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Applying XBRL, RegTech, and DLT to Strengthen Shareholders' Rights in Uzbekistan

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ABSTRACT: Despite the rapid digital transformation taking place in Uzbekistan, the application of XBRL, RegTech, and DLT to the exercising of property and corporate shareholder rights has not yet been studied. Technologies such as XBRL, RegTech, and DLT offer potential to improve shareholders' rights protection through process automation. This study explores how each of the above digital technologies can provide access to information, fulfil regulatory requirements and facilitate the transfer of ownership of shares. In this scientific article the following methods were used: legal-dogmatic and comparative-legal analysis, qualitative and quantitative analysis, analysis of positive and negative impact, as well as synthesis of results. The study found that: 1) with the help of XBRL, shareholders would have quick access to the information of the joint-stock company, which would help exercise the right to information; 2) with the help of RegTech, shareholders could timely stop wrongful related-party transactions and large transactions; 3) with the help of DLT, shareholders could quickly, transparently, and reliably realize the shares belonging to them. The results of the research show how the regulator of Uzbekistan can apply XBRL, RegTech, and DLT to the activities of joint-stock companies. The conclusion indicates that XBRL, RegTech, and DLT can be applied to the exercise of shareholders' property and corporate rights, and proposals are given for the phased implementation of these digital technologies in a test mode.

Keywords: Uzbekistan, Joint-Stock Companies, Shareholders' Rights, XBRL, RegTech, DLT.

INTRODUCTION

Despite the rapid digital transformation taking place in Uzbekistan, the application of XBRL, RegTech, and DLT to the exercising of property and corporate shareholder rights has not yet been studied. Technologies such as XBRL, RegTech, and DLT offer potential to improve shareholders' rights protection through process automation.

On a global stage of digitalisation, the number of people using digital technologies is increasing at a rapid pace throughout the world. According to the report by Simon Kemp "Digital 2025: Global Overview Report", 70.5 % of the world's population uses a mobile phone, which is 2 % more than last year. Internet users at the beginning of 2025 amounted to 67.9 % of the world's population. This proportion was 2.5 % higher than last year(Kemp, 2025).

Special attention is also paid to the digitalization of corporate governance. Namely, the Decree of the President of the Republic of Uzbekistan "On the Approval of the Strategy 'Digital Uzbekistan-2030' and Measures for Its Effective Implementation" provides for: the development of an information system for monitoring corporate governance, appointing members of the supervisory board and maintaining a register in state enterprises; modernization of the unified corporate information portal for conducting transactions with securities; in order to increase the efficiency of the system of companies' financial and economic activity and optimize corporate governance, the introduction of a system for automating production and management processes (ERP); the introduction of a corporate information system (ERP) aimed at monitoring and managing financial-economic and organizational processes at enterprises.

A good example of the reforms being carried out is that the country plans to implement a pilot project to launch the HUMO token backed by government bonds. The project is aimed at creating innovative methods for attracting foreign investment, simplifying domestic and international settlements, increasing the transparency of financial operations, and creating an even more attractive investment environment. The HUMO token will be backed by government bonds, which guarantees the stability of the backed token and neutralizes fluctuations in its value (Платежная система HUMO, 2025). This indicates that there is potential for paying shareholders' dividends in tokens.

On the international arena, starting from 23 March 2023, European countries began to apply the DLT Pilot Regime(European Parliament and Council of the European Union, 2022). Thanks to this regime, shares, bonds, and other securities can be executed using Distributed Ledger Technology (DLT). In connection to the above-mentioned rapid pace of digital technology development, the issue of digital technology application in the activities of joint-stock companies in Uzbekistan remains unexplored.

