

**ANNUAL
REPORT**

2020

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MESSAGE FROM THE CHAIRMAN OF THE MANAGEMENT BOARD

Dear shareholders!

On behalf of the Board of Directors, I am pleased to welcome you to the pages of the 2020 Annual Report of Kazakhstan Stock Exchange.

Today KASE is a universal exchange in Kazakhstan, serving the stock, money and currency markets, as well as the financial derivatives market.

KASE is a prominent organization in the global exchange community, representing the Kazakh stock market in international exchange associations – the World Federation of Exchanges, the Euro-Asian Federation of Exchanges, and the International Association of Exchanges of the CIS Countries. It is the KASE market that is taken into account when Kazakhstan is positioned in the global market ratings of the FTSE and S&P. Thanks to the implementation of the state policy for development of the local stock market and efforts of KASE, the Kazakh stock market has been classified by the international services of MSCI, FTSE and S&P indices as "Frontier Markets" since 2017.

Since 2020 KASE has also generated and calculated the country's stock index – the KASE Index, made up of stocks of major Kazakh companies.

KASE keeps its stable position even during the pandemic and continues to maintain a high level of efficiency, ensuring uninterrupted access of market participants, including the regulator, to its exchange markets.

As part of the current Development Strategy of the Exchange for 2019-2021, in terms of IT modernization, over the past twelve months, the ASTS+ trading and clearing systems have been successfully implemented in the stock and foreign exchange markets, netting has been introduced in the securities purchase-sale and repo markets using the CCP. To increase the liquidity and depth of the exchange market, market-maker programs were introduced, the money market indicator TONIA was revised, short sales became available under repo transactions, and, together with the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market, KASE actively participates in the working group to increase the status of the Kazakh stock market in the FTSE/MSCI indices.

As part of the introducing of sustainable development principles, the Exchange has also implemented an eponymous policy, which defines the fundamental norms, principles, rules and approaches to running a balanced business.

Taking into account the Strategy's goals successfully achieved in 2020, the Board of Directors expects to complete all the tasks set for the Exchange in 2021.

For the next two years, KASE is supposed to focus its efforts on implementing measures to create the Central Counterparty in form of a fully-fledged infrastructure institution, on intensifying the trading in the tenge/ruble currency pair, on attracting participants from Russia and China to the Kazakh market, on acquiring a new surveillance system to effectively control the conscientious behavior of trading participants, and to continue holding events to educate and attract retail investors.

A favorable legislative and regulatory environment has formed in Kazakhstan – in recent years, approaches to the regulation of the stock market have been significantly liberalized and optimized.

These transformations will allow us to boost activities of issuers and retail investors, ensure the growth of liquidity on KASE, expand the list of foreign members of KASE due to the possibility of admitting foreign clearing organizations, etc.

In conclusion, I would like to express my gratitude to shareholders and clients of KASE for their trust, support and effective cooperation in 2020.

Chairperson of the Board of Directors

Aliya Moldabekova

MESSAGE FROM THE CHAIRPERSON OF THE MANAGEMENT BOARD

Dear shareholders and partners!

The year 2020 was special for the global economy and was characterized by new challenges associated with the introduction of restrictive measures, a decrease in economic activity that resulted from the Covid-19 pandemic, as well as by high volatility in the stock and commodity markets. Throughout the year, KASE demonstrated high resilience to external shocks, the ability to keep up the continuous provision of all services for traders, other partners and clients, as well as a high rate of implementation of all projects as part of the development strategy.

Financial markets in Kazakhstan were also subject to volatility amid uncertainties due to the negative impact of the lockdown on businesses and lower consumer demand. At the peak of volatility, KASE's stock index showed a decrease by 13.0 % in March 2020, but since April 2020 it has showed a recovery and at the end of the year the index grew by 13.2 %.

At the same time, the total volume of trading in 2020 remained stable in comparison with the previous year and amounted to KZT118.0 trln. The volume of trading on the securities market showed a high positive growth dynamics in 2020 and reached 7.9 trillion tenge, i.e. an increase of 49 %. Good performance indicators were seen in the markets for government securities, equities and units of unit investment trusts.

In 2020, significant funds were disbursed from the state budget for the implementation of supportive measures during the pandemic. There was an objective need to finance the increased budget deficit. The volume of trades in the sector of government securities increased 2.6 times (from 1.8 to 4.7 trln tenge). More than 70 % of the trading volume, or 2.8 trln tenge, fell on offerings of government securities by the Ministry of Finance of the Republic of Kazakhstan, which was unprecedented for the Kazakh market. Following measures taken in order to boost the GS market, increase liquidity, attract new market-makers represented by Halyk Savings Bank of Kazakhstan JSC, Freedom Finance JSC and Bank CenterCredit JSC, the volume of trading on the secondary GS market increased 2.4 times and amounted to 916.8 bn tenge.

The updated main indicator of the money market TONIA was introduced, the methodology for which was developed with the participation of the NBRK, EBRD and market participants. This indicator is a new risk-free benchmark in the money market of

Kazakhstan. Its implementation is in line with current measures taken by central banks of developed countries on selection of money market rates as the main benchmarks for the value of money.

The volume of trades on the secondary equity market increased significantly: to 238.4 bn tenge. The main investors are individuals, whose share made up 54 % of the trading volume.

Due to the increased volatility and the fall in equity prices in March-April 2020, there was an influx of new investors into the market. As of January 1, 2021, the Central Securities Depository maintained 132,861 personal accounts of individuals, which is by 15,166 accounts more than at the beginning of 2020.

The active involvement of individuals and the listing of new interesting UITs made it possible to boost trading in this segment. Based on 2020 results, the historical maximum of trading volume was set in the securities sector of investment funds – KZT20.3 bn, which is 22 times higher than the result of 2019.

As an infrastructure center of liquidity, KASE during 2020 played the role of the main channel for capital redistribution. Our functions and role have not been affected by the pandemic, but they have been in strong demand ever since. On the one hand, KASE acted as an operator for the distribution of funds under government schemes (Employment Roadmap for 2020-2021, Nurlı Zher for 2020-2025 and others), on the other hand, as an intermediary of the monetary policy between the National Bank of the Republic of Kazakhstan and institutional participants. The volume of funds raised by the corporate sector amounted to KZT2.2 trln.

Despite the unprecedented environment in 2020, with up to 90 % of employees working remotely, the Exchange has demonstrated strong financial performance, high operational resilience, and implemented major strategic initiatives.

As part of the strategic cooperation with the Moscow Exchange, we completed the implementation of the ASTS+ trading and clearing system in the stock market, launched the central counterparty services for all financial instruments of the stock market and repo transactions. As of January 1, 2021, 791 instruments were represented on the stock market, while over 170 instruments are traded in the T+2 mode. The CCP allowed the introduction of netting in all markets, and also passed its first volatility testing in March-April 2020, when the Exchange, as the CCP, was making prompt decisions on changing the risk parameters for foreign exchange market instruments, setting the values of limits

and concentration rates for shares traded according to the T+2 scheme, as well as discounts equal to the values of concentration rates in the repo transactions market.

In addition, during the period of the state of emergency, as well as within 30 calendar days since this regime was cancelled, the Exchange extended the deadlines for submitting reports and other information for initiators of admission of listed securities and for members of the Exchange.

In 2020, we also carried out the transition to the ASTS+ trading and clearing system in the foreign exchange market. The foreign exchange market now features a negotiated transactions mode, which is an analogue of the OTC market, and deliverable futures for the US dollar.

In addition to the introduction of new trading and clearing systems, the year 2020 was full of events on implementing a number of other important projects. In particular, the successful launch of the KASE Mobile application took place, which makes possible the viewing of market data and indices, as well as conducting training trades as part of the "Exchange Simulator" project.

In the context of transition to remote work, the Exchange quickly restructured its operations and, already in May 2020, moved its events online. In order to popularize the stock market in Kazakhstan, we continued to work on raising the awareness of the business community about raising capital. Online meetings were held with investors and professional market participants, as well as our clients. Traditionally, during the year, the Exchange, as part of its corporate social responsibility, conducted training events for individuals and businesses in order to improve financial literacy. For the first time, a comprehensive training program for university students "Trade on KASE: from A to Z" was held, consisting of a series of webinars and the "Exchange Simulator" project.

The digital transformation of financial markets has stimulated us to launch projects on modernizing our products and services aimed at access to data, trading instruments, analytics, liquidity and risk management in financial markets. In 2021, the Exchange plans to complete the IT modernization of its trading systems – to launch the new Spectra trading and clearing system in the derivatives market, fully automate the listing process, introduce an improved version of the document exchange system with members of the Exchange and listed companies, implement a browser version of the IRIS information terminal and launch part of the updated back-office system of the Exchange.

We will continue to work on the development of clearing activities and CCP services, which provide for introduction of clearing certificates of participation, on more active involvement of market-makers in the stock and government securities markets, as well as on introduction of sustainable development principles into the Exchange's activities.

Together with the Agency for Regulation and Development of the Financial Market, work will continue to raise the rank of Kazakhstan in the MSCI and FTSE ratings.

Taking into account the growing interest in the stock market from retail investors, we intend to offer them a wide range of new services and instruments and improve the convenience of trading.

Obviously, 2020 has put the focus on the issue of sustainable development of every organization. Being committed to the sustainable development principles implies a consistent and comprehensive implementation of these principles in activities of businesses, in fact, changing business models to more sustainable ones. For these purposes, the Exchange has developed and approved the Exchange's Sustainable Development Policy, which defines the main goals and objectives of KASE as an organization that follows the principles of sustainable development and promotes them in Kazakhstan's financial market.

KASE, in order to ensure its own business continuity and health protection for its employees, has developed the Rules for remote work to ensure the efficiency and safety of employees' work, arranged shift work for employees using remote access technologies, as well as monitoring of employees' health status.

The professionalism of our team, openness and partner dialogue with clients remains the key factor in the implementation of our projects.

Dear shareholders, partners and clients, let me thank you for effective cooperation and high confidence in KASE!

Alina Aldambergen
Chairperson of the Management Board

ABOUT THE EXCHANGE

Kazakhstan Stock Exchange (KASE or the Exchange) has a diversified business, built over 27 years, thanks to the operation of four main markets: the foreign exchange market, the stock (securities) market, the money (repo and swap transactions) market and the derivatives market, as well as an established trading and clearing and settlement infrastructure. The versatility of the KASE platform gives trading participants maximum convenience when concluding deals, since the majority of trading participants are actively conducting transactions in several markets. Ability to work with various types of financial instruments provides the best conditions for liquidity management and implementation of investment strategies of trading participants and their clients.

The Exchange operates on the basis of the following licenses:

- 1) license No. 4.2.3/1 to carry out activities in the securities market dated July 19, 2012, which provides the right to carry out:
 - activities on operation of trading in securities and other financial instruments;
 - clearing activities on deals with financial instruments on the securities market;
- 2) license No. 4.3.8 for banking transactions in national and foreign currencies dated January 30, 2020 (due to changes in legislation, the license No. 4.3.8 for banking transactions in national and foreign currencies dated September 5, 2018 was reissued).

KASE is a full member and represents the Kazakh stock market in international exchange associations – WFE, FEAS and IAB CIS.

The Exchange generates and calculates the country's stock index – the KASE Index. To maintain the current positions of Kazakhstan's stock market in the international arena and improve these positions, it is extremely important to maintain the existence of this index and increase its representativeness by expanding the list of securities included in its calculation and increasing the liquidity of such securities.

KASE has trading, clearing and settlement systems that meet modern standards of reliability, security and business continuity. Since 2012, the Exchange has been acting as the CCP in the derivatives market, since October 1, 2018 – in the foreign exchange market, and since December 18, 2019 – in the stock market.

From December 3, 2019, the Exchange began a phased transfer of trading in financial instruments of the stock market from the ACT KASE trading system to the ASTS+ trading

and clearing system, developed on the basis of the Moscow Exchange's trading and clearing system, and began to perform the functions of the Central Counterparty for financial instruments, trading in which was opened in the new system. At the first stage, trading in shares, bonds denominated in US dollars, securities of investment funds, international bonds of the Republic of Kazakhstan, securities of international financial organizations, and derivative securities was opened in the ASTS+. At the second stage, all instruments of the stock market were transferred to the ASTS+, including "baskets", equity securities and bonds denominated in tenge, with settlements in tenge.

From November 30, 2020, the Exchange commissioned the new ASTS+ trading and clearing system in the foreign exchange market.

The introduction of the new trading and clearing system helps to improve the functionality of KASE as the operator of trading and the CCP in the foreign exchange market.

The derivatives market is supposed to be switched to the new SPECTRA trading system in the second half of 2021.

KASE provides a wide range of information products, including real-time market data, archive and reference data.

The main advantages of KASE over competitors are:

- the universalness of the market, since business diversification helps to smoothly pass fluctuations in the economic cycle, at different phases of which different classes of financial instruments are in demand by market participants;
- experienced and professional staff;
- the availability of its own correspondent network for carrying out cash settlements on the exchange markets;
- the availability of a license to carry out clearing activities and provide clearing services in the foreign currencies, securities and derivatives markets ;
- the availability of the T+2 trading and clearing cycle, which facilitates access to the market for foreign investors;
- the possibility of expanding the geography of investors through participation in the activities of international exchange associations, being a key source of information on Kazakhstan's capital market;

- the availability of proprietary IT systems and the implementation of MOEX trading and clearing systems, which have a capacity margin, provide maximum flexibility in improvements and adjustments to customer needs and changes in the regulatory environment, allow improvement of the quality of services and offering of new instruments;
- the availability of the CCP on all exchange markets.

MISSION, VISION AND GOAL

Mission

Promoting the economic growth of the Republic of Kazakhstan through:

- providing a wide range of instruments for fundraising by domestic issuers;
- providing a platform for re-distributing liquidity in the financial system;
- providing a transparent investment environment for local and foreign investors.

Vision

KASE is a high-tech trading platform that provides a full range of exchange services, available to local issuers and open to local and international investors.

Goal

Maintaining the leading position of KASE in Kazakhstan's exchange space.

KEY FACTS, SECURITIES MARKET TRENDS

The total volume of trading in 2020 amounted to KZT118.0 trln, having decreased slightly – by 0.1 %.

The trading volume on the securities market in Kazakhstan reached KZT7.9 trln, an increase of **49 %** compared to 2019. The number of concluded deals almost **doubled (~205 thousand deals)**.

A confident growth in the trading volume was seen in the sector of investment funds' securities; according to results of the year, its value increased **22 times to KZT20.3 bn**.

The volume of trades on the GS market increased **2.6 times**, while it should be noted that the secondary GS market has become more active, where **a 2.4-fold** growth was observed.

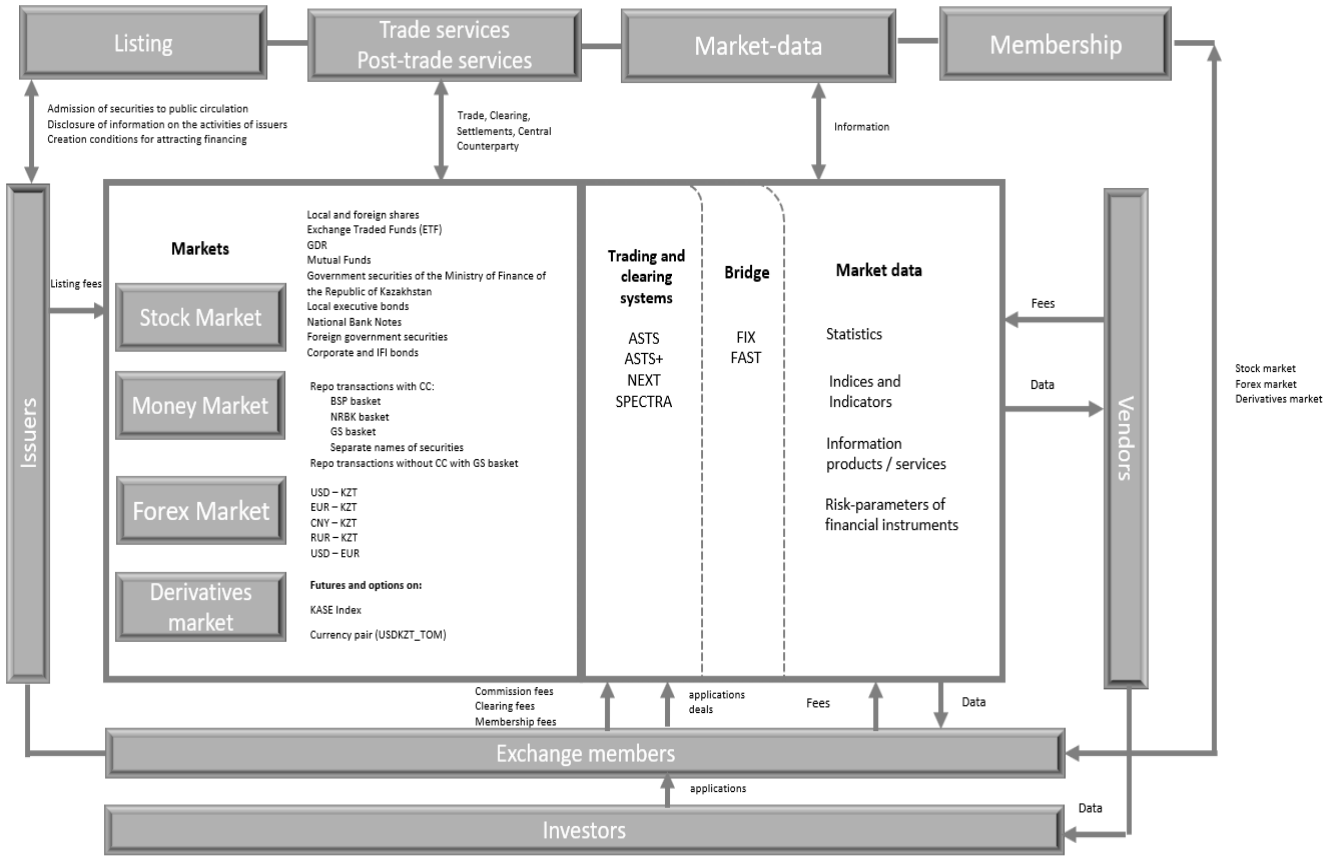
On the equity market, the volume of trading deals increased by almost **KZT35 bn**, or 17.1 %, to **KZT238.4 bn**, the number of deals increased 1.9 times.

Securities of **14** new issuers passed the listing procedure on KASE during the year.

An influx of new investors into the market is visible, the number of opened trading accounts of individuals in 2020 amounted to more than 17 thousand.

Since the beginning of the year, KASE Index **has grown by 13.2 %**. KASE Index reached its minimum on March 16 (**-13.0 % since the beginning of the year**), from the said minimum in 2020 to the end of December KASE Index recovered **by 30.2 %**.

BUSINESS MODEL OF THE EXCHANGE



STRATEGIC REPORT

Implementation of the development strategy for 2019-2021

On May 28, 2019, the Board of Directors of the Exchange approved KASE's Development Strategy for 2019-2021.

