared to 30 June 2018. The increase was largely due to the change in the Group structure (see section 4.2 Change in the Group structure).

Wages and salaries totaled KZT 10,407 million as at 30 June 2019, a decrease of 6% compared to 30 June 2018, mainly due to a decrease in sales volumes of uranium products.

The cost of processing and other services was KZT 7,226 million as at 30 June 2019, an increase of 27% compared to 30 June 2018, mainly due to an increase in costs associated with an increased work scope with third-party services.

The other categories of costs, including depreciation and amortization, taxes and other expenses, and other, totaled KZT 40,162 million as at 30 June 2019, an overall increase of 23% compared to 30 June 2018, mainly due to the recognition of acquired assets at fair values resulting from the business combinations that led to higher depreciation and amortisation of property, plant and equipment.

7.3 Selling expenses

(KZT millions)	Six months ended 30 June		Change	Proportion six month ended 30 June	
	2018	2019		2018	2019
Shipping, transportation and storing	2,446	2,469	1%	73%	60%
Wages and salaries	241	343	42%	7%	8%
Rent	130	25	(81)%	4%	1%
Materials	84	97	15%	2%	2%
Depreciation and amortisation	30	37	23%	1%	1%
Others	430	1,137	164%	13%	28%
Selling expenses	3,361	4,108	22%	100%	100%

Selling expenses totaled KZT 4,108 million as at 30 June 2019, an increase of 22% compared to 30 June 2018, mainly due to the commission charged for the delivery of fuel pellets in accordance with 2018 contractual obligation of "UMP" JSC, and due to a JV "Inkai" LLP radiation safety charge for a change of destination point for the delivery of uranium products which is shown as an increase in "Others". The shipping, transportation and storing expenses did not change significantly.

7.4 General & Administrative expenses (G&A)

(KZT millions)	Six months ended 30 June		Change	Proportion six month ended 30 June	
	2018	2019		2018	2019
G&A expenses	12,573	15,757	25%	100%	100%
<i>Incl. Depreciation and amortisation</i>	<i>425</i>	<i>788</i>	<i>85%</i>	<i>3%</i>	<i>5%</i>

G&A expenses were influenced by the change in the Group structure (see section 4.2 Change in the Group structure).

Depreciation and amortisation was KZT 788 million, 85% higher than as at 30 June 2018, mainly due to the acquisition of a new office building, which was offset by lower rent expenses in comparison to 30 June 2018.

7.5 The share of Associates' and JVs' results

The share of results of Associates and JVs as at 30 June 2019 was KZT 14,003 million, an increase of 178% compared to 30 June 2018. The increase was related to an increase in uranium spot prices and weakening of the KZT and RUB in the first half of 2019 compared with the first half of 2018, which positively impacted the operating results of the Associates and JVs and their resulting contributions to the Group.

7.6 Profit before tax and tax expense

(KZT millions)	Six months ended 30 June		Change
	2018	2019	
Profit before tax	328,801	112,454	(66)%
Corporate income tax	3,513	8,498	142%

The Group's profit before tax was KZT 112,454 million as at 30 June 2019, a decrease of 66% compared to 30 June 2018. The decrease was mainly attributable to the gains arising from business combination transactions related to changes in the Group structure (see section 4.2 Change in the Group structure), for which there is no income tax expense effect.

As at 30 June 2019 corporate income tax expense was KZT 8,498 million, an increase of 142% compared to 30 June 2018, mainly due to the increase in operating profit (see section 5.1 Consolidated Financial metrics) and the change in the Group structure (see section 4.2 Change in the Group structure).

The corporate tax rate applicable to the majority of the Group's profits is 20% as at 30 June 2019 and 30 June 2018. Income tax expense is recognised based upon management's estimate of the weighted average effective annual income tax rate. Effective income tax rates are 21% and 22% for the 6 months ended 30 June 2019 and 30 June 2018, respectively. The effective tax rate differs from corporate income tax primarily due to certain elements of reported income that are not recognized in tax accounting.