The main regulatory legal acts of Uzbekistan regulating shareholders' rights and digital technologies are: the Civil Code of the Republic of Uzbekistan; the Law of the Republic of Uzbekistan "On Joint-Stock Companies and Protection of Shareholders' Rights"; the Law of the Republic of Uzbekistan "On the Securities Market"; the Law of the Republic of Uzbekistan "On Electronic Digital Signature"; the Law of the Republic of Uzbekistan "On Electronic Government"; the Law of the Republic of Uzbekistan "On Amendments and Additions to Certain Legislative Acts of the Republic of Uzbekistan in Connection with the Further Improvement of the Legal Foundations of Corporate Relations"; the Decree of the President of the Republic of Uzbekistan "On Measures to Introduce Modern Methods of Corporate Governance in Joint-Stock Companies"; the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan "On Measures to Further Improve the Corporate Governance System in Joint-Stock Companies"; and others.

Regarding the regulatory legal acts of foreign countries, we can give the following examples: Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a pilot regime for market infrastructures based on distributed ledger technology; Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017; the law (Germany) on electronic securities (eWpG) of 2021; the law (Liechtenstein) "On Tokens and Providers of Trusted Technologies" of 3 October 2019; the Federal Act (Switzerland) "On the Adaptation of Federal Law to Developments in Distributed Ledger Technology" of 25 September 2020; and others.

Research on digital technologies and their influence on shareholders' rights has been partially conducted in such scientific works as: Opeyemi E. Aro, Michael Nweze, Eli Kofi Avickson, "Blockchain Technology as a Tool for Corporate Governance and Transparency"(Opeyemi E. Aro et al., 2024); Alon Brav, Wei Jiang, Tao Li, James Pinnington, "Shareholder Monitoring through Voting: New Evidence from Proxy Contests"(Brav et al., 2024); Mohammad Hajian Berenjestanaki, Hamid R. Barzegar, Nabil El Ioini, Claus Pahl, "Blockchain-Based E-Voting Systems: A Technology Review"(Hajian Berenjestanaki et al., 2024); and others.

However, in the above-mentioned works, the role of digital technologies in the exercise of shareholders' rights has not been scientifically studied. The purpose of this article is to conduct a review of the application of such digital technologies as XBRL, RegTech and DLT to the exercising of shareholders' rights in the Uzbekistan. This scientific article consists of an abstract, keywords, introduction, research methods, research results, discussion, and list of references.

METHOD

The research methods of the present article were a review of existing digital technologies as XBRL, RegTech and DLT, comparative-legal analysis, qualitative analysis, as well as synthesis of the results.

1. This research includes the following types of research:
   - Applied research – exploring to what extend XBRL, RegTech and DLT can be used in joint-stock companies in Uzbekistan in 2025;
   - Classification research – classifying the types of rights of shareholders in Uzbekistan in 2025;
   - Comparative research – comparing the practice of the European Union, Germany, Liechtenstein, Switzerland and the United States of America from 2005 to 2025 to the practice of Uzbekistan in 2025 in terms of exercising rights of shareholders.
2. Data source for this research are 10 legislative acts of the Uzbekistan, 1 legislative act of the European Union, 1 legislative act of the Germany, 1 legislative act of the Liechtenstein, 1 legislative act of S the Switzerland, 30 research papers and 4 web sites.
3. Data collection technique for this research is observation. The practice of the European Union, Germany, Liechtenstein, Switzerland and the United States of America from 2005 to 2025 and the practice of Uzbekistan in 2025 were observed in terms of exercising rights of shareholders.
4. Data analysis techniques for this research are:

- Descriptive analysis – the main aspects of XBRL, RegTech and DLT, as well as the main aspects of shareholders' rights in Uzbekistan were summarised;
- Prescriptive analysis – the perspectives of application of XBRL, RegTech and DLT to the joint-stock companies in Uzbekistan were analysed;
- Qualitative analysis – the data about XBRL, RegTech and DLT were analysed.

RESULT AND DISCUSSION

Digital disclosure of information through XBRL reporting

As described in the discussion section of this article, XBRL simplifies for various groups of stakeholders the exchange and analysis of data, provides an expansion of information on the activities of an economic entity, which, on the one hand, makes it possible to automatically bring the reports of economic entities into the required format (releases resources from costly manual processes of collecting, compiling, and reconciling information and gives the opportunity to concentrate efforts on data analysis, relying on software for the XBRL format).