This strategy identifies four key directions:

1. IT-modernization:
 - implementation of a phased IT modernization of the trading and clearing systems;
 - introduction of certified market data exchange protocols;
 - introduction of new trading modes on exchange markets.
2. Launch of the CCP services:
 - consecutive implementation of CCP services for all classes of financial instruments traded on the Exchange
3. Increasing liquidity and depth of the exchange market:
 - stimulating the growth of liquidity in the equity market;
 - stimulating the development of the bond market as an alternative to bank lending;
 - stimulating the involvement of the population in the process of investing in the stock market;
 - expanding investment opportunities for institutional investors;
 - expanding the investor base by increasing the number of foreign participants;
 - increasing the volume of trading and expanding the range of instruments in the foreign exchange, money markets and the derivatives market.
4. Implementation of the sustainable development principles:
 - increasing the investment value of KASE;
 - improving the quality of risk management, internal control and audit;
 - increasing the transparency of KASE's activities;
 - introduction of environmental standards for doing business;
 - increasing social responsibility.

In order to implement the tasks set, a number of activities are separately identified as part of the strategic cooperation with the Moscow Exchange – IT-modernization of the Exchange's software through the transition to the trading and clearing systems of the Moscow Exchange in the stock, derivatives and foreign exchange markets.

These measures are aimed at improving the technical reliability and capacity of the exchange infrastructure, reducing operational risks, introducing new trading modes, using standardized channels for connecting to the trading and clearing system in order to increase the number of trading participants and introducing certified protocols for the exchange of market information.

The transition to new trading and clearing systems will facilitate the integration of KASE's market within the Eurasian Economic Community and will significantly simplify the admission of foreign investors to Kazakhstan's regulated financial market.

The purpose of launching CCP services on all of KASE's exchange markets is to promote the improvement of markets' liquidity by reducing participants' credit risk, guaranteeing the completion of settlements on deals, reducing transaction costs of participants through cross-margining and netting, as well as the introduction of a unified risk management system.

The third strategic direction provides for measures aimed at increasing liquidity in the equity market, stimulating the development of the bond market as an alternative to bank lending, increasing the involvement of the population in the process of investing in the stock market, expanding the investment opportunities of institutional investors and attracting foreign participants. The further development of the money market, the foreign exchange market and the use of instruments in repo deals will contribute to solving this problem.

A new vector for the development of the exchange business as part of the Strategy is the improvement of the corporate governance system, the introduction of environmental standards for doing business and social responsibility, which will contribute to KASE's sustainable development and increase its investment attractiveness.

Improving the quality of risk management, internal control and audit, introducing environmental standards for doing business, increasing transparency of activities and increasing social responsibility will help to strengthen the strategic and competitive advantages of the Exchange.

The strategy as a whole is aimed at achieving by the Kazakh exchange market of the best world industry standards, which will allow the Exchange to become an effective platform for raising funds by local businesses, contribute to the growth of trading volume in all of KASE's markets and increase the trust of all interested parties in these markets.

Strategic direction 1. IT modernization

From December 3, 2019, the Exchange began to gradually introduce the new trading and clearing system ASTS+ and began to perform functions of the CCP in the stock market. The system was developed on the basis of the trading and clearing system of the Moscow Exchange, while a lot of work was done to adapt and adjust the system in accordance with requirements of Kazakhstan's securities market. The introduction of the new trading and clearing system provided for launch of trading in modes with the CCP in shares, units, ETF with settlements in tenge, and Eurobonds and GDRs with settlements in US dollars at the first stage.

On August 3, 2020, the second release of the trading and clearing system ASTS+ was launched, which allowed KASE to perform functions of the CCP on deals with all financial instruments of the stock market, including government securities, corporate bonds, as well as money market instruments, including the most popular among market participants – the "baskets". In addition, trading in a number of financial instruments, settlements for which are carried out on a gross basis, for each particular deal without participation of the CCP, were transferred to the new trading and clearing system ASTS+.

Since the date of commissioning of the second release, the average daily trading volume for all instruments available in the ASTS+ on the stock market has been about KZT34.5 bn.

As of January 1, 2021, more than 780 securities were traded in the ASTS+, with 177 of them admitted to deals with the CCP on terms of partial collateral.

From November 30, 2020, the Exchange has commissioned the new trading and clearing system ASTS+ in the foreign exchange market.

The updated technologies will allow attracting new categories of participants to exchange trading, including broker-dealers, corporations, and private investors. This will increase the liquidity of the foreign exchange market in Kazakhstan, make it more balanced and stable.

In addition, the introduction of the new trading and clearing system helps to improve the functionality of KASE as the operator of trades and the CCP. The new platform supports a wide range of financial instruments, trading methods and rules, as well as ensures connecting a large number of users.

The key advantages of the IT platforms of the Moscow Exchange are that the systems are designed to work with counterparties with different risk profiles, since the risk management instruments of these systems make it possible to guarantee the execution of deals and settlements regardless of the default of an individual participant, e.g., to guarantee the stability of the market as a whole, including during periods of high volatility.

The functionality of the new trading and clearing systems includes:

- the possibility of trading in various financial instruments and according to different rules both with the CCP and without the CCP (on the stock market) in various currencies;
- support of a wide range of trading methods and rules (including order-driven market, quote-driven market, opening and closing auctions, various types of special trading sessions);
- no blocking of securities on autorepo deals with the CCP (securities can be the subject of other deals);
- the procedure for transferring income on securities from the temporary owner of the securities to the permanent owner on the next day after the payment of interest by the issuer;
- real-time tracking of the current positions of trading participants;
- calculation of indexes in real time;
- providing users with a wide range of information about the course of trading in real time;
- connecting a large number of local and remote users;
- connection of external systems for disseminating information, maintaining positions and risk management, preliminary collection of client orders on the side of a trading participant.

New technologies enable clients of brokers and dealers to submit orders directly to the trading system via SMA access. For the exchange of data between the participants of

exchange trading in real time, the FIX data transfer protocol is used, which is an international standard. Based on the FAST protocol, the service for providing exchange information ensures the optimization of the electronic exchange of financial information, in particular, the distribution of a large amount of data with a minimum delay.

Strategic direction 2. Launching central counterparty services

The introduction of CCP functions in the exchange markets is inextricably linked with the implementation of clearing activities on deals with financial instruments, which the Exchange conducts based on a corresponding license issued to KASE in 2012.

Currently, the Exchange performs the CCP functions on all deals with financial instruments traded on the derivatives market and the foreign exchange market. In the stock market, the Exchange performs functions of the central counterparty on deals concluded in trading modes with the CCP, and does not perform functions of the central counterparty on deals concluded in trading modes without the CCP.

Depending on the exchange market and the type of financial instrument, KASE carries out clearing on a net or gross basis.

Clearing on a net basis is performed automatically using the clearing system following the results of each trading session on each of the exchange markets by offsetting claims and obligations on the pool of deals concluded by clearing participants in the context of each trading and clearing account of a clearing participant and financial instrument. The final net claims and net obligations of clearing participants determined during the clearing session are sent for settlements to the settlement organization corresponding to the exchange market.

Clearing on a gross basis is performed automatically using the clearing system during the trading session for each concluded deal. Requirements and obligations on each deal are sent for settlement to the settlement organization corresponding to the exchange market immediately after the conclusion of the deal.

Clearing participants of KASE are current members of the Exchange who meet the requirements established for obtaining the status of a clearing member of a particular exchange market. As of January 1, 2021, a total of 32 members of the Exchange had the status of a clearing participant in the foreign exchange market, 43 members of the Exchange – that of the stock market, and 18 members of the Exchange – that of the derivatives market.

In 2012, for the first time the Exchange began to perform the CCP functions on all deals in the derivatives market. In the foreign exchange market, the Exchange introduced the CCP functionality in October 2018 on all deals in this market, including swap transactions.

With the introduction of the ASTS+ in the stock market and the introduction of automated default management procedures, the Exchange began to perform the CCP functions in all exchange markets.

Acting as the CCP, the Exchange assumes the risks of non-fulfillment by clearing participants of their obligations and at the same time guarantees the fulfillment of their obligations to each bona fide clearing participant. This allows clearing participants, when concluding deals, to assess the risks of the CCP only, thereby leveling the credit risk of the counterparty.

The CCP's risk management system, based on a uniform approach to risk assessment in all exchange markets, is aimed at ensuring its reliability and stability in any market situation.

Risk management is carried out by building the following key components of the CCP's risk management system:

- a system of requirements for clearing participants and financial instruments admitted to trading;
- methods for determining the risk- parameters of financial instruments;
- control mechanism for securing deals and positions of participants;
- default management procedures.

In 2020, in conditions of an unfavorable epidemiological situation that provoked increased volatility in financial markets, the ASTS+ showed high stability in the provision of clearing services and the timeliness of fulfillment of their obligations based on the results of clearing in the stock market.

Strategic direction 3. Increasing liquidity and depth of the exchange market

Program for attracting market-makers in the GS market

For purposes of increasing the liquidity in the GS market in 2020, the Exchange worked on attracting market-makers to this market, conducting negotiations with the most active

participants and introducing new market-maker programs. In particular, an incentive program was introduced, which determined requirements for the volume and level of the spread on mandatory quotations, upon compliance with which a member of the Exchange is exempted from paying commission fees on deals for which he fulfills obligations of a market-maker, and pays commission fees reduced by 50% on deals with other government securities. In its turn, the Exchange pays remuneration to this market-maker, in the amount of 50 % of the Exchange's commission fee received from the counterparty involved in the deal.

Additional factors for the boost in the government securities market in 2020 were the issuance of short-term MEKAM by the Ministry of Finance, which was positively received by market agents and is an instrument for replacing investments in the notes of the National Bank, as well as the initiative of the Ministry of Finance to create "benchmark" GS issues by consolidating existing issues.

Methodology for calculating indicators of the money market

The reform of the money market indicator TONIA reflects the trend towards new benchmarks in many jurisdictions (SONIA UK, SOFR USA, RUONIA in Russia). Recently, regulators and central banks in various countries have sought to reform key benchmarks for interest rates to make them more reliable and resilient. Together with the National Bank of the Republic of Kazakhstan and the European Bank for Reconstruction and Development, as well as market participants, the Exchange developed a new methodology for calculating the TONIA index to increase its representativeness and enhance the transparency of index management.

From December 28, 2020, the Exchange implemented the updated main money market indicator TONIA. Its implementation was carried out with the aim of creating a risk-free benchmark in the money market of the Republic of Kazakhstan, based on the principles of reliability of indicators, compliance with best international practices, and increasing the transparency of the calculation of this indicator.

In accordance with the updated methodology, the TONIA indicator is calculated for opening deals of repo transactions with securities of the GS basket for the period of one day with the participation of the CCP.

If on any day of the calculation of this indicator the volume of deals after the cut-off makes less than KZT100 bn, then TONIA on that day will be determined as the sum of the values

of the NBRK base rate and the average spread of the TONIA indicator to the specified rate, formed over the previous five days.

The formation of indicators of the money market is an important component of the debt market as a whole. These indicators serve as a benchmark for determining yield rates in the debt market. In particular, the TONIA indicator is the initial value for building the yield curve for government securities of the Republic of Kazakhstan.

In this work, KASE pursues a policy of maximum openness so that all market participants have reliable information about the current and historical values of indicators and the procedure for calculating them.

In addition to the TONIA indicator, KASE calculates two additional indicators, which are designed to broadcast the intraday value of the average weighted rate of yield on repo transactions with securities of the GS basket. These indicators are calculated in real time. The TRION indicator reflects the change in the "overnight" repo rates, the TWINA indicator – the seven-day repo. To calculate these indicators, opening deals of repo transactions are used, which are carried out with the use of KASE services as the CCP.

Information Services

The global trend in the development of technologies and, as a result, information services, contributes to an increase in the number of companies using KASE market data in their operations. So, in 2020, such investment companies and banks as Credit Suisse AG, Deutsche Bank AG London, Exodus Point Capital Management LP, FTSE International Limited (incl. Russell Investments), Goldman Sachs & Co, JP Morgan Chase Bank NA, as well as distributors of financial information Morningstar Real-Time Data Ltd and Infront became foreign users of KASE market data. The circle of new consumers of KASE market data is not limited to foreign users. In the year under review, such Kazakh banks as Halyk Bank of Kazakhstan JSC and Forte Bank JSC joined the list of new subscribers.

As a result, the total number of companies receiving information services from KASE increased to 44, of which 17 companies are vendors of KASE market data, including the global news agencies Bloomberg and Refinitiv.

The number of accounts for viewing trades in real time via the Exchange's website as of January 1, 2021 was 164.

In 2020, users got the possibility to pay for access to viewing trades in real time via the Exchange's website through acquiring. This innovation allows users to pay using a bank card, reducing to a minimum the time for users to receive the service.

Mobile application

In 2020, the Exchange developed and presented a mobile application "KASE Mobile" to a wide range of users. The application supplements the list of information products of the Exchange and is aimed, first of all, at simplifying access to market data for retail and professional investors, and also provides an opportunity to participate with its help in simulated trading. The application allows users to track market and reference data on most instruments traded on the Exchange – stocks, corporate and government bonds, foreign currency. Through "KASE Mobile" you can view data on KASE market indicators, news of the Exchange, listed companies, as well as members of the Exchange. A feature of the "KASE Mobile" application is a more structured access to information on the markets in one click, the ability of the user to create a selected set of instruments for further tracking of their prices on one page. You can use "KASE Mobile" free of charge and without authorization. The app is available on Android and IOS platforms.

Popularization of the exchange market

A special place in KASE's activities is occupied by the deepening of financial services and improvement of financial literacy. For these purposes, the Exchange conducts training programs for issuers and investors, the media, as well as the broad public.

During the coronavirus pandemic, the Exchange actively supported the trend of digitalization of offline events and was one of the first to transfer information activities to a virtual mode. Demonstrating openness and striving to ensure accessibility to exchange information, KASE held eight media briefings and four press conferences, most of which were held in an online format.

A total of over 40 events were held by the Exchange in 2020.

Events for issuers

During 2020, nine roundtable meetings were held on the use of stock market instruments. With the support of regional akimdiks, a number of events were held for entrepreneurs of the regions of Kazakhstan on the topic "Fundraising opportunities on Kazakhstan Stock Exchange".

These events were attended by managers, financial directors and owners of businesses, as well as representatives of regional offices of DAMU, NEC "Atameken" and local executive bodies. As a result, over 200 people took part in roundtable meetings with entrepreneurs throughout the year.

Together with the National Mining Company "Tau-Ken Samruk" JSC, an online meeting was held with representatives of the mining sector companies, at which it was told about the possibilities of raising capital at KASE for junior companies of this sector.

In June 2020, the Exchange, together with DAMU, held a round table on KASE's platform for potential KASE-listed issuers on subsidizing coupon interest on bond issues of companies.

At the same time, in September, with the participation of DAMU, a press briefing was held for media representatives and other interested participants on the possibility of raising funds by issuing subsidized bonds under the program – Business Road Map 2025.

As part of participation in regional investment forums, theme conferences and industry exhibitions aimed at raising the awareness of Kazakh companies about the local stock market, in July the Exchange took part with a presentation in the forum "Mining Club" exploration for juniors".

In order to improve communications between market participants, listed companies with investors and other interested parties, the Exchange holds an event called "Issuer Day" on its premises.

In 2020, as part of the "Issuer Day" project, events were held with representatives of Kazakhtelecom JSC, Kcell JSC and KEGOC JSC.

As part of offerings of bonds by Development Bank of Kazakhstan, Sovereign Wealth Fund "Samruk-Kazyna" JSC and Mortgage Organization "Kazakhstan Mortgage Company" JSC (now – Kazakhstan Housing Company JSC), the Exchange held three Road Shows for potential Kazakh investors.

Training programs

Events aimed at increasing the financial literacy of the population play an important role in the development of the stock market and the involvement of the broad public in investing.

In 2020, the first comprehensive educational program on the stock market "Trading on KASE: from A to Z" (hereinafter – the Program) was implemented, the purpose of which

was to increase the knowledge of students and young professionals about the stock market, its instruments and investment opportunities.

In the first – theoretical – part of this Program its participants went through six webinars on investment topics. In the theoretical section of the Program, students got an idea of the infrastructure of the securities market, its participants, learned how to choose securities, analyze their parameters, form a portfolio and apply various strategies in the stock market.

The second part of the Program was KASE's annual project "Stock Simulator", under which over one thousand students of the country, on the basis of the test version of the mobile application "KASE Mobile", had the opportunity to apply the acquired knowledge in practice – to take part in educational trades in the most liquid securities of the Kazakh market, most of which are included in the KASE Index, in a system, based on KASE's real trading system.

Thanks to the application, students received more comfortable and efficient access to educational trading on the Exchange and relevant market data. Over 12 years more than 8,500 people have taken part in the "Exchange Simulator" project (conducted by KASE since 2008). Many participants in the project of past years are now active retail investors and heads of financial institutions.

An introductory seminar was held for undergraduates of the "Master of Science in Finance" program of Nazarbayev University in cooperation with the National Bank of the Republic of Kazakhstan and the Business School of Nazarbayev University on the basis of "NBRK Training Center" JSC.

A training seminar on the topic "Essentials of the stock market" was held for employees of the branch of Kazpost JSC in Zhambyl region, teaching staff and students of universities in Taraz, and other interested persons.

In addition, the Exchange has launched a series of educational posts on essentials of the stock market, intended for retail investors, which are published in social networks with a frequency of 1-2 times a week.

For students and teaching staff of a number of universities in Kazakhstan, the Exchange held a number of training seminars on the topic "How to trade in the stock market".

With the participation of the brokerage company "NGDEM Finance" JSC, the Exchange held an online meeting with investors in the form of training on the topic "Investing in

exchange-traded funds", about securities of investment funds, in particular ETFs, as well as their advantages of trading on the Exchange.

For journalists, a KASE webinar on the essentials of the stock market was also held, organized jointly with information partners – the ARDFM's educational project "Fingramota", the International Journalism Center "MediaNet", as well as the portal "Factcheck.kz". The event attracted interest of over 40 media representatives from different regions of Kazakhstan.

It is important that Kazakh companies have more opportunities to use KASE as a platform for raising funds for development of their business, taking into account the current economic realities. In this regard, the Exchange is doing a lot to raise awareness of local businesses of instruments of the stock market and create optimal conditions for them to enter Kazakhstan's capital market.

Events for investors

In order to expand the investor base and increase the financial literacy of the population, the Exchange during 2020 held educational events for the broad public.

In addition, in order to form practical experience and increase the financial literacy of the student community and other retail investors, the Exchange from October 20 to November 30, 2020, held an annual competition among retail investors in the stock market. According to terms of the competition, the winners are those investors who have received the highest yield following conclusion of at least two deals in shares of KASE Index universe. A total of 634 people took part in the competition.

PR events

In March 2020, the Exchange took part in the sixth annual "Ring the Bell for Gender Equality" ceremony. 77 exchanges solemnly struck the gong in support of gender equality. Within the framework of the event, a conference called "Sustainable Development of the Organization: Gender Equality" was held. Kazakhstan's prominent women who make a significant contribution to the socio-political and financial-economic spheres of the country (ARDFM, IFC, STB, YPO Kazakhstan, Alliance of Women of Kazakhstan and other institutions) took part in the conference and in the trades opening ceremony.