8.0 LIQUIDITY AND CAPITAL RESOURCES

Kazatomprom's management pays special attention to preserving financial stability in a constantly changing market environment. The Group's financial management policy is aimed at maintaining a strong capital base to support existing operations and business development.

For comparison purpose the information from the Condensed interim consolidated financial statements (unaudited) for six months ended 30 June 2018 and 30 June 2019 was used in this section.

8.1 Capital resources

The Group's liquidity requirements primarily relate to funding working capital, capital expenditures, service of debt, and payment of dividends. The Group has historically relied primarily on cash flow from operating activities, and to a smaller degree, external sources of financing, to fund its working capital and long-term capital requirements. It is expected that there will be no significant change in the sources of the Group's liquidity in the foreseeable future. As required, the Company will consider entering into project financing arrangements to fund certain investment projects. The Group also obtains capital for its operations through the formation of joint ventures with industry partners, and in the past, it has raised financing in the international debt capital markets.

8.2 Dividends received

The Company is the parent company for the Group, and in addition to revenue from its business operations, it receives dividends from JVs and Associates, and other investments. As at 30 June 2019 and 2018, the Group received dividends of KZT 9,048 million and KZT 7,135 million, respectively, from its JVs and Associates and other investments. The increase as at 30 June 2019 was primarily due to the Company using its voting power to maximise the dividend flow from subsidiaries, JVs and Associates. Dividends received by the Company from investees domiciled in the Republic of Kazakhstan are exempt from dividend tax.

In June 2019, the Company paid dividends in the amount of KZT 80,001 million to its shareholders.

8.3 Working capital

The table below provides a breakdown of the Group's working capital as at 30 June 2018 and 30 June 2019:

(KZT millions)	Six months ended 30 June		Change
	2018	2019	
Inventory	202,918	222,485	10%
Receivables	73,752	47,438	(36)%
Recoverable VAT	21,375	24,240	13%
Other current assets	23,852	21,957	(8)%
CIT prepayment	9,869	7,892	(20)%
Payables	(53,653)	(76,835)	43%
Employee remuneration liabilities	(126)	(63)	(50)%
Income tax liabilities	(508)	(1,979)	290%
Other taxes and compulsory payments liabilities	(5,659)	(8,298)	47%
Other current liabilities	(105,582)	(25,124)	(76)%
Net working capital	166,238	211,713	27%

The Group's net working capital remained positive during all periods under review.

The Company regularly monitors the cash position of its subsidiaries and focuses on effectively collecting excess cash from such subsidiaries.

The Group constantly monitors the uranium market and may pursue a strategy of increasing its inventories in unfavorable market conditions. The following table sets forth the components of the Group's inventories as at 30 June 2018 and 30 June 2019:

(KZT millions)	Six months ended 30 June		Change
	2018	2019	
Finished goods and goods for resale	174,525	175,838	1%
Work-in-process	15,999	23,641	48%
Raw materials	12,695	17,882	41%
Spare parts	778	701	(10)%
Materials in processing	1,573	1,434	(9)%
Fuel	1,170	839	(28)%
Other materials	5,559	5,821	5%
Provision for obsolescence and write-down to net realisable value	(9,381)	(3,671)	(61)%
Total inventories	202,918	222,485	10%

The Group's largest inventory item is finished goods and goods for resale, which primarily consists of U₃O₈. The Group's work-in-process and raw materials increased by 48% and 41% respectively mainly due to the change in the Group structure (see section 4.2 Change in the Group structure). A decrease of 61% in the provision for obsolescence and write-down to net realizable value was due to disposal of non-core assets; the increase of spot price for U₃O₈ which led to the reversal of previously charged impairments; and the change in the Group structure (see section 4.2 Change in the Group structure).

