



NATIONAL RESEARCH UNIVERSITY  
HIGHER SCHOOL OF ECONOMICS

*Svetlana Chekhovskaya*

# **A NEW OUTLINE OF CORPORATE LAW**

**BASIC RESEARCH PROGRAM**

**WORKING PAPERS**

**SERIES: LAW  
WP BRP 82/LAW/2018**

This Working Paper is an output of a research project implemented at the National Research University Higher School of Economics (HSE). Any opinions or claims contained in this Working Paper do not necessarily reflect the views of HSE

## **A NEW OUTLINE OF CORPORATE LAW**<sup>2</sup>

This paper continues to investigate<sup>3</sup> legal corporate governance issues. Over the last decade few topics in corporate law have proven as alluring and as elusive as the connection between information technologies (IT), corporate governance (CG) and corporate law. The dynamics of the development of modern law are determined by many factors, one of which is the rapid involvement of IT in all spheres of life. Everything in physical life can become a digital sign. We are in the era of successful "small" firms whose business models are built on a combination of software platforms, telecommunications technology and commercial transactions conducted "outside the firm". IT allows them to remotely carry out various business transactions, including corporate actions, providing participation in the governance of the corporation. The term IT covers a large array of electronic vehicles from software to artificial intelligence. Due to technological development, IT has quickly entered corporate governance structures in a large number of corporations. Some scholars argue that artificial intelligence will also be the new reality of corporate life in the very near future. Several questions are raised in connection with this. For example, do current laws need any changes? What are the prerequisites for modern corporate law. There has been a progressive revision of the fundamentals of corporate law over the last few decades, considering that key provisions of corporate law were created during and after the industrial revolution. I explore two paths of legal research in CG and corporate law: using IT for CG procedures, and an adjustment of CG rules for e-corporations. In addition the question is raised whether a virtual corporation has to have a corporate structure similar to the structure of a modern corporation. This new outline of corporate law is a new understanding of current corporate law.

JEL Classification: K29

Keywords: corporate law, corporate governance, corporate e-governance, blockchain, decentralized autonomous organization (DAO)

---

<sup>1</sup>Associate Professor, National Research University Higher School of Economics, Department of Civil and Business Law.

E-mail: [schekhovskaya@hse.ru](mailto:schekhovskaya@hse.ru)

<sup>2</sup> This study (research grant № 17-01-0072) was supported by The National Research University Higher School of Economics' Academic Fund Program in 2017/2018.

This Working Paper is an output of a research project implemented at the National Research University Higher School of Economics (HSE). Any opinions or claims contained in this Working Paper do not necessarily reflect the views of HS.

<sup>3</sup> S. Chekhovskaya. Corporate Governance Legal Issues/ [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2707063](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2707063)

# A New Outline of Corporate Law

## Introduction

The inspiration to investigate this topic come from uber-ized corporate law<sup>4</sup>, decentralized autonomous organizations (DAO)<sup>5</sup>, algorithmic entities<sup>6</sup>, artificial intelligence in CG<sup>7</sup>, token-based ecosystems<sup>8</sup>, the governance of blockchain financial networks<sup>9</sup> and other areas<sup>10</sup>. My Russian colleagues have also researched whether there are any legal barriers that prevent using blockchain for shareholder voting in Russia<sup>11</sup>. Real attempts are being made to understand, how legislation can open its doors to the new technology.<sup>12</sup>

The main aim of this study is to identify the mutual influence of law and IT in the field of CG. The need for legal reflection on the digitalization of legally significant actions depends on the stage IT enters in process. At primary stage IT usage only covers the automation of separate processes thus partly replacing human activity. Within this period the law takes preliminary steps to incorporate provisions on IT usage. This is mainly about fixing the possibility of applying electronic means to legal acts. This stage usually does not require making any significant changes to the existing legislation, in other words, it can operate without any special legislative requirements.

The second stage features IT being used instead of real human beings because they are faster, more accurate and safer. Third level is described by the development of new tools for the transformation of corporations.

## The legal framework for digitalization in Russia

The process towards the creation of the new rule continues in Russia, which is responding to the digital challenges. There are two basic laws in this field. General rules are stated by the Federal law from 27.07.2006 № 149-FZ “On information, information technologies and information protection”. The use of electronic signatures is regulated by the Federal law of 06.04.2011 № 63-FZ “On electronic signatures”. A technical committee on standardization software and hardware of technologies of the distributed register and blockchain was formed also in Russia by order № 2831 of Rosstandart<sup>13</sup> on 15.12.2017. In accordance with paragraph 1.1. of the Regulations on the Technical Committee, approved by this order, the committee is a form of cooperation of the interested organizations and authorities when carrying out works on national and international standardization.