In September 2020, a program called "Stock Markets with KASE" was launched on "Business FM" radio. The hosts of the broadcast are the Deputy Chairman of KASE's

Management Board Andrey Tsalyuk and General Director of the radio station "Business FM" Rustam Maksutov. The program is aimed at novice investors, and is designed to improve their financial literacy with an emphasis on investment opportunities on KASE.

In addition, on Mondays at 09.00 ALT, "Business FM" radio broadcasts a news program called "KASE's exchange news ", which contains up-to-date information on the dynamics of KASE's exchange markets, its projects and trends.

Lectures continued at the KASE Talks platform. The audience was addressed by the Chairperson of the Management Board of Housing Construction Savings Bank JSC (now – "Otbasy bank" house construction savings bank JSC) Lyazzat Ibragimova, the Chairman of the Board of Directors of RG Brands JSC and RESMI Group JSC Kairat Mazhibayev and Chairman of the Board of Directors of the Subsidiary VTB Bank JSC (Kazakhstan) Dmitry Zabello.

It should be noted that all information and training programs of the Exchange are carried out with the involvement of professional participants in the securities market, international financial and non-financial organizations, free of charge and for everyone.

To maintain its position in the new realities, the Exchange has doubled its production of digital content in social networks (LinkedIn, Facebook, Instagram) and opened a new channel of communication with the audience in Telegram.

Improving the quality of services

Increasing the level of satisfaction of the Exchange's clients, maintaining high positions in the assessment of exchange services and finding new ways to improve them are one of the main priorities of the Exchange. To assess the quality of exchange services, internal documents of the Exchange provide for an annual survey on the main business processes. To assess the level of satisfaction, open and closed questions with provided multiple answers are used. By conducting a survey of its clients, the Exchange strives to constantly improve the quality of the services provided and determines a set of measures to improve the Exchange's services, which are included in the list of tasks for the next year.

47 Exchange members (92 %), 128 issuers (86 %) and ten recipients of information services of the Exchange out of 184 (5 %) took part in the survey on results of 2020. The latter were not included in the calculation of the overall assessment due to their insignificant participation share. The overall assessment of customer satisfaction of the

Exchange based on 2020 results was 91.61 %, compared with 2019 (93.27 %), there is a slight decrease (-1.66 %).

Strategic direction 4. Implementation of sustainable development principles

In 2015, KASE joined the UN Sustainable Stock Exchanges Initiative thus committing itself to promoting sustainability, social development and corporate governance criteria, or ESG for short, among listed companies.

In February 2020, the requirements for the preparation of an annual report by issuers were supplemented with criteria for environmental friendliness and social responsibility.

KASE consistently promotes the best international practice in the field of sustainable development, including in terms of improving ESG information disclosure among listed companies, conducting trainings and training seminars on information disclosure according to ESG criteria, expanding products that meet the principles of sustainable development.

KASE is one of 39 WFE member exchanges disseminating ESG reporting methodology and one of 48 exchanges promoting ESG criteria.

In September 2020, the Exchange, together with the international rating agency S&P Global Ratings, held a webinar for all interested persons on the topic of environmental, social and corporate governance risks. During the discussion, the participants outlined the importance of ESG factors in making investment decisions, their impact on the company's financial performance and company ratings.

In October 2020, KASE, together with one of the world's leading providers of business information, the Bloomberg agency, held a seminar for local issuers. The event was dedicated to the topic of social investing – ESG. Bloomberg representatives told the seminar participants about the principles of responsible investing, ESG factors and ESG reporting in Bloomberg, the importance of social investing; the impact of ESG on the company value; Bloomberg ESG data collection mechanisms; assessment and rating of ESG in the Bloomberg terminal.

In October 2020, the Exchange developed a Sustainable Development Policy (hereinafter – the Policy) in order to determine the fundamental norms, principles, rules and approaches that the Exchange should adhere to in building a sustainable development management system. This goal is achieved by:

- implementation of the principles of sustainable development in the activities of the Exchange;
- assignment of the role, competence, responsibility of each body and all employees of the Exchange for the implementation of the principles of sustainable development;
- introduction of the principles of transparency and measurability in achieving the goal in the field of sustainable development.

The policy was developed in accordance with the legislation of the Republic of Kazakhstan, KASE's internal documents, the terms of the UN Global Compact and the UN Principles for Responsible Investment.

The policy defines the following areas of activity in the field of sustainable development:

- promoting the sustainable development of exchange infrastructure;
- implementation of responsible business practices;
- implementation of responsible labor practices;
- management of its own environmental impact.

Within the framework of the first direction "Promotion of sustainable development of exchange infrastructure", the Exchange implements measures to create conditions, opportunities and financing instruments for companies; creating conditions and opportunities for investing funds and promoting an effective monetary policy.

Measures to implement responsible business practices include ensuring the continuity of the Exchange as a central element of the financial market infrastructure, effective management of the Exchange development projects, as well as risks and elements of internal control.

The implementation of responsible labor practices is carried out by providing equal competitive conditions for all employees, non-discrimination, ensuring staff stability, optimizing the recruiting process and ensuring a system of fair remuneration and effective motivation.

In the field of "managing its own environmental impact" it seeks to reduce resource consumption (energy, water, paper consumption, waste disposal) and the introduction of indicators of environmental friendliness of business.

As part of the development of the Policy, international experience of the implementation of sustainable development policies by stock exchanges was studied, which showed that

the exchanges, in addition to introducing the ESG principles of environmental friendliness of doing business, social responsibility and effective corporate governance, are actively working to create new elements of the stock market infrastructure for investors and issuers. interested in responsible investing, disclosure of non-financial information.

So, within the framework of the direction "Promoting the sustainable development of exchange infrastructure", exchanges create specialized platforms for companies that disclose information on ESG components and issue "green" bonds. Preferential conditions are created for issuers, such as reduced rates for listing and being listed. For investors, indicators on "green" finance are created, stipulating an inclusion of securities of companies that disclose information on ESG components. Examples of such indicators are the Dow Jones Sustainability World Enlarged Index, MSCI EAFE ESG Index, FTSE4Good Europe Benchmark Index, S&P ESG India Index, OMX GES Ethical Denmark Index, DAXglobal® Sarasin Sustainability Germany Index.

The Exchange is studying the issues of creating new products and services in the field of sustainable development and is considering the possibility of their use in Kazakhstan's financial market. Currently, the Exchange holds events for companies listed on the Exchange, as well as among potential issuers in order to promote sustainable development issues and determine whether these companies are interested in ESG instruments and indicators.

Key projects for 2021

Implementation of the SPECTRA derivatives market trading and clearing system

As part of the IT modernization in 2021, the Exchange will switch the derivatives market to the new SPECTRA trading and clearing system. Improving IT systems, the Exchange strives to attract new participants to our markets and, as a result, to increase the liquidity of Kazakhstan's stock market.

All main types of derivative financial instruments will be implemented in this system, which, together with the reliability and high performance of the system, will ensure the interests of a wide range of participants.

Participants' risk management provides for a built-in margining system right down to the end customer, allowing participants to use it in their own risk management processes.

Listing procedures and obtaining membership of the Exchange in electronic format

The transfer of listing procedures and obtaining membership on the Exchange into an electronic format is planned to be implemented in the first half of 2021. The implementation of listing procedures and obtaining membership in an electronic format will make it possible to abandon paperwork between KASE and admission initiators/candidates for membership in the Exchange, automate the entire listing process and obtaining membership from the application submission to the result. This set of measures will help to significantly save the time spent by KASE clients.

Start of trading on omnibus accounts

In order to protect commercial secrets in the securities market and bring it in line with international securities accounting practice, according to which access to information on ultimate holders of securities is limited, from the second half of 2021 the Exchange will provide an opportunity to trade without the requirement for mandatory segregation for subaccounts of the depositor's clients.

The introduction of "omnibus" accounts will allow trading participants to optimize not only their expenses, but also those of their clients, to simplify the procedure for accounting for securities, as well as registering transactions.

Clearing participation certificates

As the CCP, from the second half of 2021, KASE plans to introduce a new type of securities – clearing participation certificates, which will allow participants to significantly increase the volume of transactions in the money market. The new instrument will combine the advantages of the two most popular products of the Kazakh money market: repo with the CCP and repo with a securities basket.

A **Clearing Participation Certificate** is a non-emission security issued by a CCP in exchange for assets contributed by a clearing participant to the property pool.

When entering securities into the pool, the participant retains ownership of them, including the right to receive income and participate in corporate actions, and at the same time gets the opportunity to replace these assets with a universal instrument for fulfilling obligations under deals in the stock market and in repo with the CCP.

The emergence of clearing certificates of participation, serving as universal collateral for repo deals, will increase liquidity and lengthen the terms of deals in the money market.

International activities

The pandemic has made corrections to the operation of international organizations. All events and contacts were transferred to the online format. At the same time, it was the international exchange organizations that acted as a hub and organized the collection of information regarding the events held by exchange platforms, regulators and government agencies to support the economy and capital markets.

The pandemic also determined the topics of discussion at the events of international organizations. The main issues of webinars and online conferences were sustainable development, sustainability of infrastructure organizations to absorbing risks during the pandemic.

The Exchange, being a full member of the international exchange associations – the WFE, FEAS and IAB CIS, takes an active part in activities of these organizations. The Exchange is part of the WFE working groups on financial technology, small and medium-sized businesses, emerging markets and sustainable development, as well as working groups on cybersecurity and operational risks.

In September 2020, KASE took part in the trades opening ceremony "Ring the Bell for Financial Literacy" within the framework of the WFE "World Investor Week" initiative. This ceremony marked the start of the annual KASE Retail Investor Contest. With regard to financial literacy, the Exchange took part in the WFE publication "Focus". KASE has implemented a number of educational initiatives dedicated to improving the financial literacy of the public, incl. in the field of development of the country's stock market. For more than three years, the Exchange has conducted more than 20 training events, during which potential retail investors received information on how to trade in the securities market.

As part of its participation in the FEAS, the Exchange together with the Egyptian Exchange and Project Heather (Scottish Exchange) took part in the writing of a research work on the subject of "Impact Investing, Covid-19 and ESG". This work highlighted the importance of promoting sustainable development and responsible investing, as well as the measures taken by exchanges in response to the pandemic.

The Exchange takes an active part in the meetings of the IAB CIS as a member of the Council and working groups of the association. Discussions within the framework of the MAB CIS were devoted to the issues of ensuring the continuity of infrastructure activities

in conditions of a pandemic and to development projects that the exchanges implemented in 2020.

In August 2020, KASE held a regional online conference of exchanges. The event was attended by six exchanges from four countries of the Central Asian region and Azerbaijan. As part of this conference, the participants discussed the economic situation in the region, the status and development plan for local capital markets, ongoing and planned projects, as well as the impact of the COVID-19 pandemic on activities of exchanges.

REVIEW OF RESULTS

International exchange market trends

In 2020 the global economy experienced a "double blow" in the form of the consequences of the coronavirus epidemic, which negatively affected traditional sales markets, as well as a sharp drop in oil prices. The synchronous decline in major stock indices began on February 20 and, interspersed with periods of strong volatility, continued until March 13. On the oil market, a massive shock from negative demand amid total lockdowns coincided with a supply shock due to the breakdown of OPEC+ talks.

Since mid-March, under the influence of negative economic forecasts, fueled by the uncertainty of the consequences of the pandemic, there has been an almost universal transition to a soft monetary policy and unprecedented stimulus measures in the world. The package of measures taken allowed the aggregate GDP indicator to be at the level of -3.5 % at the end of 2020 against the consensus expectations of -5.5 %. The GDP of the Asia-Pacific region grew by 0.2 %, mainly due to the rapid recovery of the Chinese economy. The largest drop of 6% was shown by the aggregate GDP of Western Europe.

Below are the key indicators of the global exchange market, compiled on the basis of WFE data:

- the global capitalization of the equity market grew by 18.6 % on the 2019 figure amounting to USD110 trln. Growth was observed in all regions of the WFE member exchanges. Capitalization in the EMEA regions (Europe, the Middle East and Africa), America (North and South America) and the Asia-Pacific region grew by 10.7 %, 18.3 % and 25.0 %, respectively;
- the global volume of trading in shares in 2020 increased by 44 % compared with 2019 amounting to USD158 trln. Volume growth was also observed in all regions. The trading volume in the EMEA regions increased by 34 % to USD13.5 trln, in the Americas – by 39 % to USD93.5 trln and in the Asia-Pacific region by 58 % to USD51.4 trln.

Based on results of 2020, among 70 WFE members, KASE ranks the 51st in terms of capitalization of the equity market. The volume of trades in bonds on KASE reached 18 billion US dollars, which is 36.0 % more than in 2019, and put KASE on the 20th place among WFE member exchanges.

Fig. 1. Capitalization of stock exchanges, USD billion

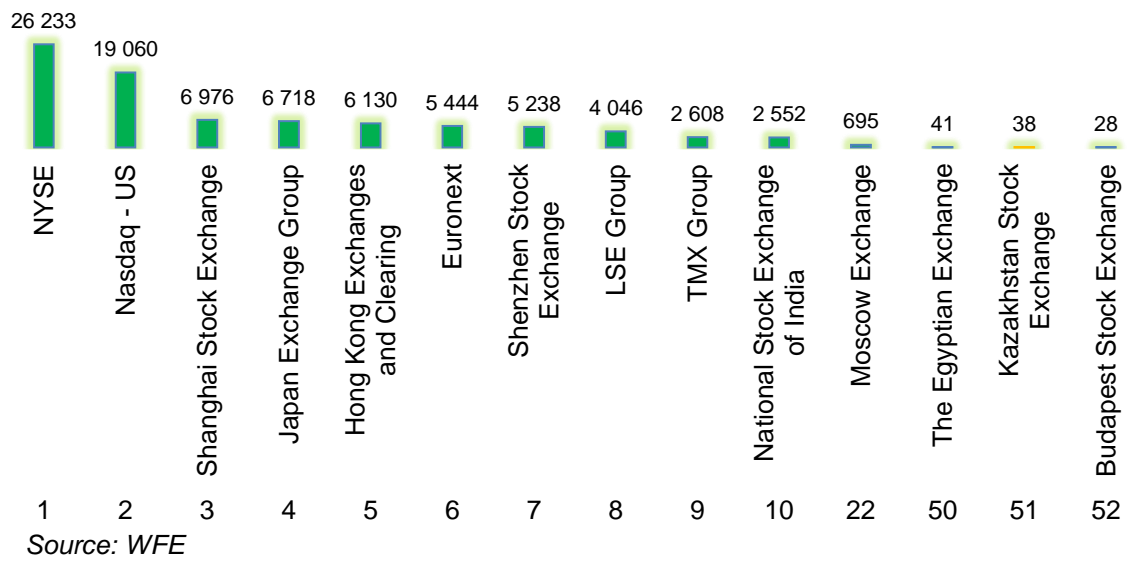


Fig. 2. Volume of trading in shares on stock exchanges of the world, USD billion

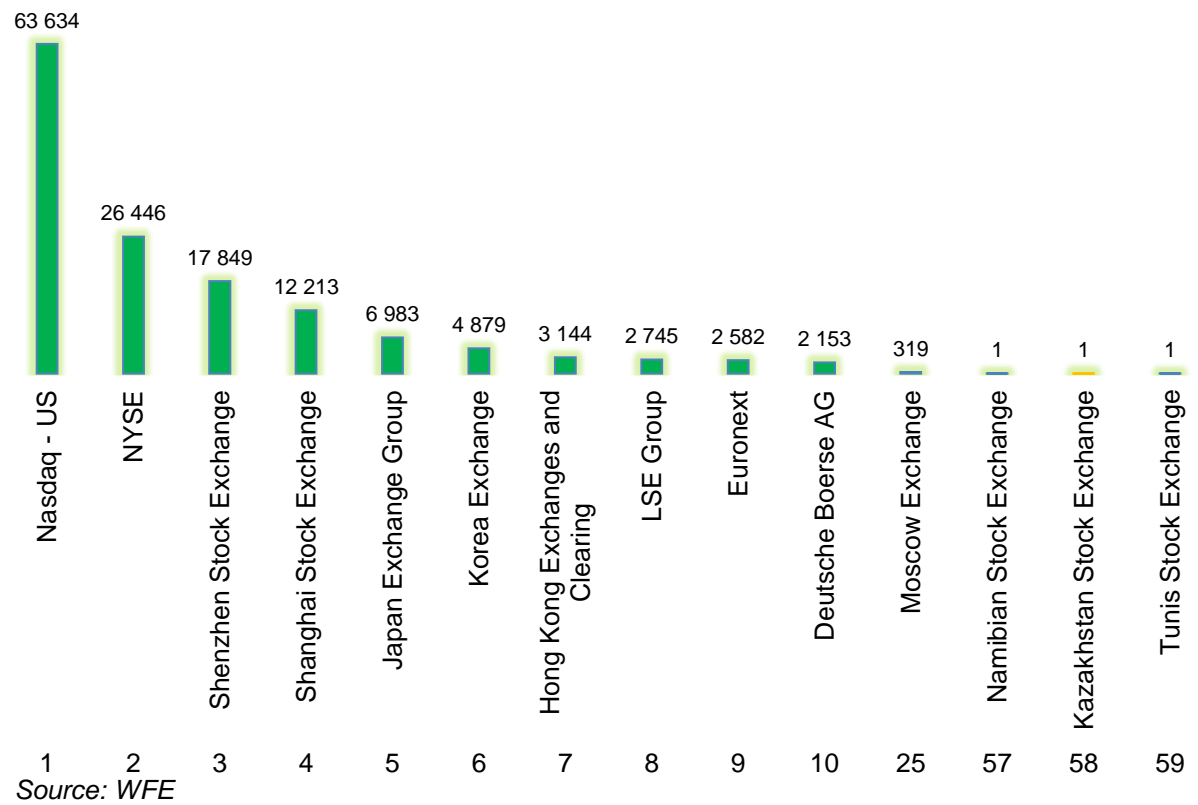
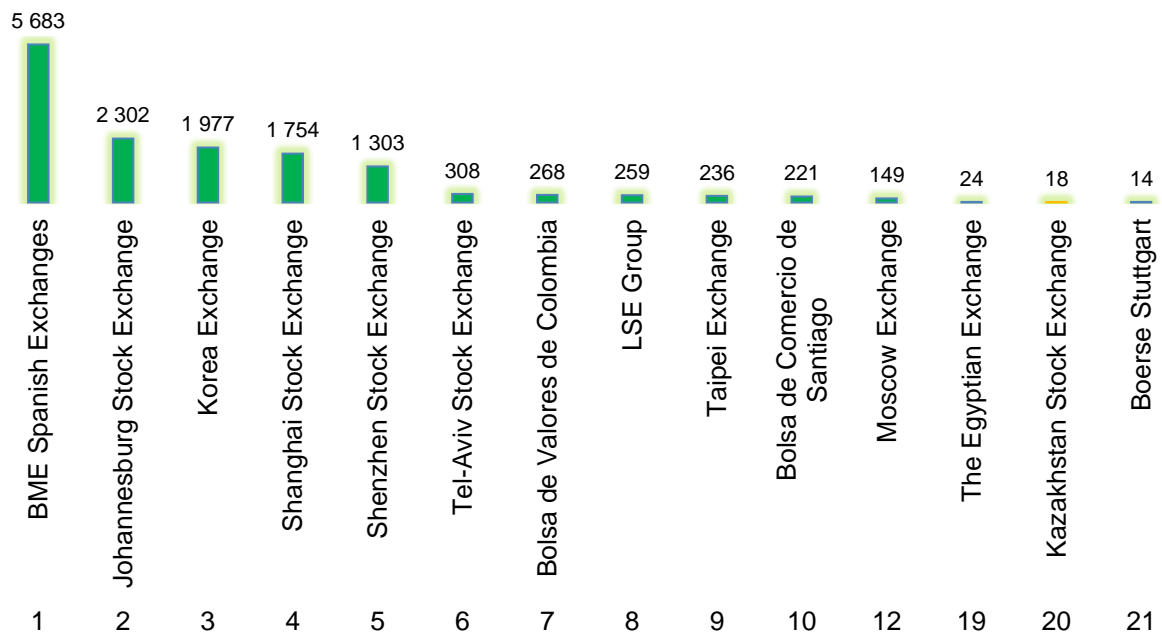