On the other hand, XBRL makes it possible to expand the composition of reporting information (XBRL can be adjusted in accordance with specific business requirements, allows one to tag and present practically any financial and non-financial information).

The specificity of the XBRL format lies in the fact that it is, in essence, an "accounting-control" software product, i.e., a means of business communication created at the intersection of the professions of accountant, auditor, and programmer (Al-Okaily, Alkayed, et al., 2024).

This digital technology would allow shareholders to gain access to the necessary information of the joint-stock company (issuer) in real time.

RegTech

Thus, the digital technologies of RegTech could be used in such areas as:

- identification management and control;
- risk management;
- regulatory reporting;
- automatic compliance;
- transaction monitoring;
- automation of operations in financial markets;
- verification of compliance with the requirements of the regulator and compliance control;
- shareholder identification;
- transaction monitoring;
- information protection, audit systems;
- corporate governance;
- risk management;
- provision of reporting.

RegTech offers controllers a fabulous opportunity to reply to dangers and guarantees significant benefits in terms of expanded productivity and decreased hazard of person mistakes and risk(Anagnostopoulos, 2018). Administrative specialists that require more noteworthy granularity and exactness in working with information conglomeration and investigation are as of now investigating the conceivable outcomes of applying RegTech and making innovative control. Administrative advances give an compelling establishment for moving to a proportionate, risk-based approach, upheld by compelling information administration and advertise supervision(Becker et al., 2020). Information and data lie at the centre of RegTech, deciding how administrative bodies ought to utilize proficient implies for collecting and in-depth examination of information to encourage viable control.

As described in the discussion section of this article, the most notable aspect is that this technology will allow shareholders to track related-party transactions and large transactions in a timely manner.

Distributed Ledger Technologies (DLT)

DLT offers several key characteristics that make it a reliable and efficient platform:

- Transparency – every transaction in the ledger is visible to all participants, which ensures accountability and reduces the level of fraud.
- Immutability – after a transaction is recorded in the ledger it cannot be changed, which provides a system of protection against falsification.
- Decentralization – DLT eliminates the need for intermediaries, providing direct peer-to-peer interactions.
- Efficiency – by eliminating intermediaries, DLT optimizes processes and lowers costs.
- The application of this digital technology would facilitate shareholders in exercising their property rights in relation to their shares.

In this section, we will consider how the findings in the Results section are formulated and analysed and we will discuss the results obtained.

Digital disclosure of information through XBRL reporting

At show, in world hone the eXtensible Business Reporting Language (XBRL) is effectively utilized – a organize for transmitting administrative, budgetary and other detailing(XBRL International, n.d.). Designers of the "ideology of XBRL" advocate the thought "collect and compile data once, utilize it repeatedly". In fact, the "idea of XBRL" is communicated within the taking after calculation:

- Formation of so-called XBRL taxonomies, which actually include an expanded set of basic indicators that allow receiving analytical information in various breakdowns for various groups of users; forms of external presentation of it to interested users and algorithms for shaping these shapes from the database;
- Providing all interested users (stakeholders) with the opportunity to independently obtain information on the activity of an economic entity in the desired breakdown and format.

The XBRL dialect guarantees the method of transmitting data in conjunction with its depiction - recognizable proof labels - metadata(Hwang et al., 2021). The four fundamental components of XBRL reports are values - numerical quantities or textual data (sentences or paragraphs) describing business information in the report;

1. context - reveals important characteristics of the values, for example such as the period or the organization to which they relate;
2. concepts (elements) - technical representations of business entities (indicators);
3. taxonomy - a description of data and indicators supplied with detailed analytical attributes that reporting entities must transmit to interested users.