---

<sup>4</sup>J.W. Verret. Uber-ized Corporate Law: Toward A 21st Century Corporate Governance for Crowdfunding and App-Based Investor Communications/ [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2763896](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2763896)

<sup>5</sup> Decentralized Autonomous Organization to automate Governance/ <https://download.slock.it/public/DAO/WhitePaper.pdf>; Benjamin P. Edwards, Carla L. Reyes, & Nizan Geslevich Packin. Companies Face Risk and Opportunity with Distributed Governance Structures, COLUM. L. SCH.: CLS BLUE SKY BLOG (Jan. 19, 2017), <http://clsbluesky.law.columbia.edu/2017/01/19/companies-face-risk-andopportunity-with-distributed-governance-structures/>

<sup>6</sup>Lynn M. LoPuck. Algorithmic Entities// Washington University Law Review, 2018, Volume 95, Issue 4  
[/https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2954173](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2954173)

<sup>7</sup> Florian Möslein. Robots in the Boardroom: Artificial Intelligence and Corporate Law / <https://ssrn.com/abstract=3037403>

<sup>8</sup>Philipp Hacker. Corporate Governance for Complex Cryptocurrencies? A Framework for Stability and Decision Making in Blockchain-Based Organizations // SSRN-id2998830.pdf

<sup>9</sup> Philipp Paech. The Governance of Blockchain Financial Networks/ Modern Law Review, 2017, 80(6), pp.1073–1110. This paper can be downloaded from LSE Law, Society and Economy Working Papers at: [www.lse.ac.uk/collections/law/wps/wps.htm](http://www.lse.ac.uk/collections/law/wps/wps.htm) and the Social Sciences Research Network electronic library at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2875487](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2875487)

<sup>10</sup> Mark Fenwick, Wulf A. Kaal & Erik P. M. Vermeulen, Regulation Tomorrow: What Happens When Technology Is Faster Than the Law?/ [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2834531](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2834531)

<sup>11</sup>L. Novoselova, T. Medvedeva . Blockchain dlya golosovaniya aktzionerov/ Hozyaystvo i pravo, 2017, No. 10, pp. 10-21.

<sup>12</sup> <http://legalconsortium.org/2018/01/09/legislation-opens-doors-for-blockchain-in-governance/>(visited 30 Mars 2018)

<sup>13</sup> Rosstandart is a Federal Agency on Technical Regulating and Metrology is included in the system of federal executive bodies of the Russian Federation and is under jurisdiction of Ministry of Industry and Trade of the Russian Federation.

To ensure the correct and uniform application by courts of the legislation regulating documents in electronic form, the Plenum of the Supreme Court adopted the resolution from 26.12.2017 № 57.

In less than one year the following were adopted:

- Decree of the President of the Russian Federation from 09.05.2017 № 203 "Strategy for the development of the information society in the Russian Federation for 2017-2030";
- Resolution of the Government of the Russian Federation from 28.07.2017 № 1632-r on the program "The Digital Economy of the Russian Federation";
- Resolution of the Government of the Russian Federation from 15.08.2017 № 1739-r on the sub-commission for the digital economy of the governmental commission for the use of information technologies to improve the quality of life and the conditions of doing business;
- Resolution of the Government of the Russian Federation from 28.08.2018 № 1030-r "On the Management System for the Implementation of the program the Digital Economy of the Russian Federation" which provided the functional structure of the management system for the implementation of the program and the rules for developing and implementing action plans for the implementation of the program.

The program "The Digital Economy of the Russian Federation" has prompted more than 50 draft laws. The draft Federal law № 424632-7 "On the modification of parts the first, second and fourth Civil Code of the Russian Federation" concerns digital rights and digital money. In accordance with this draft, the rights to objects can be certified by a set of electronic data (digital code or designation), existing in a decentralized information system. This digital code or designation shall be deemed as a digital right. The holder of a digital right is a person who has unique access to the digital code or designation, allowing that person to perform actions on the disposition of the digital right. The draft also prescribes that digital money is recognized as a set of electronic data (digital code or designation), created in the information system and used by members of this system to make payments.

These proposed rules only introduce new terms into the legislation. It is difficult to find another legal sense of them, but the scheduled 50 bills describe the beginning of the second stage of IT application.

With regard to corporate law, scholars<sup>14</sup> do not see any obstacles to using IT or cloud- or blockchain-based tools. Federal Law № 210-FZ<sup>15</sup> implements an e-voting service, and makes their use possible in the Russian market<sup>16</sup>. Issuers which added an e-voting option for their shareholders to their charters are entitled to provide such service.