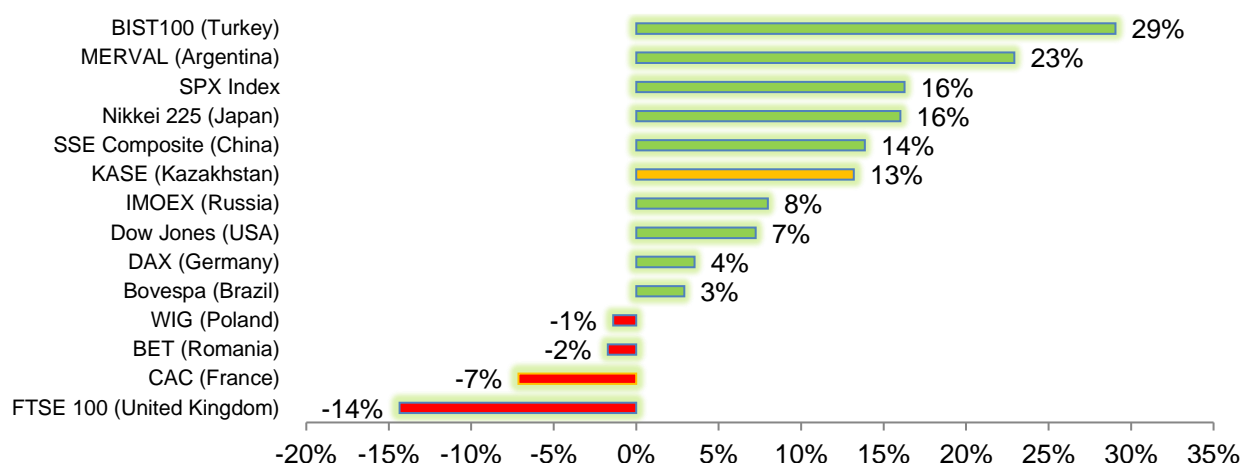
Fig. 3. Volume of trading in bonds on stock exchanges of the world, USD billion



Source: WFE

In 2020, bullish sentiment was observed on most stock exchanges in the world, with the exception of the European region, which was most affected by the self-isolation regime. The growth leaders were the indices of the Istanbul Stock Exchange and the Buenos Aires Stock Exchange, which renewed their all-time highs, rising by 29 % and 23 %, respectively. The third place in terms of growth was shared by one of America's major indices, the S&P 500, and the Japanese Nikkei 225. The growth was supported by the softest possible "stimulating" policy. Among the anti-leaders were the Britain's indices and most of the Western European indices. KASE index rose by 13 % over 2020. Below is a graph of changes in the main stock indices and KASE Index during 2020.

Fig. 4. Growth indicators of the main world stock indices and KASE Index based on results of 2020, %



Source: Bloomberg

KASE markets

KASE official list

As of January 1, 2021, there were 786 securities of 210 issuers in the Exchange's official list, including 343 securities of 112 issuers on the "Main" market, 75 securities of 62 issuers on the "Alternative" market, and 368 securities of 42 issuers – on the "Mixed" market.

In 2020, 34 meetings of the Listing Commission were held, as a result of which 39 companies (including ten new companies) underwent the full listing procedure, and 48 security issues were included in the Exchange's official list, including: corporate bonds – 42; common shares – three; units of investment funds – three.

For the first time, three bond issues issued by microfinance organizations and one bond issue of an agricultural production cooperative were included in the Exchange's official list.

Based on the results of a check for compliance with the criteria and requirements established by the Listing Rules for inclusion of securities in the Exchange's official list, 16 security issues of ten issuers were transferred to the respective sector and category of the "Main" market, including five issues of common shares and 11 issues of bonds.

In 2020, three issues of shares of interval mutual investment funds managed by First Heartland Jysan Invest JSC, were included in the sector "Securities of investment funds" according to the full procedure, and units of a closed unit investment trust of market financial instruments under management of Management Company "East-West" LLC

(Russian Federation), as well as shares of SPDR Gold Shares, issued by the investment fund SPDR Gold Trust (ETF, USA) – according to the simplified procedure.

In addition, eight bond issues of international financial organizations were listed on the Exchange in 2020, under the simplified procedure: two bond issues of the Asian Development Bank, two issues of the Eurasian Development Bank, three issues of the European Bank for Reconstruction and Development and one bond issue of the International Finance Corporation.

At the same time, in 2020, following an initiative of four Kazakh brokerage organizations, the Exchange's official list was supplemented with two GDR issues, four issues of international bonds of the Ministry of Finance of the Republic of Kazakhstan and 23 issues of foreign government securities (bonds issued by authorized bodies of the Russian Federation, the United States and Ukraine).

In 2020, local executive bodies issued and included in the Exchange's official list bonds of 123 issues issued both to fund housing construction as part of the implementation of state and government programs, and to finance the activities provided for in the framework of the state program "Employment Roadmap 2020-2021".

In 2020, eight issues of commercial bonds of three issuers and two issues of international bonds of non-residents of the Republic of Kazakhstan – Altyn PLC and LLOYDS BANK PLC – passed through the simplified listing procedure.

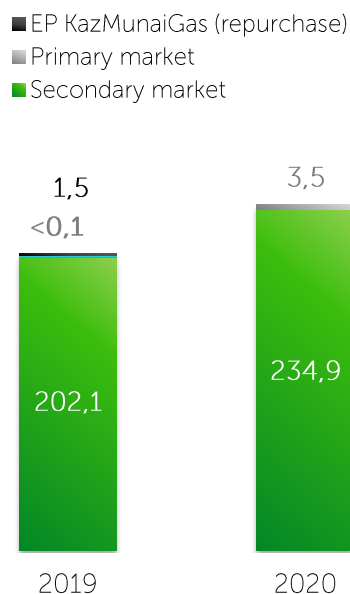
Due to the expiration of the circulation period, early redemption or cancellation of the issue, bonds of 34 issues and one issue of shares were excluded from the Exchange's official list. In addition, six security issues of five issuers were excluded from the Exchange's official list, among which three – at the initiative of issuers, two issues were delisted due to the forced liquidation of the issuer and one issue – in connection with the default committed by the issuer and rejection of the issuer's action plan by the Exchange's Listing Commission.

Auditing organizations

In 2020, four meetings of the Committee for issuer audit of Exchange's Board of Directors were held, as a result of which two auditing organizations were included in the List of auditing organizations recognized by the Exchange by the second level.

Securities market

Fig. 5. Volume of trading on the equity market, bn KZT



Stocks

The volume of trading in shares in 2020 compared with 2019 increased by 17.1 % to KZT238.4 bn.

The average daily volume of trades amounted to KZT969.1 mln, the average daily number of deals made up 795, the average volume of one deal – KZT1.2 mln.

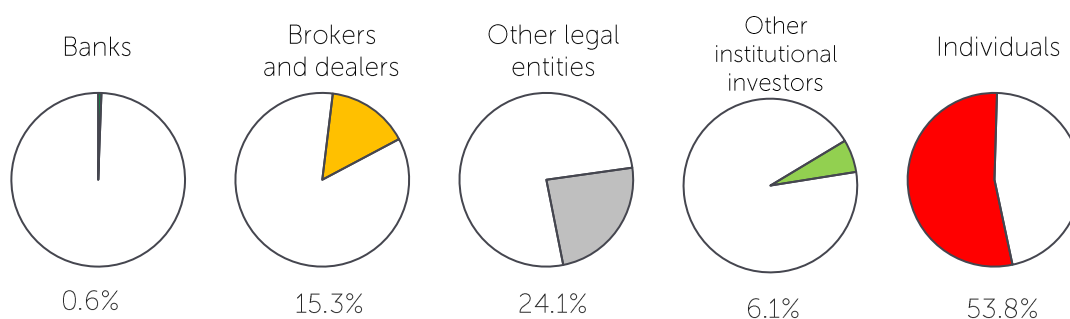
The volume of the primary market is estimated at KZT3.5 bn. BAST JSC during the second and third quarters of 2020 placed in KASE's trading system 249.6 thousand of its common shares in the amount of KZT3.4 bn. The price per share ranged from 12 to 28 thousand tenge per share. Insurance Company "Sinoasia B&R" JSC in the third quarter

of 2020 placed 8.5 thousand of its ordinary shares by subscription at KZT16.2 thousand per share in the third quarter of 2020 for the amount of KZT137.7 mln.

The volume of trades on the secondary equity market increased by 15.4 % and amounted to KZT234.9 bn.

In terms of the main categories of investors in the secondary market, the most active are individuals, whose accounts accounted for 53.8 % of the gross turnover of trading in shares. The participation of STBs is estimated at 0.6 %, that of broker-dealers – at 15.3 %, other institutional investors accounted for 6.1 %, and the share of other legal entities was 24.1 %. The participation of non-residents is estimated at 10.0%.

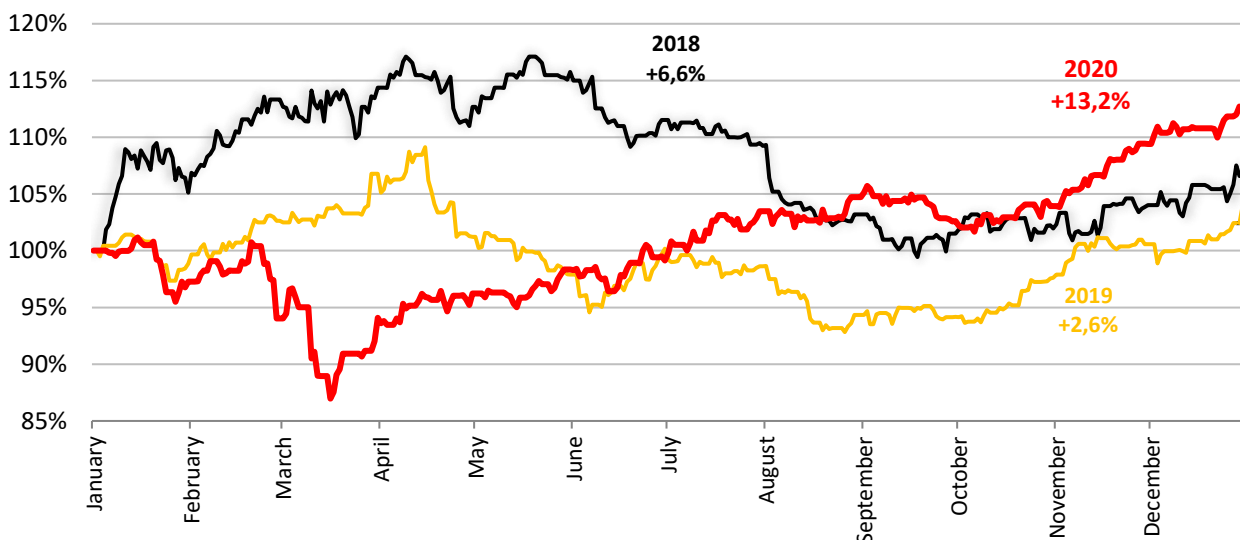
Fig. 6. Investors on the secondary equity market



Since the beginning of 2020, KASE Index has grown by 13.2 % to 2,675.58 points. The total volume of trading in index shares amounted to KZT150.4 bn, thus increasing by 39 % YoY.

On December 30, KASE Index closed at the maximum value of 2020 – 2,678.37 points (maximum since June 27, 2008), on March 16 KASE Index reached a minimum – 2,055.72 points (-13.0 % since the beginning of the year). The recovery of KASE Index from the said minimum of 2020 to the end of December made 30.2 %.

Fig. 7. KASE Index change in 2018-2020



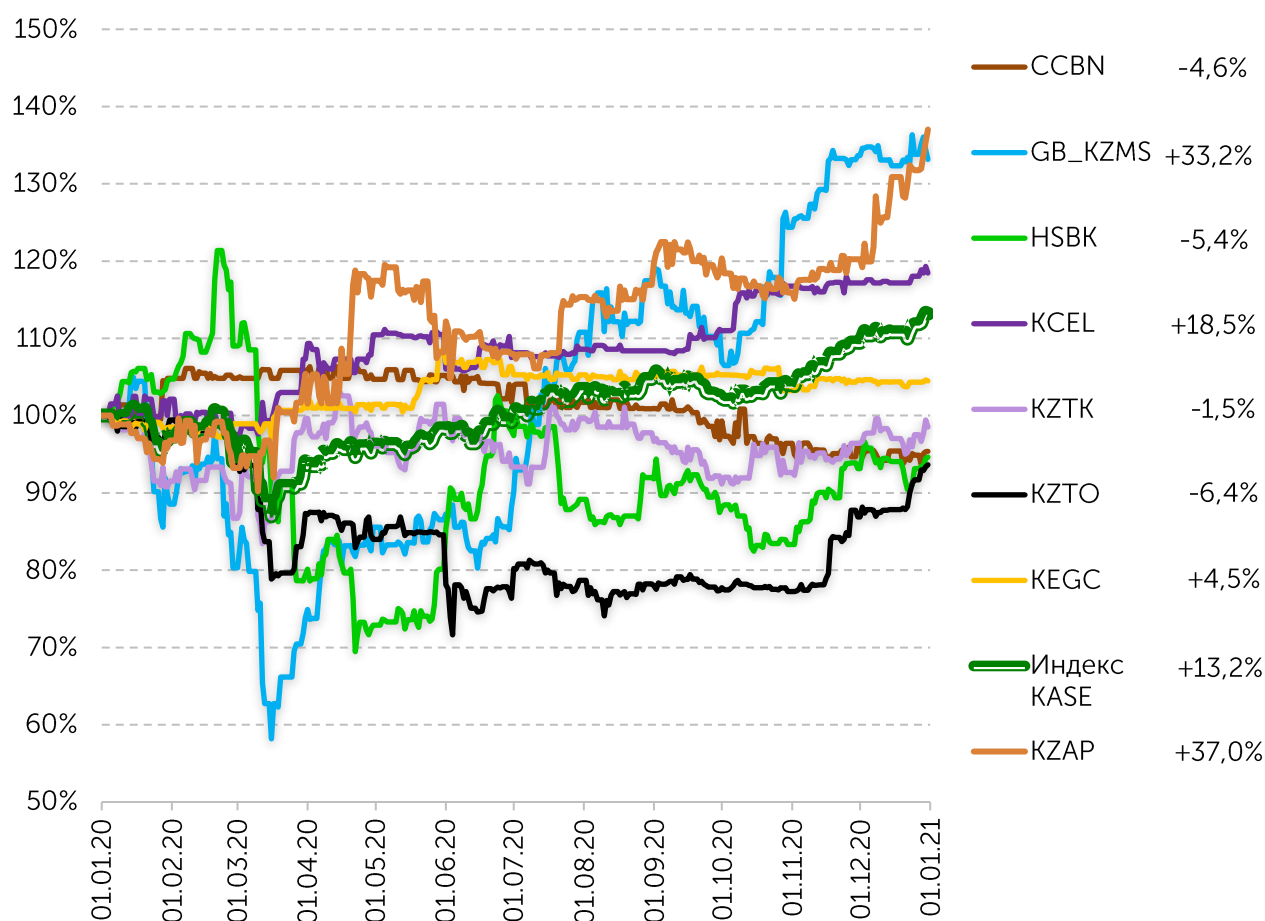
Based on results of 2020, the growth leaders among the shares of the Index were the securities of **NAC Kazatomprom JSC**, which increased in price by 37.0 %. The company's shares entered 2020 in a sideways trend, however, against the background of the spread of the coronavirus pandemic by the beginning of March, the price of the nuclear company shares showed a fall, which was played back rather quickly and the formed upward trend continued to drive prices to historical highs of up to 7,150 tenge per share. Growth at the macro level was supported by the rapid pace of economic recovery in China, which is the main consumer of the company's products, and the general increase in spot prices for uranium due to disruptions in supply chains and the closure of large North American mines with continued demand on the market.

The second-best result was shown by common shares of **KAZ Minerals PLC**, which increased in price by 33.2 % over the year. Conceptually, the development of the price trend is similar with shares of NAC Kazatomprom JSC: the introduction of lockdowns had a negative impact on price dynamics, however, increased demand from China as the largest consumer of copper in the world created a reversal in the trend. In addition, in the last quarter of the year, share prices increased by 15 % amid news of the repurchase of minority stakes by Vladimir Kim and Oleg Novachuk through Nova Resources B.V. at a price of £6.4 per share. As a result of the offer, which expired on April 9, 2021, Nova

resources became the owner of an 89 % stake in the capital of Kaz Minerals and decided to delist Kaz Minerals securities in London and Almaty.

Kcell JSC completes the top three in 2020, whose shares rose in price by 18.5 % due to an increase in demand for Internet access services caused by mass self-isolation of citizens and widespread quarantine measures due to the outbreak of coronavirus. Also this year, the rating agency Fitch Ratings upgraded the long-term issuer default rating of Kcell from BB to BB+ with a "Stable" outlook, highlighting three main reasons: the insignificant impact of the pandemic on roaming revenues, moderate leverage and the consolidation of the local mobile market.

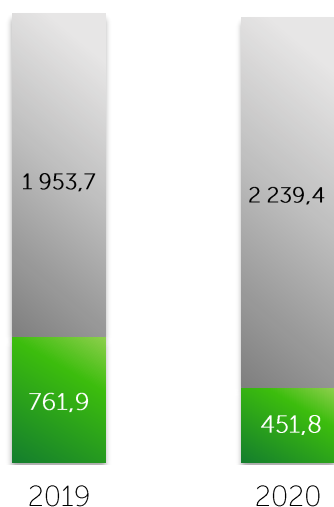
Fig.8 Dynamics of shares from KASE Index universe in 2020



Corporate bonds

The total trading volume on KASE's corporate bond market in 2020 amounted to KZT2.7 trln, having decreased compared with 2019 by 0.9 %, or by KZT24.4 bn. A decrease by 40.7 % was observed in the secondary market, while in the primary market the trading volume increased by 14.6 %.