In the USA and Europe, the practice of successfully applying XBRL has already lasted for more than 10 years. One of the first authoritative American organizations to conclude a contract in 2005 for the development and implementation of the reporting standard in XBRL was the SEC (Security Exchange Commission) - the Securities and Exchange Commission. The result of close cooperation between the American branch of XBRL International and the SEC was the development of its own variant of taxonomy based on national accounting standards.

At present, joint-stock companies under the supervision of the SEC are obliged to submit all financial reporting in XBRL. The transition was carried out in three stages: initially the largest issuers were the first to switch to mandatory reporting in this format, and the smallest and foreign companies were the last. At the same time, since 2013 these companies have been subject to legal liability for the accuracy of information submitted in XBRL format(Du & Wu, 2018). Thus, in the USA the introduction of XBRL took more than 10 years.

In 2014, the International Bank was among the primary within the world to utilize XBRL when issuing a maintainability report.

Concurring to certain pros, "a period of 3 to 5 a long time for move to XBRL is considered reasonable(Dong et al., 2016). The encounter of nations (both created ones and those having a place to BRICS, Indonesia, Moldova, Peru, Chile) appeared that a commonplace extend for making a modern scientific categorization and executing XBRL guidelines on the side of organizations took around 2–3 years"(Григорович & Аушев, 2015).

In international practice, two approaches to implementing XBRL have taken shape—form-centric and data-centric(Al-Okaily, Boshnak, et al., 2024). As global experience has shown, the main advantages of implementing the XBRL format are the following:

1. Improvement in the quality of information provided to users: a high-tech, large-scale interactive data model; the possibility of verifying generated data through the use of control ratios.
2. Optimization of IT costs for processing and analyzing data: standard tools for the formation, verification, collection, storage, and analysis of data; up to a 96 % reduction in labor costs for preparing initial data; a 40 % reduction in the cost of using IT products; a decrease in technical and counting errors.
3. Standardization of the requirements of various stakeholders for the data being generated: presentation of reporting data to all interested users in a single standardized format; acceleration and cost-reduction of the process of exchanging business information with counterparties; tools for controlling changes in the data model.

4. Use for the preparation of reporting under IFRS: the possibility to compare reports of different companies prepared under IFRS in a modern interactive mode; the key indicators of such reporting are understandable to investors in different countries both economically and linguistically—the program allows a report to be generated in whichever language is convenient for reading.

The world is actively discussing global initiatives for the development of XBRL for the coming period(Zhang et al., 2019). At present the European Securities and Markets Authority (ESMA), in accordance with the Transparency Directive, is carrying out a project to introduce ESEF using Inline XBRL technology, which combines the high analytical power of XBRL data with the broad visualization capabilities of HTML. In May 2019 technical standards (RTS) were published for the preparation of annual reports of public companies compiled under IFRS in Inline XBRL format. This change enters into force for the annual reports of public companies prepared under IFRS starting from 01.01.2020 and strictly limits the possibility of a dual system of presenting reports in both PDF and Inline XBRL formats.

At the same time, a problem arose concerning the confirmation of the reliability of reports in XBRL format, because under existing standards the auditor's report is provided in PDF format(Kim et al., 2019). The European Commission approached the Committee of European Auditing Oversight Bodies (CEAOB) with a proposal to study how, in practice, to audit documents in Inline XBRL format with the aim of developing recommendations(Chen et al., 2018).

Financial reporting, under conditions of growing stakeholder demands for disclosure, does not provide a complete picture of a company's performance in terms of environmental risks and opportunities, social impacts, and other crucial aspects of activity that are currently considered separately in non-financial reporting(Tawiah & Borgi, 2022). While financial reporting is strictly standardized [national and international standards (IFRS, US GAAP, etc.)], non-financial reporting lacks an equivalent harmonized approach. These two kinds of reporting information constantly influence each other, yet they are not terminologically linked, which reduces transparency and complicates analysis. All these circumstances lead to inconsistency in the indicators produced.