## **IT for corporate governance systems**

### ***IT for shareholders***

The largest Russian banks are pioneers of IT usage in corporate procedures. In 2017 VTB<sup>17</sup> shareholders could use the online system of electronic voting in the shareholder's personal account on the website of the Bank's Registrar (VTB Registrar JSC), including voting terminals and the mobile application "VTB Shareholder", which is the first specialized mobile application for shareholders and private investors in the Russian market.

Last year Sberbank<sup>18</sup> also provided its shareholders with an opportunity to be the first in Russia to test the electronic voting system of the national settlement Depository "e-voting". Logins and

---

<sup>14</sup> L. Novoselova ,T. Medvedeva . Blockchain dlya golosovaniya aktzionerov/ Hozyaystvo i pravo, 2017, No. 10, pp. 17.

<sup>15</sup> Here we discuss the changes introduced by the Federal law dated 29.06.2015 № 210-FZ on amendments to certain legislative acts of the Russian Federation.

<sup>16</sup> It established the right of shareholders to use this type of voting at shareholders meetings as of 1 July 2016.

<sup>17</sup> VTB Bank is one of the leading universal banks of Russia. VTB Bank and its subsidiaries form a leading Russian financial group – VTB Group.

<sup>18</sup> Sberbank is 14 territorial banks and over 16 thousand branches throughout the Russia.

passwords for access were issued to shareholders during registration (VTB Bank implemented similar technology). It was also possible to visit the website and vote through specially installed voting terminals in the hall. For shareholders who could not personally attend the meetings of VTB and Sberbank, there was a video broadcast online. Shareholders of Gazprom, Rosneft, MTS, Rostelecom, now use the same technologies.

The National Settlement Depository (NSD)<sup>19</sup> and VTB Registrar will provide Alrosa, Russia's leader in diamond miner, with e-voting services at its General Meeting of Shareholders. From 19 December 2017 to 11 January 2018, Alrosa shareholders were able to use NSD's e-voting systems<sup>20</sup> and VTB Registrar's Meeting Portal service. E-voting enables shareholders to take part in shareholder meetings and to vote at the meetings, in absentia. The service<sup>21</sup> provides shareholders with:

- ✓ The opportunity to register and vote electronically
- ✓ The opportunity to connect to the video or text broadcasting (depending on the issuer's choice);
- ✓ Access to agenda items and meeting materials;
- ✓ Online communications with the issuers during the meeting.

The document interchange between issuers, registrars, and the CSD<sup>22</sup> will be carried out on the basis of international ISO formats implemented by NSD as part of their corporate action reform. It provides a straightforward process of automation across all stages of meetings.

NSD, as a member of the CSD Working Group<sup>23</sup>, continues to develop technical tools for shareholders. The CSD Working Group has finalized the work on the alignment of a DLT-based product with the ISO 20022 standard<sup>24</sup>. Since 2017 the Nasdaq has begun to facilitate a blockchain-based e-voting service in Estonia<sup>25</sup> and in South Africa<sup>26</sup>. In April 2017 the Toronto Stock Exchange operator, TMX Group Ltd, developed a blockchain-based prototype for electronic shareholder voting<sup>27</sup>.

### ***IT for board of directors***

The system proposed by NSD can be used at shareholder meetings, board meetings (supervisory boards), management boards, committees, and other events. A core objective of good CG is to reduce the risk of director misbehavior. Despite all efforts to improve CG, this risk remains a problem.

Möslein<sup>28</sup> describes an example of how IT has been implemented into the activity of a board of directors. He described the appointment by Deep Knowledge Ventures<sup>29</sup> of an algorithm named Vital (Validating Investment Tool for Advancing Life Sciences) to its board of directors. The algorithm was given the right to "vote on whether the firm makes an investment in a specific company or not". Vital does not have the status of a corporate director. It is treated "as a member with an observer status". Such decision-making may be much more attractive for corporations,

<sup>19</sup> <https://www.nsd.ru/en/press/ndcnews/index.php?id36=633731> (visited 1 April 2018)

<sup>20</sup> National Association of Securities Market Participants (NAUFOR) named NSD's e-voting project the winner of Russia's Elite of the Securities Market Awards in the category "Best Project Focused on Stock Market Development."

<sup>21</sup> The e-voting platform is convenient for different issuers: from major companies with tens and hundreds of thousands of shareholders to small issuers.

<sup>22</sup> [Central Securities Depositories](#)

<sup>23</sup> *CSD Working Group of DLT* is an international collaboration of central securities depositories focused on producing specifications for DLT-based products and other research of the use of DLT in post-trade.