The value of finished goods and goods for resale did not change in the first half of 2019 compared to the same period in 2018. However, the volume of U₃O₈ inventory, which is a significant component of finished goods and goods for resale, decreased by 11% (see section 5.2 Uranium segment production and sales metrics). The unchanged value despite a decrease in volume is primarily related to the cost of purchased uranium from JVs and Associates, which generally references current market prices. In 2019, the value of the purchases going into inventory was higher than in 2018 due to a higher uranium spot price and a weaker exchange rate.

The lower inventory volume levels (see section 5.2 Uranium segment production and sales metrics) are the result of the Company's target to maintain an optimum uranium inventory level of approximately six to seven months of annual attributable production.

8.4 Cash Flows

The following cash flow discussion is based on, and should be read in conjunction with, the Financial Statements and related notes.

The following table provides the Group's consolidated cash flows as at 30 June 2018 and 2019:

(KZT millions)	Six months ended 30 June	
	2018	2019
Cash flows from / (used in) operating activities ¹	(45,001)	111,351
Cash flows (used in) investing activities	(13,158)	(16,039)
Cash flows (used in) financing activities	(82,880)	(161,487)
Net increase / (decrease) in cash and cash equivalents	(141,039)	(66,175)

¹ Includes income tax and interest paid.

8.4.1 Cash Flows from Operating Activities

Cash flows generated from operating activities increased to KZT 111,351 million at 30 June 2019 from KZT used (45,001) million at 30 June 2018. This change was primarily related to:

- a KZT 69,213 million increase in cash receipts from customers during the first half of 2019. This was due to receipt of cash for products which were sold in the end of 2018 (decrease of trade receivables).
- a KZT 80,235 million decrease in payments to suppliers for 30 June 2019, due to an increase of accounts payable during the first half of 2019 (most of the payment will be made in the second half of 2019).

8.4.2 Cash Flows from Investing Activities

Net cash outflows from investing activities as at 30 June 2019 was KZT 16,039 million compared to KZT 13,158 million at 30 June 2018.

Changes in investing cash flows at 30 June 2019 were due to:

- KZT 1,913 million increase in dividends received from Associates, JVs and other investments as a result of Company's efforts to maximize the dividends from its investees.
- KZT 9,790 million increase in acquisition of exploration and evaluation assets and mine development assets due to the change the Group structure (see section 4.2 Change in the Group structure).

8.4.3 Cash Flows from financing activities

Net cash outflows from financing activities were KZT 161,487 million as at 30 June 2019 and KZT 82,880 million as at 30 June 2018. This change was primarily due to:

- an increase of KZT 34,982 million in dividends paid to shareholders in first half of 2019 compared to 2018;
- a KZT 12,749 million increase in repayment of loans and borrowings at 30 June 2019.

8.5 Liquidity

The Group manages its liquidity requirements to ensure sufficient funds are available for operations and for settlement of financial obligations using, amongst other sources, short-term and long-term corporate credit lines without collateral.

(KZT millions)	Six months ended 30 June		Change
	2018	2019	
Cash and cash equivalents	100,542	60,012	(40)%
Current term deposit	7,618	55	(99)%
Total cash	108,160	60,067	(44)%

The Group's cash and cash equivalents as at 30 June 2019 were KZT 60,012 million, compared to KZT 100,542 million as at 30 June 2018. The decrease was mainly the result of the payment of dividends to shareholders during the first half of 2019, and the scheduled repayment of debt.

Corporate credit lines are an additional liquidity source for the Company. As at 30 June 2019, the Company, with certain subsidiaries, had total available revolving credit facilities of USD 275 million (denominated in USD). Approximately USD 265 million (96%) remained undrawn at 30 June 2019.

9.0 INDEBTEDNESS

For comparison purposes, the information from the Condensed interim consolidated financial statements (unaudited) for six months ended 30 June 2018 and 30 June 2019 was used in this section.

The Company's debt portfolio is primarily denominated in USD, which is the main currency of the Company's sales contracts (88% during the first half of 2019). As a result, the Company gained a natural economic hedge of USD/KZT foreign currency risk without the use of derivative financial instruments.