To ensure proper transparency and comparability of non-financial information, in the opinion of the European Securities and Markets Authority (ESMA), it is necessary to develop and implement internationally agreed non-financial reporting standards (ESG) in a structured Inline XBRL format(Amin et al., 2018). To achieve these objectives, an initiative is being discussed to create a working group for developing the architecture of non-financial indicators included in ESG reporting and for producing a set of standardized, material, global non-financial indicators that will be used in reports submitted on a mandatory basis alongside financial statements. The ultimate goal of such an initiative is to create a harmonized global standard, linked to financial reporting, for the coordination, rationalization, and consolidation of non-financial data and for applying a core set of global non-financial indicators. In other words, it is proposed to develop a common non-financial reporting standard and taxonomy, similar to the IFRS taxonomy, used within the single European electronic Inline XBRL format.

To see the digital advantages of the Inline XBRL format in the ESG field in practice, the European Commission proposes to extend the scope of single-format reporting to include ESG reporting.

According to European Commission Vice-President Mr Dombrovskis, the European Securities and Markets Authority (ESMA) should be responsible for developing this taxonomy.

The introduction of such reporting in joint-stock companies in Uzbekistan would allow shareholders to receive in a timely manner the necessary information about the activities of the joint-stock company.

RegTech

At present, a definition of the term "RegTech" as a new type of digital technology is being formed(Papantoniou, 2022).

RegTech is a technology that enables compliance with regulatory requirements, risk management, and the introduction of control tools that reduce risks(Bolton & Mintrom, 2023). This technology ranges from supplementing existing workflows for identifying regulatory compliance, conducting audits, and managing risks to their replacement and full automation through the use of artificial intelligence, machine learning, and blockchain(CB Insights, 2017).

RegTech is linked to the transition to continuous monitoring. The move to this stage is actively supported by regulators in many countries(Charoenwong et al., 2024). Today many financial companies worldwide undergo regular checks for compliance with regulatory requirements. For many, it has become cyclical. This allows regulators in different countries to identify non-compliance with legislative requirements and their causes that persist for years. Companies that have switched to monitoring gain the ability to promptly change the current situation, minimize their own risks, and prevent violations of legislation in real time(McCarthy, 2023). To use continuous monitoring, back-office workflows are automated, which partially eliminates corporate risk problems, increases operational security, prevents fraud, and ensures compliance with information security standards (ISO).

The emergence of RegTech was prompted by the 2007–2008 financial crisis, which arose because regulators exercised insufficient control over banks that were massively issuing loans to clients with poor credit histories(Campbell-Verduyn & Lenglet, 2023). The response to the crisis was a tightening of regulatory requirements, and the banking sector developed a need for innovations that would facilitate compliance with the regulator's demands.

At present, RegTech is developing in three dimensions(Goul, 2019): rules-based (the most rigid approach, presupposing detailed rules, transparency, and strict orderliness in the recording of operations); principles-based (a more flexible approach aimed at expanding the dialogue between regulatory authorities and business entities)(Teichmann et al., 2023); understanding-based (considered the most flexible; information spreads easily and can be influenced both by regulatory bodies and by companies that use advanced analytics and AI).

Different states or regions may employ one of these dimensions or a mixed approach, depending on various practical cases.

The rules-based approach entails the highest compliance costs for all interested parties. The principles-based approach provides a measure of flexibility and freedom in interpreting standards, which is important under conditions of rapid adaptation, scalability, and organizational improvement(Grassi & Lanfranchi, 2022). However, RegTech developers then face significant

difficulties in creating solutions that possess the desired flexibility and freedom. The understanding-based approach is intended to reduce contradictions among the parties involved(Buckley et al., 2020). Regulatory structures in this case will focus more on real-time data and on expanding experiments in controlled environments, which is often viewed as a way to foster better innovations.

The application of such a technology will undoubtedly allow shareholders to receive timely information on related-party transactions and large transactions for the prompt application of legal measures.