Fig. 9. Volume of trading on the corporate bond market, KZT bn



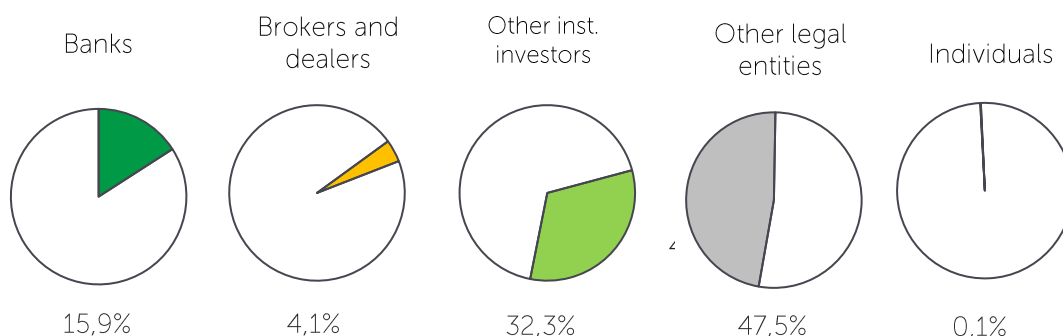
The average daily trading volume amounted to KZT10.9 bn (in the secondary market – KZT1.8 bn), the average daily number of deals – 13 (in the secondary market – 9), the average volume of one deal – KZT840.2 mln (in the secondary market – KZT208.2 mln).

A total of 50 bond issues of 17 issuers were offered on KASE. The total volume of borrowings reached KZT2.2 trln, increasing by 14.6 %, or KZT285.7 bn. This figure is a record amount of capital raised on the Exchange by issuing corporate bonds.

91.2 % of the volume of borrowings was raised by companies of the quasi-public sector, 8.3 % – by second-tier banks, the remaining 0.4 % – by the real sector and private financial companies.

In terms of the main categories of investors in the primary corporate bond market, STBs accounted for 15.9 %, brokers and dealers accounted for 4.1 %, other institutional investors – for 32.3 %, other legal entities – for 47.5 %, individuals – for 0.1 %. The share of non-residents was 2.3 %.

Fig. 10. Investors on the primary corporate bond market



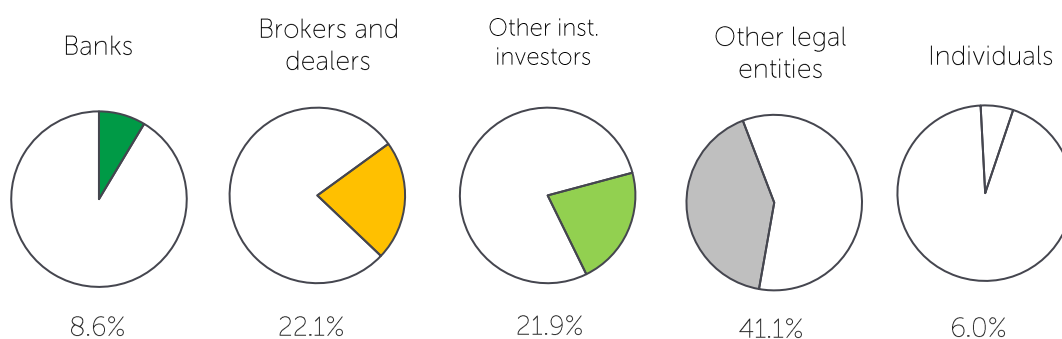
Legislative changes introduced from January 1, 2020, allowed microfinance organizations to raise funds in the stock market: thus a debut issue of two-year bonds of the Microfinance Organization "OnlineKazFinance" LLP in the amount of KZT3.3 bn at 19 % per annum took place in August 2020. Among the main categories of investors, this issue

aroused the greatest interest of individuals, their share in the acquisition of this issue was 69 %, that of institutional investors – 23.4 % and that of legal entities – 7.7 %.

The volume of trades in the secondary market of corporate bonds in 2020 decreased to KZT451.8 bn by 40.7 %, or KZT310.1 bn.

In terms of the main investor categories in the secondary corporate bond market, STB accounts accounted for 8.6 %, accounts of brokers and dealers – for 22.1 %, accounts of other institutional investors – for 21.9 %, accounts of other legal entities – for 41.4 %. The share of individuals in this market segment was 6.0 %. The participation of non-residents was estimated at 20.4 %.

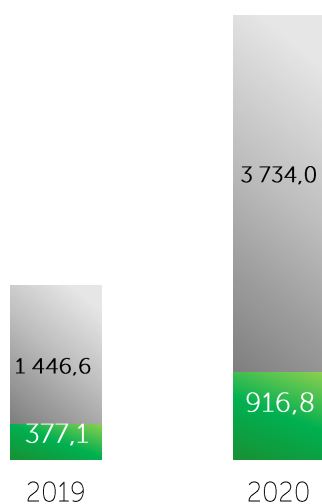
Fig. 11. Investors on the secondary corporate bond market



Government securities

Fig. 12. Volume of trades on the GS market, bn KZT

■ Secondary market ■ Primary market



The volume of trades in government securities on KASE amounted to KZT4.7 trln and increased 2.6 times, or by KZT2.8 trln relative to 2019.

The average daily trading volume amounted to KZT18.9 bn (in the secondary market – KZT3.7 bn), the average daily number of deals – 8 (in the secondary market – 4 deals), the average volume of one deal – KZT2.5 bn (in the secondary market – KZT860.0 mln).

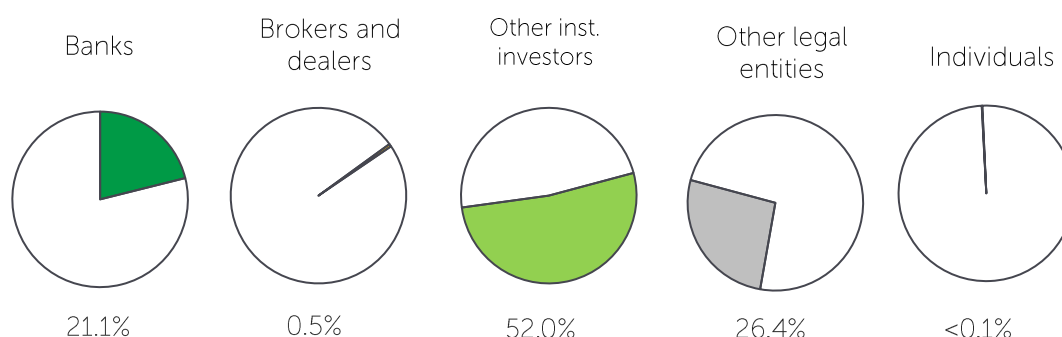
In 2020, the volume of the primary market reached KZT3.7 trln, which is 2.6 times, or by KZT2.3 trln, higher than the results of 2019. Of these, KZT963.2 bn at 0.35 %–6.09 % were raised by the Akimdiks of 14 regions, the cities of Nur-Sultan, Almaty and Shymkent as part of the implementation of state and government programs, which is 8.8 times, or by KZT854.3 bn, higher than in 2019.

The Ministry of Finance borrowed as much as KZT2.8 trln via KASE trading floor. This amount is 2.1 times, or by KZT1.4 trln (107.1 %) higher than the indicator of 2019. The buyer's yield in these offerings varied in the range of 9.47–12.0 % per annum with the maturity of bonds from six months to 20 years.

In order to form a benchmark of risk-free yield for Kazakhstan's market, the Ministry of Finance issued a short-term issue of securities with an average weighted yield of 10.7863 % per annum, and also during 2020 carried out additional offering of existing issues, enlarging them in order to create large-scale volume issues as acceptable objects for foreign investments. In total, by the end of 2020, there were 118 issues of internal tenge-denominated government securities of the Ministry of Finance in KASE's lists with a nominal volume of KZT9.8 trln.

In terms of the main categories of investors in the primary market, STBs accounted for 21.1 %, brokers and dealers – for 0.5 %, other institutional investors – for 52.0 %, the share of other legal entities was 26.4 %, that of individuals – less than 0.1 %. The participation of non-residents was just over 1 %.

Fig. 13. Investors on the GS primary market

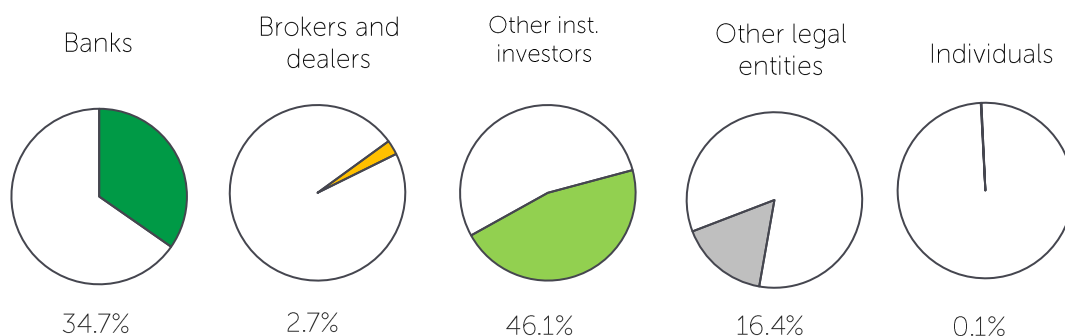


The volume of trades in the secondary market increased 2.4 times, or by KZT539.7 bn, to the level of KZT916.8 bn. The share of trades in notes of the National Bank in the secondary market amounted to 50.5 % of the total turnover of trades against 95.0 % in 2019, the share of bonds of the Ministry of Finance of Kazakhstan – 49.4 % (less than 1% in Eurobonds) against 4.9 % of the previous year. The share of trades in government securities of foreign issuers also remains insignificant – 0.2 %.

In terms of the main categories of investors in the secondary market, STBs accounted for 34.7 %, brokers and dealers – for 2.7 %, other institutional investors – for 46.1 %, the

share of other legal entities made up 16.4 %, the share of individuals was 0.1 %. The participation of non-residents is estimated at 9.7 %.

Fig. 14. Investors on the secondary GS market

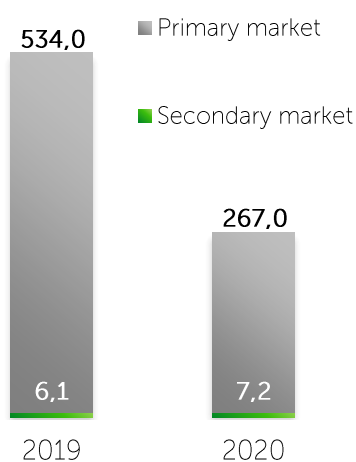


Securities of international financial organizations

As of the end of 2020, KASE's trading lists featured bonds of 34 issues of four international financial organizations: Asian Development Bank, Eurasian Development Bank, European Bank for Reconstruction and Development and IFC.

Since the beginning of 2020, eight bond issues of four issuers have been included in the official list: two issues of Asian Development Bank, two issues of Eurasian Development Bank, three issues of European Bank for Reconstruction and Development, one issue of IFC.

Fig. 15. Volume of trading in the IFO bond market, bn KZT



Over the past period, the trading volume amounted to KZT274.2 bn, which is by 49.2 %, or by KZT266.0 bn, lower than the result of 2019. In terms of the main categories of investors in the primary market, the share of STBs was 11.2 %, the share of other institutional investors – 84.2 %, the share of other legal entities was 4.5 %.

The volume of trades in the secondary market amounted to KZT7.2 bn, which is by 17.7 %, or KZT1.1 bn, higher than the figure of 2019.

In terms of the main categories of investors in the secondary market, STBs accounted for 14.8 %, brokers and dealers – for 16.5 %, other institutional investors – for 23.7 %, the share of other legal entities made up 44.8 %, the share of individuals was 0.1 %. The participation of non-residents is estimated at 30.7 %.

Securities of investment funds

Fig. 16. Investors on the IFO primary market

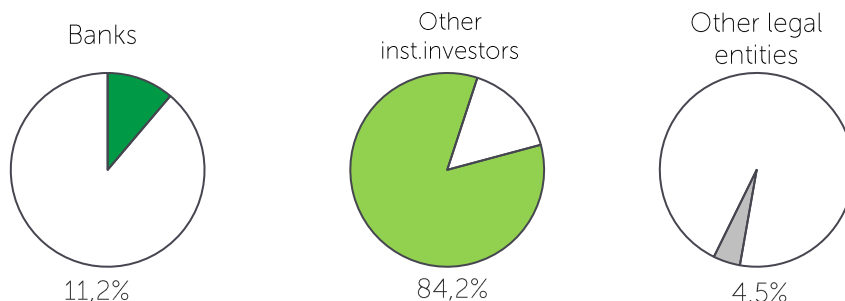
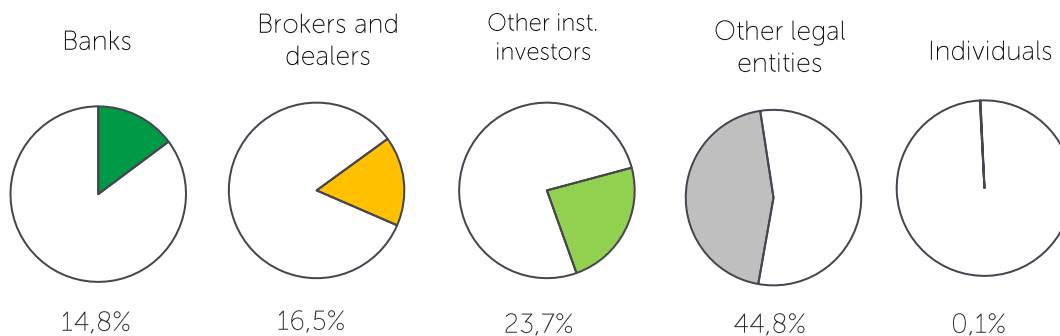


Fig. 17. Investors on the IFO secondary market

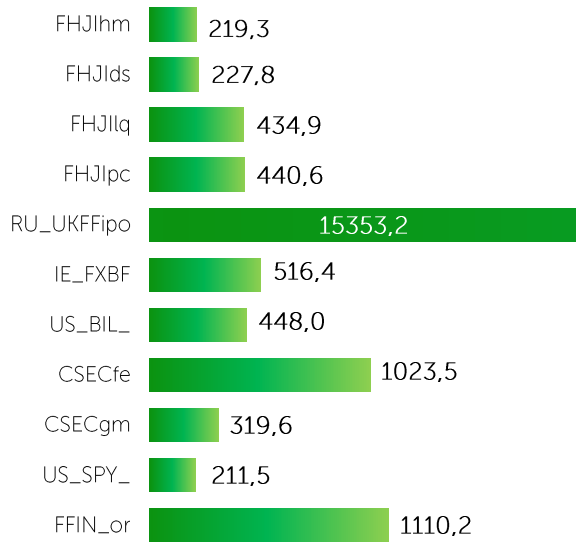


As of the end of the reporting period, the "Securities of Investment Funds" sector included units of 12 unit investment trusts and four ETFs.

During 2020, units of four funds and one ETF were included in KASE official list: shares of IUIT "Global Leaders", IUIT "Regional Leaders", IUIT "Sovereign" and CIUIT "Primary Offerings Fund"; shares SPDR Gold Shares issued by the investment fund SPDR Gold Trust.

In 2020, the trading volume amounted to KZT20.3 bn, which is 22 times, or by KZT19.4 bn, higher than the result of 2019. The increase in the trading volume was due to the conduct in early September of special trading sessions for sale of units of the closed unit investment trust of market financial instruments "Initial Offerings Fund". A total of 490,000 of the said units were sold for the amount of USD10.4 mln (equivalent to KZT4,355.1 mln) at a price of USD21.2 per share. The deals were settled in US dollars.

Fig. 18. Amount of deals in the investment fund securities market, by instrument, mln KZT



In terms of the main investor categories, individuals accounted for 53.4 %, brokers and dealers – for 28.9 %, other legal entities – for 16.9 %, other institutional investors – for 0.8 %.

Money market

The total trading volume in the money market reached KZT98.5 trln, having decreased by 3.2 %, or by KZT3.2 trln, relative to the figure of 2019.

From November 30, 2020, calculation of indicators of the interbank deposits market has been terminated: KAZPRIME – due to termination of the Agreement on formation of Kazakhstan's interbank deposits indicator KazPrime and KIBOR, KIBID – due to termination of the Memorandum on formation of the interbank market indicator.

Fig. 19. Investors on the investment fund securities market

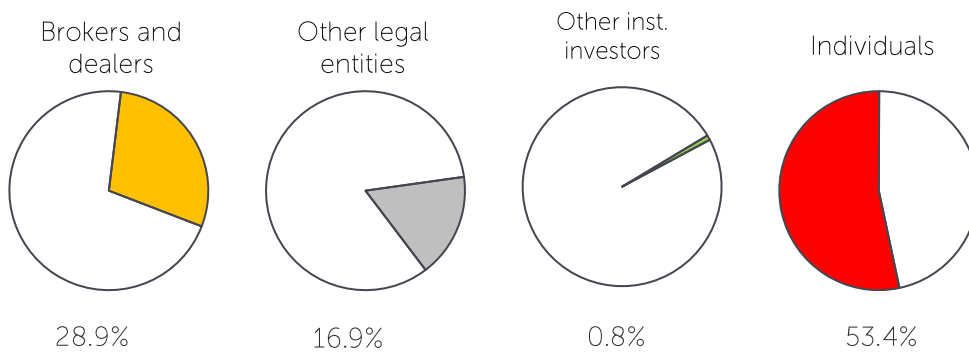
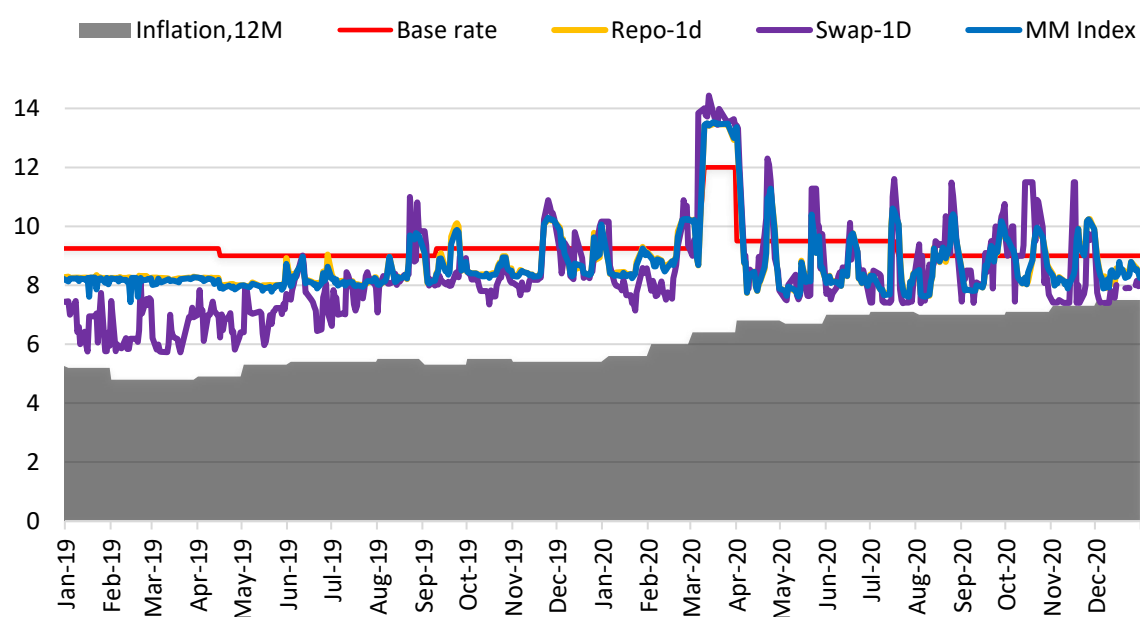


Fig. 20. Inflation, base rate and money market indicators



Repo transactions

The total volume of repo transactions in 2020 amounted to KZT88.6 trln, which is by KZT15.9 trln, or 21.8 %, more than the volume of 2019. A significant part of repo transactions, more than 82.9 %, were auto repo transactions with GS, auto repo with CS – 17.0 %, nego CS repo – 0.08 %. The average daily volume of transactions amounted to KZT360.0 bn, the average daily number of daily concluded deals – 431, the average volume of

Fig. 21. Volume of trading on the REPO transactions market, trln KZT

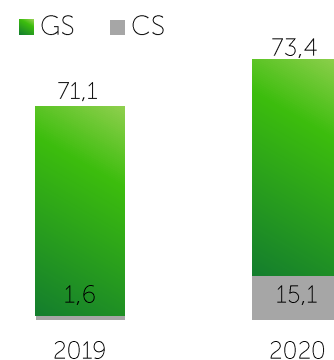
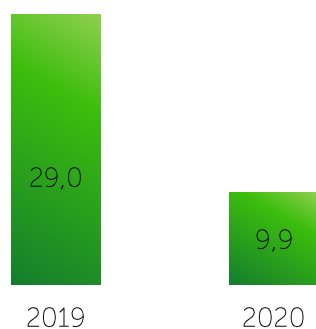


Fig. 22. Volume of trading on the currency swap market, trln KZT



one deal – KZT835.2 mln.