<sup>24</sup> <https://www.nsd.ru/en/press/ndcnews/index.php?id36=633691> (visited 2 April 2018)

<sup>25</sup> <https://www.tradewithestonia.com/68-media/news/2163-nasdaq-baltic-to-adopt-shareholder-e-voting-based-on-estonian-e-residency-platform>; (visited 28 Mars 2018)

<sup>26</sup> <http://ir.nasdaq.com/releasedetail.cfm?releaseid=1049610> (visited 1 April 2018)

<sup>27</sup> <https://ca.reuters.com/article/businessNews/idCAKBN1782BV-OCABS> (visited 1 April 2018)

<sup>28</sup> Florian Möslein. Robots in the Boardroom: Artificial Intelligence and Corporate Law / <https://ssrn.com/abstract=3037403>

<sup>29</sup> <http://www.deepknowledgeventures.com/> (visited 30 Mars 2018)

because of the ability of algorithms to process huge amounts of data and to find the best solution in a short time. New rules will be needed in corporate law for situations with fully or partly robotic decision-making. The personal liability of directors for damage as a result of such decisions must be shared with corporation itself. In other words, a director's responsibility in such cases may be limited depending on the specific use of the software (Robot-director).

## **“Next-Generation Smart Contracts” and E-corporations**

Existing CG systems focus on maintaining a hierarchical and centralized structure within corporations. But the “next-generation smart contract”<sup>30</sup> era is beginning. These smart contracts serve various purposes, for example to determine “shares” or “membership”. These are based on blockchain technology, which provides two important elements<sup>31</sup> for parties that want to engage in any transaction on a certain platform: transparency and trust as a consequence of this transparency. The application of blockchain technology may mitigate agency problem risks. Such technical solutions need to be reviewed as part of the discussion on the corporate law.

A corporation can now be created which is fully managed by a smart contract, due to the broad variety of forms of decentralized applications. One of such application is a German startup which developed “The DAO”, a smart contract running on Ethereum<sup>32</sup>. It is intended to function as a decentralized investment platform. The DAO<sup>33</sup> raised more than USD 150 million through the sale of its virtual tokens to its “shareholders”. The existence of virtual shareholders poses new questions for corporate law concerning voting rules, the transfer of virtual ownership and so on. It may be time to model DAO virtual governance. Leonhard<sup>34</sup> describes DAO as being similar to a shareholders association, proposing it as a first step to create a virtual board of directors forming their votes as a cryptocurrency.

This blockchain technology may solve a certain corporate law problem but may cause new one. A decentralized system is accompanied by a high degree of uncertainty. How to govern this risk will be an important task in organizations like DAO. I suggest that corporate software law will be the best way for regulation.

## **Conclusion**

In this contribution we investigate how the opportunities offered by new technologies may influence CG procedures and corporate law. Corporations should care about technology-based CG solutions. New technologies have both advantages and disadvantages and changes in the law will depend on the level of a digitalization process.

Describing a new outline of corporate law for the nearest future, I propose several preliminary statements. A general area of corporate law will not change significantly; the key function of corporate law remains the same.

In the nearest future, the practical dissemination of blended CG procedures is expected. This means that new corporate law will have to provide directors the right to delegate decision making to algorithms (with certain restrictions). The personal responsibility of director will be limited to cases of “blended” decision.

---

<sup>30</sup> The term ‘smart contract’ refers to computer code that is designed automatically to execute contractual duties upon the occurrence of a trigger event.

<sup>31</sup> A. Lafarre, C.Van der Elst. Blockchain Technology for Corporate Governance and Shareholder Activism/[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3135209](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3135209)

<sup>32</sup> There are several platforms that facilitate smart contracts. The most well-known is Ethereum, which is ‘a decentralized platform that runs smart contracts. Ethereum is an open-source, public, blockchain-based distributed computing platform and operating system featuring smart contract functionality. <https://www.ethereum.org/> (visited 30 Mars 2018)

<sup>33</sup> Decentralized Autonomous Organization (DAO)

<sup>34</sup> R.D.Leonhard. Corporate Governance on Ethereum’s Blockchain/[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2977522](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2977522)

It will be important to understand the main functions of the new players in the virtual marketplace. Holders of tokens can be considered virtual shareholders. “Blended” CG and the governance of e-corporations will allow current decision-making risks to be minimized due to the transparency of the decentralized system.

Such an understanding of the mutual influence of IT and CG helps us to construct a new corporate law for e-corporations, protecting them and their electronic participants.

**Svetlana Chekhovskaya**

Associate Professor, National Research University Higher School of Economics, Department of Civil and Business Law.

E-mail: [schekhovskaya@hse.ru](mailto:schekhovskaya@hse.ru)

**Any opinions or claims contained in this Working Paper do not necessarily reflect the views of HSE.**

© Chekhovskaya, 2018.