Distributed Ledger Technologies (DLT)

One of the trends in the development of the crypto-economy is the growth of asset tokenization, which raises numerous legal issues.

According to the OECD report "Regulatory Approaches to the Tokenisation of Assets," 2021, resource tokenization is the method of carefully speaking to genuine (physical) resources in disseminated records or issuing conventional sorts of resources in tokenized frame. That's , within the to begin with case genuine resources exist—for illustration, securities—and rights to such resources are connected or inserted in tokens based on distributed-ledger innovation, in specific blockchain innovation(Yermack, 2017). Hence, it can be concluded that the token acts as a store of esteem for genuine resources: the issued tokens exist in computerized DLT systems as a "digital twin," whereas the genuine resources on which the tokens are issued exist exterior the DLT(Gilmour et al., 2025). Examining the moment case, one can say that resource tokenization suggests making a money related instrument based on blockchain, and the issued tokens exist solely in conveyed records(Chiu & Koeppl, 2019). Tokenized resources may incorporate securities, such as offers and bonds.

Analysis of the experience of foreign countries shows that, to regulate tokenization, nations use two approaches. The first approach is to apply existing securities legislation to the regulation of security tokens.

In Germany DLT-securities are controlled by the Act Presenting Electronic Securities (hereinafter - "eWpG"), which entered into constrain in June 2021. The Act permits the tokenization of carrier obligation commitments (bonds). Agreeing to the clarification of the German Government Money related Supervisory Specialist (hereinafter - "BaFin"), a conveyor bond could be a security beneath which an speculator more often than not gets intrigued by exchanging a certain whole to the bond backer for a indicated period of time (giving the backer with a long-term advance). The individual gets to be a bank, not a shareholder, and the bond guarantor attempts toward the leaser of the money related claim to reimburse the obligation at the conclusion of the term(Daluwathumullagamage & Sims, 2020).

A security may be issued within the shape of an electronic security by the issuer entering a record within the enroll of electronic securities or in a DLT enlist rather than issuing a security certificate(Lambert et al., 2022). Among electronic securities a subtype of crypto-securities is recognized. Hence, in truth a security can be issued in three ways:

- in the form of a paper certificate;
- in electronic form;
- by entering a record in a DLT register.

The eWpG sets up that obligation DLT-securities have the same legitimate results as securities spoken to by a paper certificate. In this way, we see that for the purposes of gracious enactment the eWpG has compared the status of certificated and uncertificated DLT-securities.

Hence, ready to witness how outside nations utilize DLT in hone with regard to offers.

Shareholders' rights

A share belonging to a shareholder secures for him rights of both a property and a non-property (corporate) nature. The peculiarity of these rights is manifested in that they exist in a single complex and cannot be separated from one another; they pass to another person upon alienation of the share.

In our opinion, in the rights secured by shares the property component prevails. This is explained by the fact that a joint-stock company is a commercial organization and is created to extract profit. In this connection, a shareholder, acquiring shares, counts first of all on obtaining property benefits from the activity of the company (the right to receive dividends, the right to receive a part of the property remaining after liquidation of the company, etc.). Non-property powers (the right to management, the right to information), in our view, are fixed first of all so that the shareholder can fully exercise his property rights.

In many respects the characteristics of shareholders' rights depend on the category (type) of shares they hold. Owners of preferred shares possess primarily property rights – the right to receive a guaranteed dividend, the right to acquire a certain portion of ordinary shares, etc. Owners of ordinary shares, however, possess both property and non-property rights in full. True, the realization of property rights is conditioned on a number of circumstances. For example, the right to receive a dividend depends on the presence of net profit of the company, adoption by the general shareholders' meeting of a decision on payment of the dividend, etc.

Based on the analysis of legislation and specialized literature, the following property rights of shareholders can be distinguished:

a. the right to receive dividends;
b. the right to receive a portion of the property remaining after settlements with creditors upon liquidation of the company (the right to a liquidation quota).