(KZT millions)	Six months ended 30 June		Change
	2018	2019	
Loans, borrowings and lease liabilities	91,115	145,801	60%
Guarantees issued for loans of affiliated companies	13,746	12,268	(11)%
Total debt	104,861	158,069	51%

The following table summarises the Group's indebtedness as of 30 June 2018 and 30 June 2019:

(KZT millions)	Six months ended 30 June		Change
	2018	2019	
Non-current debt, including	787	11,729	1390%
Bank loans	-	10,733	100%
Non-bank loans	369	-	(100)%
Lease liabilities	418	996	138%
Current debt, including	90,328	134,072	48%
Bank loans	54,007	24,949	(54)%
Non-bank loans	36,202	16,629	(54)%
Bonds issued	-	74,486	100%
Promissory note issued	-	17,451	100%
Lease liabilities	119	557	368%
Total debt	91,115	145,801	60%

Total debt increased by 60% largely due to the increase in short-term loans to finance the Group's working capital requirements.

By the end of 2019, it is planned to refinance bonds issued in 2018 through a new issue of 5-year bonds, as previously disclosed in the IPO Prospectus. New bonds will be placed on JSC Kazakhstan Stock Exchange (KASE).

Promissory notes were issued by JV "Khorasan-U" LLP in December 2014 to repay the debt for mine development assets. According to the terms, promissory notes are payable on demand at an interest rate of 0.1%. As of 30 June 2019, the right of claim under these promissory notes belongs to "Kyzylkum" LLP.

The following table summarises the Group's weighted average interest rate for bank loans as at 30 June 2018 and 30 June 2019:

(%)	Six months ended 30 June	
	2018	2019
Fixed interest rate	4.25%	4.15%
Floating interest rate	4.04%	4.08%

According to the loan and guarantee agreements, the Group is required maintain to several key financial covenants based on the Group's consolidated information, such as debt to equity ratio, debt to EBITDA ratio. As at 30 June, 2019, the Group complies with all applicable covenants.

9.1 Net debt and debt leverage ratio

The following table summarises the key ratios used by the Company's management to measure its financial stability as at 30 June 2018 and 2019:

(KZT millions unless noted)	Six months ended 30 June		Change
	2018	2019	
Total debt	91,115	145,801	60%
Total cash	108,160	60,067	(44)%
Net debt	(17,045)	85,734	603%
Adjusted EBITDA ¹	79,747	165,492	108%
Net debt / Adjusted EBITDA (coefficient)	(0.2)	0.5	350%

¹ Adjusted EBITDA for the six months ended 30 June 2018 and 30 June 2019 calculated as for the 12 months (first half of the reporting period plus second half of the last period).

The above indicators are in line with expectations previously communicated by management to investors. They indicate the creditworthiness of the Company.

10.0 GUIDANCE FOR 2019

(exchange rate 370 KZT/1USD)	2019
Production volume U ₃ O ₈ (tU) (100% basis) ¹	22,750 – 22,800
Production volume U ₃ O ₈ (tU) (attributable basis) ²	13,000 – 13,500
Group sales volume (tU) ³	15,000 – 16,000
KAP sales volume (incl. in Group) (tU) ³	13,500 – 14,500
Revenue - consolidated (KZT billions) ⁴	485 – 505
Revenue from Group U ₃ O ₈ sales, incl. in consolidated sales of U ₃ O ₈ (KZT billions) ⁴	392 – 408
C1 cash cost (attributable basis) (USD/lb)*	\$11.00 – \$12.00
All-in sustaining cash cost (attributable C1+capital cost) (USD/lb)*	\$15.00 – \$16.00
Total capital expenditures (KZT billions) (100% basis) ⁵	80 – 90 (previously 85 – 95)

¹ Production volume (100% basis): Amounts represent the entirety of production of an entity in which the Company has an interest; it therefore disregards that some portion of production may be attributable to the Group's JV partners or other third-party shareholders.

² Production volume (attributable basis): Amounts represent the portion of production of an entity in which the Company has an interest, which corresponds only to the size of such interest; it excludes the remaining portion attributable to the JV partners or other third-party shareholders.