Based on results of 2020, the TONIA indicator decreased by 180 b.p. from 10.05 % to 8.25 % per annum. The TWINA indicator dropped 141 b.p. from 10.01 % to 8.6 % per annum.

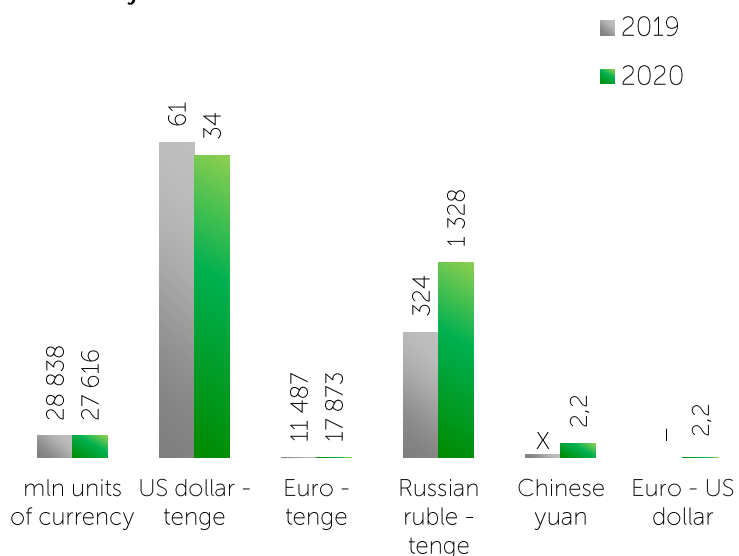
Currency swap transactions

The total volume of currency swap transactions decreased by KZT19.1 trln, or by 65.7 %, to KZT9.9 trln from KZT29 trln in 2020.

The average daily volume of transactions in 2020 amounted to KZT40.4 bn, the average daily number of deals – 15, the average volume of one deal – KZT2.8 bn.

In the instrumental structure, 48.0 % of the total volume in the currency swap market fell on one-day currency swap deals (USDKZT_0_001), 49.4 % of the total trading volume in the currency swap market fell on two-day currency swap deals (USDKZT_0_002), 0.4 % of the total trading volume – on one-week currency swaps (USDKZT_01W), 2.1 % of the total trading volume – on one-month currency swaps (USDKZT_01M), less than 0.1 % of the total trading volume – on one-day currency swaps (EURKZT_0_001).

Fig. 23. Volume of trading on the foreign currency market in 2020, mln units of currency

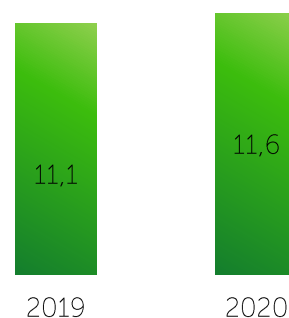


In 2020, there was a 15 % increase in the number of deals with the CNY/KZT currency pair, a 23 % increase in deals with the RUB/KZT currency pair, while the volume of deals with the CNY/KZT currency pair increased 4 times in 2020 compared with 2019, RUB/KZT – by 56 %, which witnesses of development of direct conversion transactions in the currencies of Kazakhstan's partner countries.

Foreign currency market

In 2020, the volume of trades in the foreign exchange market reached KZT11.6 trln, which is by 4.1 %, or KZT461.9 bn, higher than the same indicator of the previous year. The average daily trading volume amounted to KZT47.2 bn, the average daily number of deals – 397, the average volume of one deal – KZT118.9 mln.

Fig. 24. Amount of trading in the foreign currency market, trln KZT



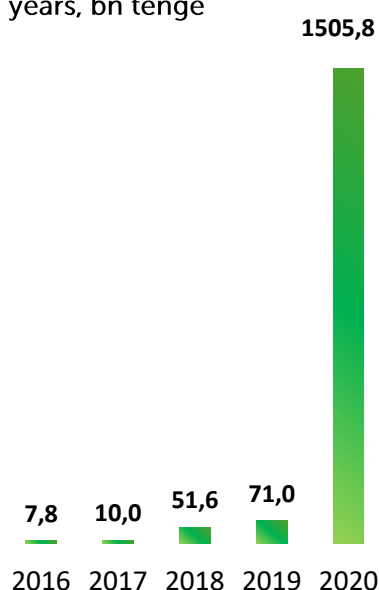
Derivatives market

At the moment, futures are available in this sector of the exchange market, the underlying assets of which are the US dollar, KASE Index and particular titles of shares. In 2020, one deal was carried out in a one-week currency futures in the amount of KZT405 th., the final settlement price of the futures was KZT402.81 per US dollar. By the beginning of January 2021, trading participants had no open positions in the derivatives market.

Operating and financial results

Assets

Fig. 25. Change in assets over 5 years, bn tenge



As of December 31, 2020, assets¹ of the Exchange amounted to KZT1,505,801.8 mln, having increased 21.2 times compared with last year (by KZT1,434,760.8 mln).

A significant increase in assets and liabilities is caused by the fact that since October 1, 2018, the Exchange has been performing the CCP functions in all markets, being a party to each participant in all deals concluded in the exchange trading and guarantees their execution on a net basis. In particular, in the financial statements repo transactions with the central counterparty are reflected on a gross basis as claims and liabilities on

repo transactions, which amounted to KZT1,423,667.9 mln.

Cash and cash equivalents amounted to KZT46,817.9 mln, financial assets accounted for at amortized cost amounted to KZT29,142.5 mln and were mainly composed from guarantee fees and collateral of clearing participants.

Liabilities and equity

The Exchange's liabilities increased 24.9 times and amounted to KZT1,489,997.1 mln, of which 95.6% (KZT1,423,667.9 mln) are the CCP liabilities on repo transactions in the stock market, 4.3 % (KZT64,690.9 mln) are guarantee fees and collateral of clearing participants allocated on accounts of KASE as the central counterparty and 0.09 % (KZT1,379.8 mln) – liabilities of the CCP on foreign exchange transactions.

The equity capital of the Exchange in the reporting year increased by 38.6 % (KZT4,404.6 mln) to KZT15,804.7 mln, mainly due to retained net income (KZT2,893.5 mln).

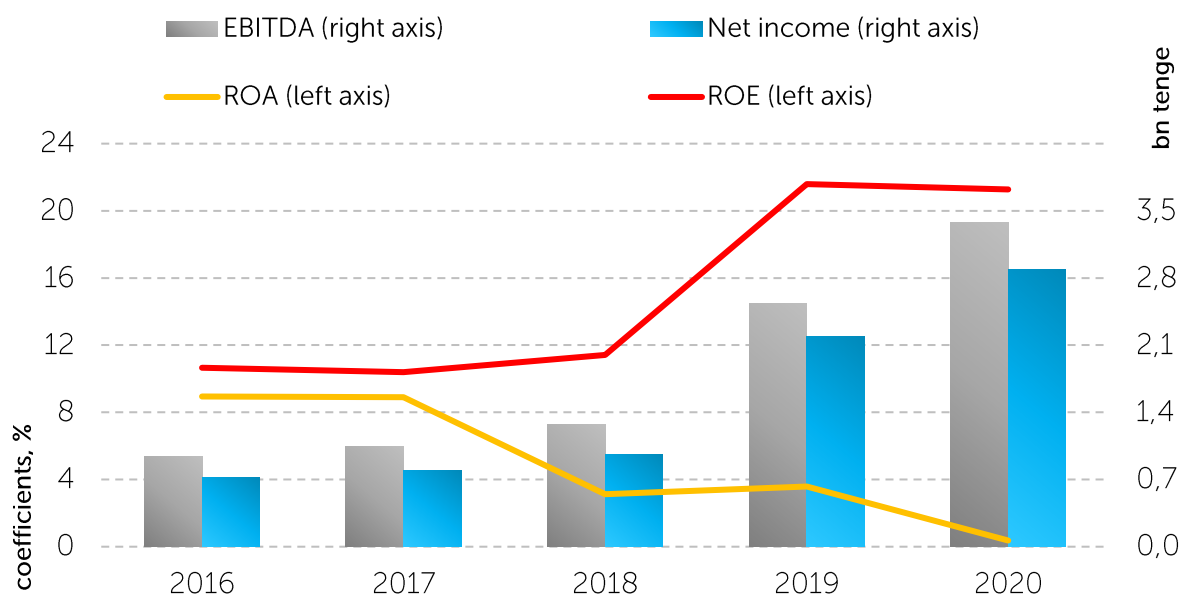
The authorized capital of the Exchange as of December 31, 2020 amounted to KZT4,189.0 mln, having increased by 57.4 % (KZT1,527.3 mln) following the sale of KASE shares by its shareholders as part of the exercise of their right of pre-emptive purchase (decision on offering of part of the announced shares was made by the Board of Directors of the Exchange on October 27, 2020), as well as through the purchase by

MOEX of 108,504 shares of KASE as part of the implementation of the Agreement on Strategic Cooperation dated October 10, 2018, previously signed by the parties.

Clearing reserve funds increased by 81.1 % and amounted to KZT3,170 mln.

Provisions for revaluation of fixed assets decreased by KZT78.7 mln amounting to KZT100.8 mln.

Fig. 26. Key profitability ratios



Revenues

Operating revenues of the Exchange based on results of 2020 amounted to KZT5,622.5 mln, which is by KZT1,377.6 mln, or 32.5 %, higher than the result of last year. Revenues from services and fees amounted to KZT3,157.8 mln, having increased by KZT682.9 mln, or by 27.6 %. Interest income increased by KZT699.5, or 39.4 %, and amounted to KZT2,473.0 mln, including income from investment of margin contributions and money included in the guarantee or reserve funds of the Exchange and other collateral of clearing participants that made up KZT1,542.1 mln.

In the structure of the Exchange's revenues from services and fees, the largest revenues from commission fees (43.4 %), listing fees (26.6 %), clearing fees (12.3 %) and income from membership fees (9.1 %).

Commission fees of the Exchange amounted to KZT1,371.2 mln, having increased by KZT357.4 mln, or 35.3 %. An increase in commission fees compared with the same period of last year followed an increase in the volume of borrowings in the stock market, as well as an increase in liquidity in the repo market.

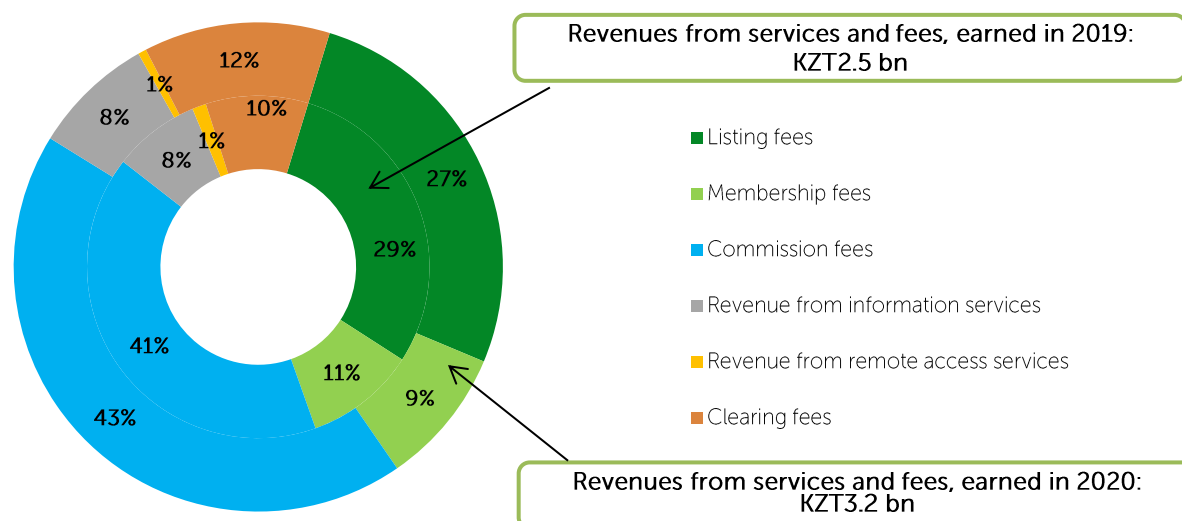
Listing fees of the Exchange in 2020 increased by KZT112.7 mln, or 15.5 %, reaching KZT839.8 mln, after Kazakh businesses showed lively interest in listing new securities issues on KASE.

Clearing fees of the Exchange increased by KZT149.5 mln, or by 62.4 %, amounting to KZT389.1 mln due to an expansion of the list of securities accepted by KASE for clearing services following the introduction of new trading and clearing systems on KASE's markets.

Membership fee revenue increased by KZT27.5 mln, or 10.6 % compared with 2019, amounting to KZT286.5 mln.

Revenues from provision of information services increased by KZT29.8 mln, or by 14.7 %, in 2020 amounting to KZT232.7 mln. This increase is connected to an increase in the number of recipients of exchange information.

Fig. 27. Revenues structure by the main services



Expenses

According to results of the year, the Exchange's expenses amounted to KZT2,486.8 mln, having increased by KZT656.4 mln, or 35.9 %, in comparison with last year. This increase was caused mainly by an increase in personnel costs due to a larger number of employees, as well as an increase in depreciation and amortization expenses following the introduction of new trading and clearing systems and launch of the corresponding server hardware.

Expenses of the Exchange reflect expenses related to the payment of interest on repo transactions as part of the Exchange carrying out the CCP function in the stock market in the amount of KZT5.8 mln.

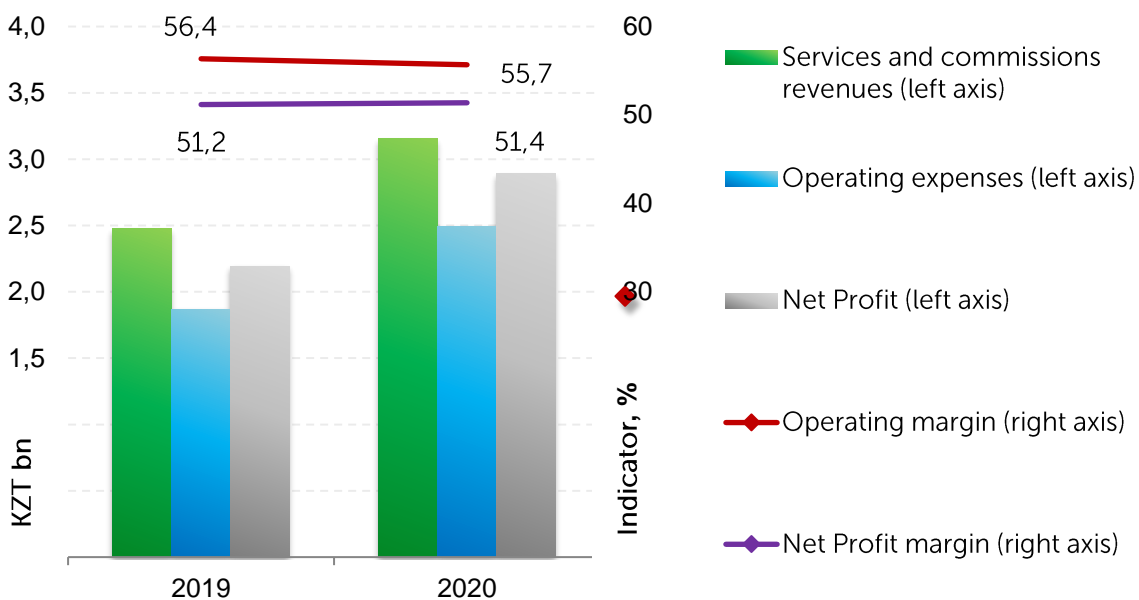
In the structure of the Exchange's expenses, the largest are personnel costs (65.2 %) and depreciation and amortization (9.7 %).

Operating results of the Exchange

Based on results of 2020, the Exchange's net income amounted to KZT2,893.5 mln, which is by 32.0 % higher than the result of last year. EBITDA increased by 32.9 % and amounted to KZT3,374.6 mln. The Exchange's operating income increased by 31.4 %, operating expenses increased by 35.9 %, and the operating margin decreased to 55.7 % in 2020 from 56.4 % a year earlier. The net profit margin increased to 51.4 % in 2020 from 51.2 % a year earlier.

Return on equity (ROE) in 2020 decreased from 21.6 % to 21.3 % due to an increase in equity in the reporting year. Return on assets (ROA) decreased from 3.6 % to 0.4 % as a result of a significant increase in assets due to repo transactions with the central counterparty.

Fig. 28. Key figures of operating activities



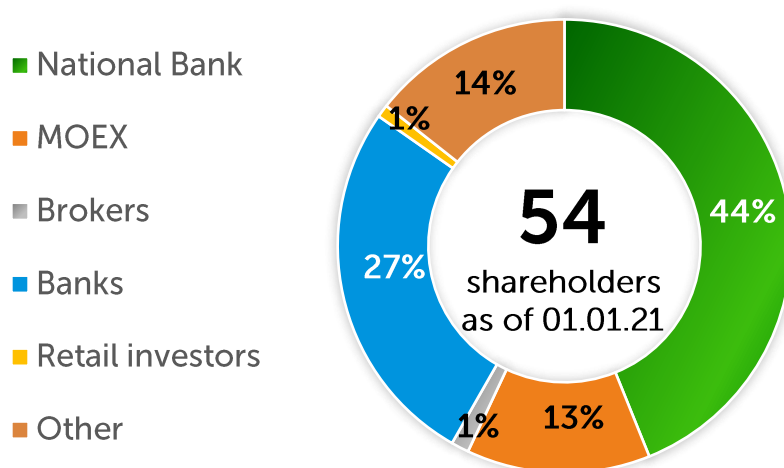
CORPORATE REPORT

Corporate governance

Information about shareholders

As of January 1, 2021, the total number of announced shares of the Exchange was 5 million, of which 1,075,231 shares were issued. 54 persons were the Exchange's shareholders, including banks, brokers and dealers, retail investors – individuals. The National Bank owned a 43.89 % of the total number of issued shares of the Exchange.