Among the non-property rights of shareholders, the leading role is played by the right to participate in management. It should be noted that the Law of the Republic of Uzbekistan "On Joint-Stock Companies and Protection of Shareholders' Rights" mentions only the right of a shareholder—the owner of ordinary shares—to participate in the general meeting of shareholders with the right to vote on all matters within its competence.

Another non-property right is the shareholder's receipt of information about the company's activities. Information can be understood as data about the company's activities contained in written and other sources. For the purpose of exercising this right, shareholders may demand that the company provide them with access to certain documents.

The application of the above-mentioned digital technologies would facilitate the exercise of shareholders' rights, preventing violations(Magnier & Barban, 2018). Practical Challenges of application XBRL, RegTech, and DLT in the activities of joint-stock companies in Uzbekistan.

Currently, there are several barriers in Uzbekistan to the implementation of XBRL, RegTech, and DLT in the activities of joint stock companies. The main barriers are as follows.

1. Deficit of expertise and personnel - the report of the Ministry of economy and finance of the Republic of Uzbekistan together with UNDP - "Digital economy of Uzbekistan. The State of Digital Entrepreneurship and Artificial Intelligence" indicates that "Despite growing demand, Uzbekistan faces a shortage of IT specialists"(Digital Economy of Uzbekistan: The State of Digital Entrepreneurship and Artificial Intelligence, 2025). To implement and ensure the functioning of the above-mentioned digital technologies, qualified personnel are needed for both government agencies and companies.
2. High cost of development and implementation. Attracting international experts and acquiring the necessary technologies will require large investments from the state.
3. Lack of sufficient legislative base. Lack of sufficient legislative base. As of today, Uzbekistan has no legal acts obliging state bodies to develop and implement XBRL, RegTech, and DLT.

On the other hand, there are also risks of using XBRL, RegTech, and DLT. One such risk is cyberattacks by unscrupulous individuals.

Study limitations

This study has limitation that should be taken into account when interpreting its results. Namely, the experience of foreign countries in using XBRL, RegTech, and DLT in different countries was studied in this study. In this regard, it is not clear what the effect of the above technologies can be in the real application of joint stock companies in Uzbekistan.

Suggestions for further research

In the near future, it will also be necessary to conduct a research study regarding the creation of a "personal digital shareholder's cabinet", where all information and possible shareholder actions will be collected in one digital platform. This will certainly facilitate the realisation of shareholders' rights.

CONCLUSION

To sum up, the main result of this article is that the use of digital technologies XBRL, RegTech, and DLT in the activities of joint-stock companies is still little widespread among the countries of the world. Only developed foreign countries (the USA, the EU) partly apply these technologies in certain areas of state regulation.

The conducted research has shown that these technologies have great potential for application in the activities of joint-stock companies of Uzbekistan. In particular, our suggestions are:

1. to apply the XBRL technology to the activities of joint-stock companies of Uzbekistan, which will allow shareholders the effective exercise of their rights to receive information on the activity of the joint-stock company;
2. to apply the RegTech technology to the activities of joint-stock companies of Uzbekistan, which will allow shareholders to verify the joint-stock company's observance of regulatory requirements as well as to timely stop wrongful related-party transactions and large transactions;
3. to apply the DLT technology to the activities of joint-stock companies of Uzbekistan, which will allow shareholders to dispose of their shares quickly, transparently, and reliably.

In connection with the above conclusions, we recommend to apply the digital technologies XBRL, RegTech, and DLT into the activities of joint-stock companies of Uzbekistan in a test mode for 1 year. Based on the results of the test mode it would be possible to assess whether investors' trust in the securities (equity) market of Uzbekistan has increased. In the near future, it will also be necessary to conduct a research study regarding the creation of a "personal digital shareholder's cabinet", where all information and possible shareholder actions will be collected in one digital platform. This will certainly facilitate the realisation of shareholders' rights.

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