³ KAP sales volume: includes only the total external sales of KAP HQ and THK. Intercompany transactions between KAP HQ and THK are not included.

⁴ Revenue expectations are based on uranium prices taken at a single point in time from third-party sources. A spot price of approximately US\$26/lb U₃O₈ was published in Q3, 2018 and used for 2019 revenue estimates. Revenue could therefore be impacted by how actual uranium prices vary from that assumption.

⁵ Total capital expenditures (100% basis): includes only capital expenditures of the mining entities.

* Note that the conversion of kgU to pounds U₃O₈ is 2.5998.

Kazatomprom's production expectations remain unchanged from previous guidance, consistent with the intention to flex down planned production volumes by 20% for 2018 through 2021 (versus consolidated planned production levels under Subsoil Use Agreements). With the flex down, under the existing Subsoil Use Agreements, production is expected to total approximately 22,750 to 22,800 tU (100% basis) in 2019; without the reduction, production would have exceeded 28,500 tU (100% basis) in 2019.

Expectations for sales volumes and revenue also remain unchanged.

Guidance for C1 cash cost (attributable basis) and All-in Sustaining cash cost (attributable C1 + capital cost) are unchanged. However, throughout the first half of the year, the KZT has been weaker against the US dollar than the 2019 budget assumption of 370 KZT/1 USD. As a result, both C1 and All-In Sustaining cash costs have trended to the bottom of their expected ranges.

The expectation for Total capital expenditures (100% basis) in 2019 has decreased, related to changes in the timing of spending for projects related to future expansion at some of the mining assets.

The Company continues to target an ongoing inventory level of approximately six to seven months of annual attributable production.

10.1 Uranium sales price sensitivity analysis

The table below indicates how the Group's U₃O₈ annual average sales price may respond to changes in spot prices (shown on the left), for a given year (shown across the top). At present, the table clearly indicates that the Group's U₃O₈ average sales prices are closely correlated with the uranium spot market price.

This sensitivity analysis should be used only as a reference, and actual uranium market spot prices may result in different U₃O₈ annual average sales prices than those shown in the table. The table is based upon several key assumptions, including estimates of future business opportunities, which may change and are subject to risks and uncertainties outside the Group's control. Please review the footnotes under that table and refer to section 11.1 *Forward-looking statements* for more information.

Average Annual Spot Price (USD)	2019E	2020E	2021E	2022E	2023E
20	23	21	22	22	22
30	29	30	31	31	31
40	36	39	40	40	40
50	42	47	48	49	49
60	49	56	57	58	58
70	55	65	66	67	67

Values are rounded to the nearest dollar. The sensitivity analysis above is based on the following key assumptions:

- Annual inflation at 2% in the US;

- Analysis is as of 30 June 2019 and prepared for 2019–2023 on the basis of minimum annual sales of approximately 13.5 thousand tonnes of uranium in the form of U₃O₈, of which the volumes which are contracted as of 30 June 2019 will be sold per existing contract terms (i.e. contracts with hybrid pricing mechanisms with a fixed price component (calculated in accordance with an agreed price formula) and / or combination of separate spot, mid-term and long-term prices);

- For the purpose of the table, uncommitted volumes of U₃O₈ are assumed to be sold under short-term contracts negotiated directly with the customers and based on spot prices.

11.0 RISKS AND FORWARD-LOOKING INFORMATION

The Company is exposed to the following key risks that could have a material adverse effect on the Group and its results:

- major accidents affecting the nuclear industry may result in a dramatic fall in uranium prices;
- nuclear energy competes with several other sources of energy, and sustained lower prices of such other energy sources may result in lower demand for nuclear energy, and consequently, in a reduction in demand for uranium which could impact market prices;
- nuclear energy is subject to public opinion risks that could have a material adverse impact on the demand for nuclear power and increase the regulation of the nuclear power industry;
- the Group's profitability is directly related to the market prices of uranium, which are volatile;
- the Group faces competition and could lose customers to other suppliers of uranium and uranium products;
- the Group is currently dependent on a small number of customers that purchase a significant portion of the Group's uranium, and the loss of a significant customer could have a material impact;
- certain customers and business associates of the Group may be subjected to US and EU sanctions, and such sanctions could have a material impact;
- the US or other uranium importers could impose tariffs or quotas on uranium imports;
- the Group may continue to hold significant U₃O₈ inventories throughout the U₃O₈ pricing cycle if production exceeds sales;
- the Group's uranium extraction and transportation activities are subject to operational risks, hazards and unexpected disruptions, which could delay the production and delivery of the Group's uranium and uranium products, increase the Group's cost of extraction, or result in accidents at the Group's extraction locations;
- the availability and cost of sulfuric acid materially affects the continuity and commercial viability of the Group's operations, as the Group uses substantial amounts of sulfuric acid to extract uranium;
- the Group may face difficulty using railroads or other transportation infrastructure connecting Kazakhstan with neighboring countries;
- the Group may be unsuccessful in maintaining existing ore reserves or discovering new ore reserves, and the reported quantities or classifications of the Group's uranium ore reserves may be lower than estimated because of inherent uncertainties in the estimation process;
- the Group may be unable to obtain, on commercially acceptable terms or at all, the necessary financing for its operations, strategy implementation, and/or expansion of its business and local infrastructure;
- the Group is subject to various financial risks related to certain financial and other restrictive covenants, fluctuations of interest and currency rates, liquidity constraints or fail to obtain the necessary funding, or defaults of counterparties;
- the Group may be affected by arbitration or litigation proceedings to which it is not a party, or by legal consequences of non-compliance / misinterpretation of legislation;
- the Group's insurance coverage may not be adequate to cover losses arising from potential operational hazards and unforeseen interruptions;
- failures of the Group's IT systems or cyber-attacks could negatively influence the results of operations;
- failure to achieve planned uranium production or products (U₃O₈) output volumes, sales, or production costs of products and services;
- failure to achieve the Group's assets restructuring plan;
- failure to successfully improve corporate governance systems and health, safety, and environmental programs;
- failure to successfully complete construction of a fuel fabrication plant on time and on budget;
- the Group is impacted by the macroeconomic, social and political conditions in Kazakhstan, and the Group may be exposed to risks related to adverse sovereign action by local government, or subject to extensive government regulation and legislation;
- the Group may be affected by labor unrest or increased social tension in Kazakhstan;
- the Group's results of operations are subject to economic, political and legal developments in China, India and South-East Asia;
- unexpected catastrophic events, including acts of vandalism and terrorism.

11.1 Forward-looking statements

This document contains statements that are considered as “forward-looking statements”. The terminology used for describing the future, including, inter alia, such words as “believes”, “according to preliminary estimates”, “expects”, “forecasts”, “intends”, “plans”, “suggests”, “will” or “should” or, in each case, similar or comparable terminology, or references to discussions, plans, objectives, goals, future events or intentions, is used to denote forward-looking statements. These forward-looking statements include all statements that are not historical facts. These statements include, without limitation, statements regarding intentions, opinions and announcements on the Company’s expectations concerning, among other things, the results of operations, financial state, liquidity, prospects, growth, potential acquisitions, strategies and sectors, in which the Company operates. In their nature, forward-looking statements involve risks and uncertainties because they relate to future events and circumstances that may or may not occur. Forward-looking statements do not guarantee future or actual performance. The Company’s financial position and liquidity, as well as the development of the country and industries, in which the Company operates, may significantly differ from the options described herein or assumed pursuant to the forward-looking statements contained herein. The company does not plan and does not assume obligations to update any information regarding the industry or any forward-looking statements contained herein, whether as a result of obtaining new information or occurrence of future events or any other circumstances. The Company makes no representations, provides no assurances and publishes no forecasts as to whether the outcomes described in such forward-looking statements will be achieved.