The main change in the composition of KASE shareholders in the reporting year was the



increase in the stake of the Moscow Exchange.

As part of the implementation of the Agreement on Strategic Cooperation concluded by KASE and MOEX in October 2018, MOEX acquired 108,504 KASE shares in December 2020. As a result, the total number of KASE shares paid up by shareholders made up 1,075,231 pieces, and the share of the Moscow Exchange in KASE's capital increased from 3.32 % to 13.10 % of the issued shares. This deal took place after the Exchange's shareholders exercised their right of preemptive purchase of shares.

General Meeting of Shareholders and Board of Directors of KASE

In accordance with the legislation of the Republic of Kazakhstan, the general meeting of shareholders is the supreme governing body of the Exchange. The list of issues related to the competence of the general meeting of shareholders is determined by the Act of the Republic of Kazakhstan "On Joint-Stock Companies" and the Charter of the Exchange.

In May 2018, the general meeting of shareholders elected the composition of the Board of Directors of nine people, including:

- three non-elected members of the Board of Directors (a representative of the National Bank of the Republic of Kazakhstan, a representative of the authorized body for regulation, control and supervision of the financial market and financial organizations, on the basis of clause 4 of article 84 of the Act of the Republic of Kazakhstan "On the Securities Market" and the Chairman of the Exchange's Management Board (ex officio) on the basis of sub-clause 2) of clause 3 of article 17 of the Exchange's Charter);
- three independent directors of the Exchange;
- three representatives of interests of the Exchange's shareholders.

By a decision of the extraordinary general meeting of shareholders of the Exchange dated December 11, 2020, the number of members of the Exchange's Board of Directors was increased from 9 to 10 people.

Jan Willems, Executive Director of Global Markets at Clearstream (Luxembourg), was elected as a new member of the Board of Directors – an independent director of the Exchange.

Due to the increase in the Moscow Exchange's share in KASE's capital and this organization becoming a major shareholder of the Exchange, an independent director of the Exchange Igor Marich (a member of the Management Board – managing director for sales and business development of the Moscow Exchange) was re-elected as a member of KASE's Board of Directors (as a representative of the shareholder).

The terms of office of Jan Williams and Igor Marich are determined similarly to the term of office of the Exchange's Board of Directors as a whole.

Taking into account the specified decision of the extraordinary general meeting of KASE shareholders from December 11, 2020, the Board of Directors consists of:

- three non-elected members of the Board of Directors (a representative from the authorized body for regulation, control and surveillance of the financial market and financial organizations and the National Bank of the Republic of Kazakhstan on the basis of item 4 of Article 84 of the Act of the Republic of Kazakhstan "On the Securities Market" and the Chairman of the Management Board of the Exchange (ex officio) on the basis of sub-item 2) of item 3 of article 17 of the Exchange's Charter);

- four representatives of the interests of the Exchange's shareholders;
- three independent directors of the Exchange.

The Board of Directors is the Exchange's governing body, which carries out general management of the Exchange's activities, except for resolving issues referred by the Act of the Republic of Kazakhstan "On Joint-Stock Companies" and/or the Exchange's charter to the exclusive competence of the General Meeting of Shareholders of the Exchange.

Meetings of KASE's Board of Directors in 2020 were held on a regular basis in accordance with the Regulations on the Board of Directors. As was necessary, the Board of Directors held extraordinary meetings.

During the reporting period, at the meetings of the Board of Directors, both strategic and current issues of the Exchange's activities related to its competence were considered. The list of issues and decisions on them are reflected in the relevant minutes of meetings of the Exchange's Board of Directors and decisions made by absentee voting of its members.

During the reporting period, the Board of Directors of the Exchange, in accordance with the legislation of the Republic of Kazakhstan on the securities market, on joint-stock companies, held 25 in-person meetings and 18 absentee voting sessions of members of the Board of Directors.

In January 2020, representatives of the National Bank of the Republic of Kazakhstan and the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market were changed in the composition of the Board of Directors, namely, Aliya Moldabekova, Deputy Chairman of the NBRK, and Mariya Khajiyeva, Deputy Chairman of the ARDFM were elected to the Board of Directors.

Composition of the Board of Directors as of January 1, 2021:

Representatives of the National Bank of the Republic of Kazakhstan and the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market on the basis of the Act of the Republic of Kazakhstan "On the Securities Market":

Aliya Moldabekova (Chairman of the Board of Directors) – Deputy Chairman of the National Bank of the Republic of Kazakhstan;

Mariya Khajiyeva – Deputy Chairman of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market.

Head of the executive body on the basis of the Exchange' charter:

Alina Aldambergen – Chairperson of KASE's Management Board.

Elected members of the management body on the basis of the Act of the Republic of Kazakhstan "On Joint-Stock Companies":

Yeldar Abdrazakov – Chairman of the Board of Directors of Centras Securities JSC;

Talgat Ayupov – Chairman of the Management Board of Halyk Finance JSC;

Kadyrzhan Damitov – independent director of KASE;

Viktor Kyshpanakov – Deputy Chairman of the Management Board of BCC Invest JSC
- a subsidiary of Bank CenterCredit JSC;

Igor Marich – member of the Management Board – managing director for sales and business development of Moscow Exchange MICEX-RTS PJSC;

Mirlan Tashmetov – independent director of KASE;

Jan Willems – independent director of KASE.

The following committees of the Board of Directors and commissions of the Exchange operate at the Exchange to consider the most important issues and prepare recommendations for the Board of Directors.

In accordance with the Act of the Republic of Kazakhstan "On Joint-Stock Companies":

- Committee of the Board of Directors on Budget and Strategic Planning;
- Internal Audit Committee of the Board of Directors;
- Committee of the Board of Directors on HR, Remuneration and Social Issues.

In compliance with the Requirements for the organizational structure of the trading operator and the composition of the listing commission of the stock exchange, approved by the Resolution No. 249 of the Board of the National Bank of the Republic of Kazakhstan dated December 19, 2015, the Exchange has:

- a Listing commission;
- a Committee of the Board of Directors on Financial Reporting and Audit of Issuers.

In accordance with the Procedure for settlement of disputes and conflicts arising in the process of carrying out deals with financial instruments, approved by a decision of the

Board of Directors dated May 28, 2012, there is a Commission for settlement of disputes and conflicts is functioning.

The procedure for the formation and operation of committees of the Board of Directors and commissions of the Exchange, their number, as well as their competence, functions, composition are regulated by the company's internal documents approved by the Board of Directors.

The following events were held in 2020 :

- 17 meetings of the Committee of the Exchange's Board of Directors on Budget and Strategic Planning;
- 12 meetings of the Committee of the Exchange's Board of Directors on HR, Remuneration and Social Issues;
- nine meetings of the Internal Audit Committee of the Exchange's Board of Directors;
- nine meetings of the Listing commission, as well as 25 absentee voting sessions of this commission;
- four meetings of the Committee on Financial Reporting and Audit of Issuers.

During 2020, a representative of the ARDFM and the Chairman of the Management Board of SkyBridge Invest JSC were in the Committee of the Exchange's Board of Directors on Budget and Strategic Planning as experts.

The Board of Directors fulfilled the goals, objectives, functional duties established by the Exchange's Corporate Governance Code, the Exchange's charter, the Regulations on the Board of Directors, which, among other things, influenced the positive financial results of the Exchange in 2020.

Management Board of the Exchange

The Management Board is a collegial executive body of the Exchange and manages current activities of the Exchange, except for resolving issues referred by the Act of the Republic of Kazakhstan "On Joint-Stock Companies" and the Exchange's charter to the exclusive competence of the general meeting of shareholders and/or the Board of Directors of the Exchange.

During 2020, in accordance with decisions of the Board of Directors, the following changes took place in the composition of the Exchange's Management Board:

- due to the expiration of the term of office of K. Turmagambetov – member of the Management Board, managing director for Business Development, following a decision of the Exchange's Board of Directors dated June 29, 2020, Y. Mazhekenov, who previously held the position of director of KASE's Trading Department, was elected to the Management Board as a Deputy Chairman of the Management Board;
- due to an early termination of powers of the Deputy Chairman of the Management Board Idel Sabitov, as of August 10, 2020, following a decision of the Exchange's Board of Directors dated August 7, 2020, Adil Mukhamejanov was elected as a Deputy Chairman of the Management Board.

In 2020, following a decision of the Exchange's Board of Directors dated April 26, 2019, the powers of the following members of KASE's Management Board were extended until July 1, 2023:

- Alina Aldambergen – Chairperson of the Management Board;
- Natalya Khoroshevskaya – Deputy Chairman of the Management Board;
- Andrey Tsalyuk – Deputy Chairman of the Management Board.

The term of office of the members of the Management Board newly elected in 2020 is determined similarly to the term of office of the Management Board as a whole – until July 1, 2023.

As of January 1, 2021, KASE's Management Board consisted of five people:

- **A. Aldambergen**, Chairperson of the Management Board;
- **Y. Mazhekenov**, Deputy Chairman of the Management Board;
- **A. Mukhamejanov**, Deputy Chairman of the Management Board;
- **N. Khoroshevskaya**, Deputy Chairperson of the Management Board;
- **A. Tsalyuk**, Deputy Chairman of the Management Board.

In 2021, changes were made in KASE's Management Board following decisions of the Board of Directors (events after the reporting date), as follows:

- powers of A. Mukhamejanov were terminated as of February 24, 2021;
- Zhainar Sarzhakov was elected as of April 5, 2021.

Information about remuneration

Remuneration and compensation for expenses to members of the Exchange's Board of Directors and Management Board are paid in accordance with terms of contracts concluded with them. The amount of the bonus remuneration for these executives is determined by the general meeting of shareholders in relation to members of the Board of Directors, and by the Board of Directors – in relation to members of the Management Board, depending on results of the Exchange's operations in the respective financial year.

Remuneration to members of the Board of Directors

In accordance with the Act of the Republic of Kazakhstan "On Joint-Stock Companies", the Charter of the Exchange and the Regulations on the Board of Directors:

- the monthly remuneration of members of the Board of Directors is determined by a decision of the general meeting of shareholders of the Exchange;
- the amount of the annual bonus remuneration of any member of the Board of Directors must not exceed 85 % of the total amount of monthly remuneration paid to this member of the Board of Directors for all months of the year for which the bonus is paid;
- no annual bonus remuneration is paid to those members of the Board of Directors who attended less than 50 % of meetings of the Board of Directors, absentee voting of members of the Board of Directors, meetings of committees of the Board of Directors, other permanent committees and commissions of the Exchange, whose members these persons from the Board of Directors were.

During 2020, members of the Board of Directors of the Exchange were paid 50,971,500 (fifty million nine hundred seventy-one thousand and five hundred) tenge.

Members of the Exchange's Board of Directors, who are representatives of government bodies of the Republic of Kazakhstan or related to persons who may not receive remuneration in accordance with the legislation of the Republic of Kazakhstan, are not provided with nor paid any remuneration:

- representatives of the National Bank of the Republic of Kazakhstan and the Agency for Regulation and Development of the Financial Market, who are members of the Board of Directors on the basis of item 4 of Article 84 of the Act of the Republic of Kazakhstan "On the Securities Market" and sub-item 1) of item 3 of Article 17 of the Exchange's charter;

- to the Chairman of the Management Board of the Exchange who is a member of the Board of Directors ex officio on the basis of sub-item 2) of item 3 of Article 17 of the Exchange's charter.

Remuneration of members of the Exchange's Management Board

In accordance with the Act of the Republic of Kazakhstan "On Joint-Stock Companies", the Charter of the Exchange and the Regulations on the Management Board:

- the monthly salary of a member of the Management Board is determined by a decision of the Board of Directors;
- based on results of consideration of results of activities of the Management Board and the Exchange during the reporting year, the Board of Directors makes a decision on setting the amount of annual bonus remuneration for members of the Management Board for the reporting year;
- the amounts of annual bonus remuneration of members of the Management Board are determined by a decision of the Board of Directors based on results of evaluation of work of each member of the Management Board during the reporting year;
- the Board of Directors may decide on a lump sum payment to a member of the Management Board.

During 2020, members of the Management Board of the Exchange were paid 232,903,649.07 tenge (two hundred thirty two million nine hundred three thousand six hundred forty nine thousand tenge 07 tiyn).

Sustainable development

KASE, following the principles of sustainable development, in October 2020, approved its own Sustainable Development Policy. This document defines the fundamental norms, principles, rules and approaches that the Exchange must adhere to in building a management system in the field of sustainable development.

In 2020, KASE updated the requirements for annual reports that listed companies must submit to the Exchange. The requirements include additional disclosure of information on social responsibility and environmental friendliness for companies whose securities are in the "Main" category of the Exchange's official list. The Exchange's ESG disclosure requirements include a description of general environmental, social and corporate governance issues to be disclosed by companies in the annual report, as well as a list of key indicators and guidance on industry specifications.

The Exchange's initiatives are of great educational value to businesses and provide an opportunity to build the capacity necessary to prepare quality reports on sustainability issues. The Exchange has repeatedly announced the introduction of a requirement for ESG reporting disclosure. At the same time, it became apparent that companies still needed time to adapt. Today, most of the companies in the list can prepare reports and submit them for publication on the Exchange's website. These are mainly companies of the Samruk-Kazyna group. It should be noted that more and more companies of the financial sector get involved in this process. In 2020, Halyk Bank of Kazakhstan JSC for the first time generated a Sustainable Development Report, which was recognized as the best in the financial sector in a competition of annual reports and reports on sustainable development. The Exchange continues to regularly conduct training events, which, among other things, explain the basic principles of preparing an ESG report and the issues required for disclosure according to ESG criteria. As a result, 86 listed organizations out of 148 provided annual reports for 2019 with the disclosure of ESG or its main elements.

A landmark event on the Exchange was the first listing of the Asian Development Bank's green bond issue. The development institute raised KZT14 bn, which have been invested on projects on adaptation to the climate change and mitigation of its consequences in Kazakhstan.

KASE is also considering issues of creating new products and services in the field of sustainable development and their application in the Kazakh financial market. For this purpose, we hold events among issuers listed on the Exchange and potential issuers to promote sustainable development issues and determine whether there is interest in ESG instruments. Thus, work goes on to promote green bonds issuances. For these purposes, changes are made to the regulatory framework to determine the purpose at offering of green bonds, potential infrastructure elements are identified, whose functions will include verification of the principle of "greenness" of a funding scheme or a project.

The Exchange is aware of the importance and relevance of the availability of ESG indices and encouraging Kazakh companies to be part of such indices. The Exchange plans to hold events with participation of the largest providers of financial information and international agencies in order to popularize the "green" indicators. For these purposes, a list of companies that can potentially meet the criteria for inclusion in such an index has already been formed and is being updated on an ongoing basis.

Corporate responsibility and personnel management

KASE's personnel management system is aimed at forming and developing a team of professional experts through the establishment of unified HR approaches and standards, which include a system of selection and admission of candidates, a system of employee motivation, assessment of employee performance, formation of a corporate culture, training and development of KASE personnel, as well as development of corporate social responsibility of KASE.

Corporate values

An important component of the Exchange's operation as a team of professionals implementing strategically important projects for the development of the exchange market is the availability of corporate values that meet the current challenges and self-identification of the KASE team.

The corporate values of the Exchange are: innovation, responsibility, openness and care.

The approved formulations of the Exchange corporate values are as follows:

- we work on the principles of innovation and sustainability for the common good, constantly adapting to changes;
- we are responsible for our decisions, confirming the professionalism of our team and high quality of services;
- we cooperate with our partners, clients and with each other on the principles of openness and transparency;
- we care about the future of our country, customers and employees, creating conditions for development.

In the reporting year, a number of measures were taken to develop the value approach at the Exchange.

KASE's corporate values symbolize the desire to unite the business and the team into a single whole in order to develop the stock market, introduce new technologies, products and services, improve existing services and technologies in a changing modern environment, as well as contribute to the achievement of sustainability by all market participants.

In accordance with the previously approved approach, the Exchange's staff chose among colleagues the corporate values carriers for 2020 – KASE's employees who demonstrate

personal qualities that best meet the key terms of corporate values: openness, innovation, responsibility and attentive attitude towards others.

Development of KASE's corporate culture

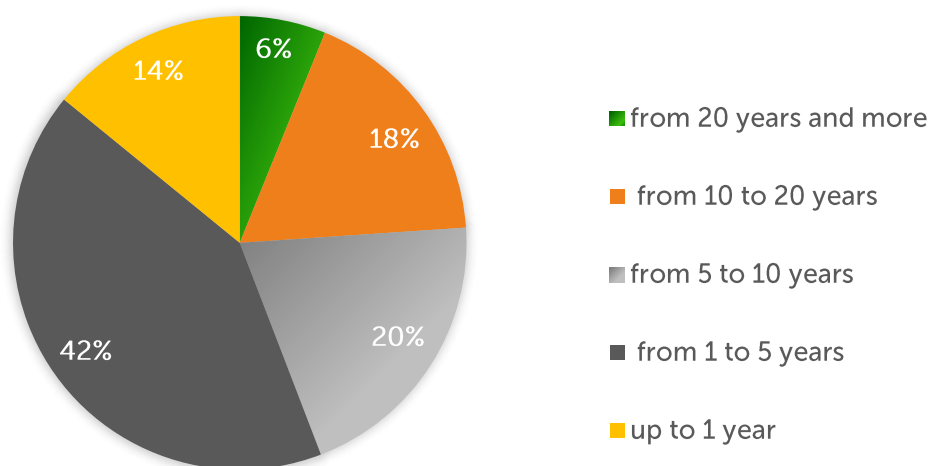
One of the important components of the HR policy is the formation and development of the corporate culture of KASE, which is a system of fundamental values and standards that contribute to the formation of favorable conditions for effective work, keeping up the team spirit of the team and the commitment of employees to the goals and objectives of KASE.

In conditions of the fight against the pandemic and the need to develop new forms of corporate interaction, the Exchange took measures to support the continuity of communications, ensure safe working conditions, and form modes and conditions for remote work.

During the reporting period, 7 events of "KASE Townhall" were held, the main task of which was to provide employees with information on intermediate results of operation and plans for future periods, on the latest news related to activities of the Exchange's employees, and to receive feedback from employees.

Pay Policy

Fig. 31. KASE employees' work experience



KASE strives to ensure a competitive level of pay for attracting, retaining and motivating employees.

The wage and salary pay system includes a fixed (official salary, monthly bonus to the official salary) and variable (bonuses at the end of the year, bonuses for especially

important work) components. Determination of the amount of the fixed part of wages and the target amount of the variable part is carried out taking into account the data of the salary market. The variable part of remuneration depends on KASE's performance and individual results of the employee, assessed as part of the personnel performance management system.

The Exchange provides for an employee motivation system in the form of bonuses based on results of the year, based on an annual assessment of employees' performance, bonuses for especially important work and rationalization proposals, bonuses on holidays and/or solemn dates.

According to the personnel management policy, in order to improve the efficiency of personnel and encourage KASE's employees, the employee performance assessment system is aimed at achieving the set corporate goals and objectives of the Exchange (MBO).

In 2020, more than 70 employees were awarded and given bonuses for especially important work and projects of the Exchange.

Training and development

Training and professional development is part of KASE's personnel management policy. The Exchange encourages the desire of employees to acquire new knowledge and develop existing ones, including through internal and external training.

Professional and compulsory training is a priority. Much attention is paid to the development of corporate competencies, leadership skills and project management skills necessary for the implementation of strategic projects of the Exchange.

In the reporting year, 52 employees of the Exchange underwent training, including on improving professional knowledge and skills, personal growth and business competencies, as well as obtaining international qualifications in the field of accounting.

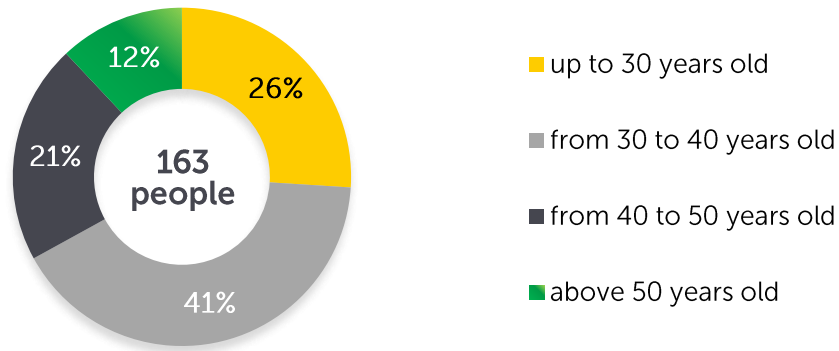
Personnel

As of January 1, 2021, the staffing of KASE counted 188 units, while the actual number is 163 units.

Age structure of the Exchange

In 2020, the main age group of employees is from 30 to 40 years old. The average age of employees is 37 years. At the same time, the share of newly hired young specialists under the age of 30 was 8 %.

Fig. 29. Distribution of KASE's employees



Employees' educational background

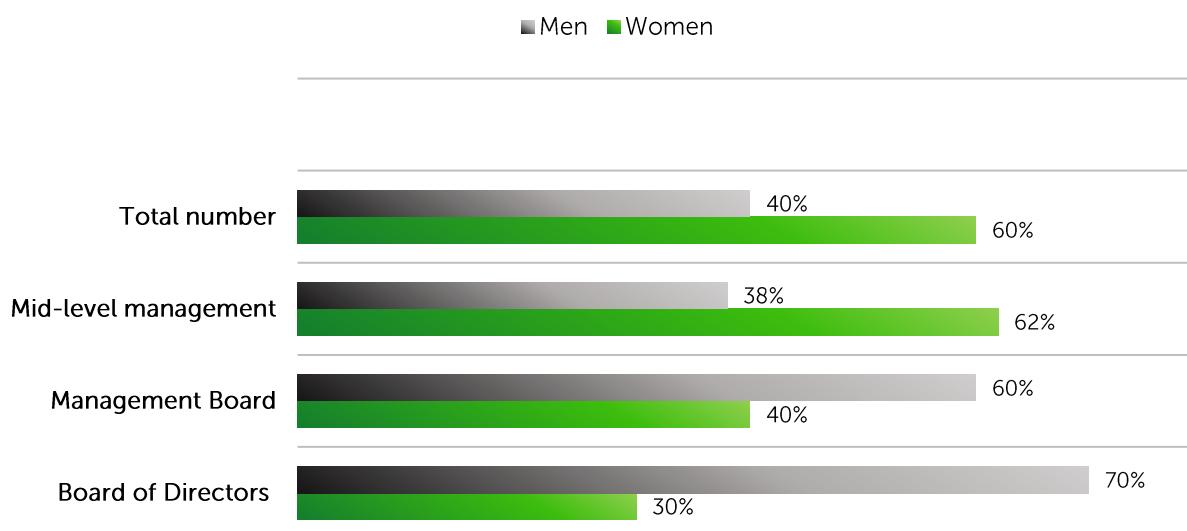
As of the end of the reporting period, the majority of KASE's employees (99 %) had higher education, with 20 people having received postgraduate education.

Gender structure of the Exchange

The total number of KASE's female employees is 60 %, that of male employees – 40 %. At the same time, the top management (Management Board and Board of Directors of the Exchange) is represented mainly by men (66 %).

KASE has joined global initiatives to promote gender equality in order to enhance the role of women in society, namely the global initiative Women's Empowerment Principles, developed and promoted in partnership between the UN Women and United Nations Global Compact.

Fig. 30. Distribution of KASE's employees by gender



KASE personnel turnover

In the period under review, the staff of the Exchange has significantly changed. At that, 18 % of employees have more than ten years of total work experience on KASE, 21 % of employees – from five to ten years of work experience on KASE, 42 % of employees – from one to five years of work experience on KASE, and 23% are employees with less than one year of work experience on the Exchange.

Social responsibility

As part of the development of corporate social responsibility, the Exchange pays special attention to improving the financial literacy of young people in Kazakhstan. In this regard,

the Exchange continues active cooperation with Kazakhstan's universities, in terms of organizing trainings and internships at the Exchange, employing promising students, as well as conducting guest introductory lectures and seminars on the stock market on the premises of the Exchange and at universities.

In 2020, a lecture was held for undergraduates of the National Bank of the Republic of Kazakhstan. A number of students from various universities completed internships and trainings on KASE.

Ecological responsibility

Within the framework of ESG standards, KASE adheres to environmental principles of environmental friendliness:

- measures are being taken to ensure the economical use of paper, consumables and energy resources;
- electronic document management systems are being improved, including electronic reporting systems;
- measures are being taken to reduce energy consumption and improve energy efficiency.

Internal audit

The purpose of the Internal Audit Service is to regularly review internal control systems and identify potential areas for improvement through objective internal audits based on a risk-based approach to analyzing business continuity management systems and providing recommendations for their improvement.

IAS follows the legislation of the Republic of Kazakhstan and strives to carry out its activities in accordance with the International Standards for the Professional Practice of Internal Auditing, recommended by the global Institute of Internal Auditors.

During the reporting period, IAS performed all planned activities in terms of audits of certain areas of the Exchange's activities. The results of such inspections were discussed on a regular basis with the audited entities and the Exchange's management. At the same time, the IAS formulated more than 70 recommendations for improving the internal control system and reviewed plans for corrective actions based on the results of the audits carried out. Most of the recommendations were related to the need to improve the methodological work and update the relevant business processes, taking into account the introduction of new projects in the activities of the Exchange.

IAS was constantly monitoring the carrying out of plans for implementation of IAS recommendations and presented the relevant conclusions to the Internal Audit Committee of the Board of Directors and to the Board of Directors.

At the same time, in order to improve their qualifications, IAS employees took part in conferences and online training. Based on results of 2020, IAS confirmed its independence to the Board of Directors.

Risk management system

The Exchange is constantly working to improve its risk management system in accordance with best international practices, such as the recommendations of international standards ISO 31000, 27001, 22301. This system is aimed at timely identification, assessment, monitoring and minimization of risk events that may affect the achievement of purposes of the Exchange.

In 2020, in order to improve risk management processes on the Exchange, the Risk Management Policy and Risk Management Rules were updated, reflecting the principles and approaches to the risk management system, risk management tools on the Exchange, as well as the introduction of the institution of risk coordinators, increasing the risk culture of the Exchange's employees

The Exchange's Board of Directors annually approves the register of risks, key risk indicators, compiles a risk map, sets the maximum permissible value of risk indicators, constantly monitors the dynamics of risk events. In the reporting period, the Exchange conducted an annual risk identification procedure by identifying risk factors and risk objects based on a comprehensive analysis of all business processes. When new threats are identified, new areas of development are mastered (including the launch of the CCP in the foreign exchange and stock markets), the risk register is supplemented with new identified risks.

In the period under review, the risk register and risk map of the Exchange were revised, which were approved by the Board of Directors and the Management Board of the Exchange at the beginning of 2021.

In order to maintain an effective risk management process in 2020, the Exchange took comprehensive measures to reduce and prevent risks.

The Exchange pays great attention to the development of a risk culture through involvement of all structural divisions in the risk management process, as well as through

exchange of information between the Board of Directors, the Management Board, the Market Risk Committee and the Exchange's employees

In 2020, in accordance with the Schedule of training seminars on risk management, events were conducted to increase the risk culture of the Exchange's employees. As a result of the measures taken to improve the risk culture of the Exchange's employees, a higher degree of understanding of the involvement of each employee in the risk management system is noted.

To effectively manage the Exchange's risks in the course of the CCP's activities, the Market Risks Committee – a permanent collegial body of the Exchange's Management Board – operates, the main task of which is to manage the market risks of the Exchange. Functions of the committee include approving the risk-parameters of financial instruments, defining parameters of the GS yield curve as a risk-free benchmark for the debt market, preparing recommendations to the Exchange's Management Board to determine the list of financial instruments admitted to trading modes with deferred settlement (T+) and financial instruments that can be accepted as collateral for trading participants' deals concluded with involvement of KASE as the CCP, as well as other functions provided for by the Exchange's internal documents.

To identify areas in which it is necessary to improve the risk management system, the Exchange's Internal Audit Service, in accordance with the Internal Audit Plan, assesses the effectiveness of the risk management system.

Business continuity management

The Exchange is working on improvement of the business continuity management system. This activity is regulated by internal documents – the Business Continuity Management Policy approved by the Board of Directors of the Exchange on April 24, 2020, the Rules for Organizing Continuity and Recovery of Operations and the Business Continuity Plan approved by the Management Board of the Exchange on July 30, 2020, which were developed taking into account the requirements of international standards and are aimed at ensuring the continuity of critically important activities in the event of incidents and emergencies that entailed failure of the Exchange's information systems.

Internal documents establish that critically important activities include: organizing and conducting trades in financial instruments, clearing, settlements, settlement of default of clearing participants, dissemination of information on the results of trades. The business continuity management system that is being built to this day, which includes an optimal

IT infrastructure, ensures the recovery of critically important activities within four hours from the onset of a critical situation.

In the period under review, work was carried out to amend the Exchange's internal documents regulating the business continuity management system. The need to update the internal documents governing the business continuity management system is associated with the change in the IT infrastructure of the Exchange. The Exchange launched a system of three data processing centers – the main and two backup ones, and also changed its business continuity management scheme.

As part of the change in approaches to the business continuity management system, a system of virtual workstations was developed and implemented, which are created on the Exchange's servers and provide access to all information systems of the Exchange, regardless of the user's location. Desktop virtualization allows you to quickly respond to emergencies and reduce the cost of creating jobs in reserve.

The Exchange periodically conducts business continuity trainings and exercises providing for the testing of backup systems' operation. In the reporting year, the plan for such exercises was revised and an updated training system was launched, taking into account the use of VDI and new data processing centers.

In the period under review, the Exchange's business continuity management plan provided for a number of measures to complete the formation of the Exchange's IT infrastructure, migration of server equipment between data processing centers, completion of the staffing of the backup office, setting up the equipment and infrastructure in the Exchange's backup office, testing the transfer of the operation of trading systems to backup equipment, as well as testing the operation of the Exchange's backup office.

In 2020, a self-assessment was carried out with regard to compliance of the Exchange's business continuity management system with the recommendations of the international standard ISO 22301: 2014 "Social security. Business continuity management systems". As a result of the self-assessment, it was found that most of the recommendations of all sections of the international standard are taken into account in the existing internal documents on the management of the Exchange's business continuity and are being implemented in practice.

In 2020, an Action Plan was developed based on the results of this self-assessment, which provides for the maximum achievement of the specified standards in the Exchange's operations.

Continuity of KASE's operation is ensured by the organization of internal work, but there is also influence of external factors of a natural, social, economic and technological nature. In particular, certain key aspects of the Exchange's activities depend on the uninterrupted supply of services from significant suppliers. In order to manage the risks of uninterrupted supply of such services, the Exchange developed the Guidelines for selection and monitoring of critically important suppliers.

The instruction provides for generation and maintenance of a list of critically important suppliers, monitoring of risks and development of risk management measures related to critically important suppliers.

Business continuity management during the pandemic, emergency and restrictive measures

The year 2020 showed that a full-fledged business continuity management system is the key to running a successful business even in an unfavorable epidemiological environment.

On March 11, 2020, the World Health Organization recognized the outbreak of coronavirus infection as a pandemic. On March 13, 2020, the Exchange's Management Board developed and approved an Action Plan for the Exchange in conditions of coronavirus infection COVID-19, created a Working Group to counter the spread of coronavirus infection (COVID-19), which is performing its functions to date.

The main aspects of the Plan are related to the organization of the Exchange's operation in remote mode, including work of employees who carry out critically important tasks using virtual workplaces. Remote and/or shift work in the office of the Exchange's employees was organized in accordance with regulatory legal acts of health authorities and the authorized body.

The Exchange also took a number of measures to ensure the health safety of employees – personal protective equipment, organization of testing of Exchange employees when detecting cases of contact with coronavirus infection, development of rules and guidelines for organizing the work process during the pandemic, as well as ensuring information security with remote access to personal computers and information systems of the Exchange.

The measures being taken by the Exchange have shown their effectiveness during the state of emergency and quarantine. The Exchange did not allow mass infection at workplaces (only 11 employees, or 6 %, of the Exchange's staff were affected by this

disease in the reporting year), and also ensured full availability of its services and systems for market participants and other clients.

Information and physical security

In order to minimize information security risks and increase the level of protection of the Exchange's information and communication infrastructure from possible cyber attacks, updated telecommunications equipment was purchased and put into operation in the period under review, providing a high level of protection against various cyber threats. To reduce the risk of leakage of confidential information, special software has been implemented that ensures the integrity control of confidential files and audit trail logs. The control of connection of devices to the Exchange's corporate network on the ports of active network equipment was configured. The security of the Exchange's Wi-Fi network has been improved, a unified authentication system for administrator access to the Exchange's servers using the Exchange's domain controller has been configured and is operating.

In addition, as part of improving the information security system in the reporting period, a number of checks for compliance with internal documents were carried out, an audit of access rights of all users to the Exchange's information systems was carried out, as well as a set of other measures related to strengthening user discipline in the network and systems of the Exchange were conducted.

As part of the plan to improve regulatory documentation in accordance with the information security standard ISO 27001:2013 and the requirements established by the authorized body, changes and additions defining the operation of the Exchange's information security management system were made to the Exchange's internal documents, and new internal documents on information security were developed and approved.

The combination of these measures made it possible to improve the level of information security of the Exchange and reduce the Exchange's risks in this area.

In order to improve the physical security of the Exchange, the procedures for control of provision of security services have been improved; additional sensors for security alarms have been installed in the premises of some divisions.

ABBREVIATIONS AND TERMS

ALT	Almaty time
ASTS+	KASE's trading and clearing system, developed on the basis of the Moscow Exchange's trading and clearing system
COVID-19	acute respiratory infection caused by the SARS-CoV-2 coronavirus
ESG	criteria for environmental friendliness, social responsibility and corporate governance – Environmental, Social and Governance
ETF	Exchange Traded Fund
FAST	FIX Adapted for Streaming (data transfer protocol in trading systems)
FEAS	Federation of Euro-Asian Stock Exchanges
FIX	international standard for data transfer protocol
Frontier Market	Frontier Market
FTSE	international index service Financial Times Stock Exchange
IFC	International Finance Corporation
IOS, Android	mobile operating system for smartphones, electronic tablets, wearable players and some other devices
IOSCO	International Organization of Securities Commissions
IPO	Initial Public Offering
IR	Investor Relations
IRIS	exchange information terminal
ISO	International Organization for Standardization
IT	Information Technology
KASE	abbreviation of the name of Kazakhstan Stock Exchange JSC
MOEX	Moscow Exchange PJSC
MSCI	international index service Morgan Stanley Capital International
RUONIA	indicative weighted rate of one-day ruble loans (deposits), which reflects the assessment of the cost of unsecured ruble borrowing on an "overnight" basis by a standard borrower from among Russian banks with minimal credit risk
S&P	international index service Standard & Poor's
SMA	sponsored market access (access for submitting orders directly to the trading system)
SOFR US	money market interest rate in US dollars, representing the weighted average median rate for the volume of transactions of

	three different types of overnight REPOs secured by US Department of Treasury securities
SONIA UK	based on real transactions and reflects the average interest rate banks pay for overnight borrowing in pounds sterling from other financial institutions and institutional investors
SPECTRA	trading and clearing system in the derivatives market
sTrade	Internet platform for remote access to trading, developed by KASE
TOD	a settlement condition under which a deal is executed on the day of its conclusion (from the English word "today")
TOM	a settlement condition under which a deal is executed on the next business day from the date of its conclusion (from the English word "tomorrow")
TONIA	the main indicator of the repo transactions market, representing the weighted average interest rate on one-day repo transactions with the GS Basket, calculated at the end of each trading day
TRION	weighted average interest rate on repo transactions with the GS Basket, carried out with the participation of the CCP, for a period of one day, calculated during each trading day
TWINA	weighted average interest rate on repo transactions with the GS Basket, carried out with the participation of the CCP, for a period of seven days, calculated during each trading day
VDI	system of virtual workplaces
WFE	World Federation of Exchanges
JSC	Joint-stock company
ARDFM	Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market
STB	second-tier bank (banks)
Exchange	Kazakhstan Stock Exchange JSC
Brokers–dealers	Brokerage and / or dealer organizations licensed by the authorized body
GDP	Gross domestic product
HEI	Higher education institution
GS	Government serial securities
DAMU	"Damu" Entrepreneurship Development Fund JSC
EBRD	European Bank for Reconstruction and Development
KASE Index	KASE equity market index
CPC	Clearing participation certificate

IAE CIS	International Association of Exchanges of the Commonwealth of Independent States
mln	million
bn	billion
Moscow Exchange	Moscow Exchange PJSC
IFO	international financial organization (international financial organizations)
NBRK	National Bank of the Republic of Kazakhstan
NCE RK "Atameken"	National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken"
CS	Corporate serial securities
BISP	Bonds of issuers with state participation
UN	The United Nations
OPEC+	international intergovernmental organization created by oil-producing countries to control oil production quotas.
COVID-19 pandemic	the current coronavirus infection pandemic caused by the SARS-CoV-2 coronavirus
PJSC	Public joint-stock company
UIT	Unit investment trust
Software	Software
Government	Government of the Republic of Kazakhstan
RCE	Regional chamber(s) of entrepreneurs
IAS	Internal audit service
CIS	Commonwealth of Independent States
USA	United States of America
T+2	a settlement condition under which a deal is executed on the second business day from the date of its conclusion
LLP	Limited liability partnership
trln	trillion
th.	thousand
CCP	Central counterparty
DPC	Data processing center

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