

## Chapter VI. The future of blockchain solutions in legal regulations (an initiated discussion).

Blockchain technology has become familiar in business transactions, both in the traditional and digital economy. As shown at the beginning of this monograph, more and more states, consortia and single institutions are implementing and using the opportunities related to the new tool. Also, the initial legal chaos or problem with applying legal regulations to the blockchain and new tools are slowly being eliminated by explicit decisions made by supervisory authorities, by connection of the new tools with domestic law or with the principles of looking for applicable law and jurisdiction. What is also important is the development of international arbitration related to ICO, “smart contracts”, tokens or cryptocurrencies. The pace of activities with regard to blockchains, just like the pace of development of technology, is extremely high. While this monograph was being written, a number of changes and initiatives appeared which, as far as possible, were included herein. The most interesting ones include the adoption (30 May 2018) and the coming into effect (1 July 2018) of the first act in the world devoted to blockchain technology and the introduction (in response to the problem of DAO) of the first blockchain-based limited-liability company that functions solely on a virtual basis.

On 30 May in the state of Vermont (USA), Governor Phil Scott signed the Act Related to Blockchain Business Development, the objective of which is to consolidate the position of the state of Vermont as the leader of supporting the initiatives related to blockchain technology. The new tasks of the Agency of Commerce and Community Development include promotion and development of business support programs for 1) the business private sector related to blockchain technologies, including blockchains for banking, insurance, retail and services as well as cryptocurrencies; 2) analyzing and amending the legal mechanisms and regulations to allow and support implementation of blockchain technologies in public and private areas and 3) educating and training employees in the scope of blockchain technology, blockchains in finance and in related fields. In order to achieve this, Sec. 7.11 VSA was amended in that a new type of company was added to subchapter 12 in chapter 25: a Blockchain-Based Limited-Liability Company (BLLC). The act introduces a number of definitions, such as: a “blockchain”, which means a mathematically secured,

chronological and decentralized register or database, whether it is managed using an online peer-to-peer network or in another way; "blockchain technology", i.e., computer software or computer equipment, or groups of computer software or computer equipment, or both types of software and equipment, which use or allow the operation of blockchains; "participant", i.e., a) any person holding a partial or full copy of the decentralized consensus ledger or database used within the blockchain or who otherwise participates in the processes of approving such a book or database, b) any person controlling any digital resources in blockchain technology; and c) any person who has a significant contribution to protocols. "Protocols" are understood as certain regulatory models of the software which regulates the principles, operations and communication among the network nodes used by the users; and, finally, "virtual currency", which means a digital representation of value: a) used as a means of exchange, settlement unit or to store value; and b) not being legal tender, whether it is denominated as legal tender or not.

A limited-liability company operating on the basis of blockchains may be established under the provisions of § 4172 for the purpose of conducting business activities based on blockchain technology, but its statute must clearly indicate that it operates as a BBLLC and that it meets the legal requirements specified in the act. No existing regulations associated with companies allow the management of a BBLLC, in full or in part, using blockchain technology. The articles of association of the company have to include the abridged objective and mission of the BBLLC; indication whether a decentralized consensus ledger or database, used or activated through the BBLLC, will be fully or partly decentralized, and whether such a ledger or database will be fully or partly public or private, including the scope of access of participants to information and permits for reviewing and recording data in protocols; the voting procedure which may also include the "smart contracts" executed using blockchain technology; the proposed managers, members as well as other groups of participants in the BBLLC being entitled to update or modify the software protocols or systems or both these elements; and the way of adopting other amendments to the articles of association of the BBLLC as well as any other issues related to management and operation within the BBLLC. Furthermore, they must include the principles of adopting protocols, reacting to system security violations or other, unauthorized activities affecting the integrity of the blockchain technology used in the BBLLC; specify the way of becoming a member of or obtaining shares in the BBLLC, which may be expressed in the form of participation units, shares in share capital or other forms of

participation in profits; and specify the rights and obligations of each group of participants in the BBLLC, including which participants have the rights and obligations of shareholders and to manage.

A member or manager of a BBLLC may interact with a BBLLC in many roles, including as a member, manager, developer, node, miner or another participant in a BBLLC, or as an entrepreneur and holder of a currency for its own account or for the account of other persons, on the condition that such a member or manager complies with any and all the trust obligations specified by the law. The activities of a member or manager who cooperates with BBLLC by performing several roles are not considered conducted in the state of the BBLLC merely because the BBLLC is incorporated in that state.

Also, there was introduced the regulation on the manner of reaching consensus which, in a BBLLC, may 1) include any and all the reasonable algorithm measures for the purpose of reaching consensus in the process of validation of records, as well as of the requirements, processes and procedures of operations or making organizational decisions regarding the blockchain technology used by the BBLLC; and 2) under the procedure specified in section 4173 of the act – modify the consensual procedures, processes and requirements or replace the consensual procedures, requirements and processes which are consistent with legal requirements and provisions on management of BBLLCs, into new processes.

Unless explicitly provided otherwise, the act does not release a BBLLC from any other provisions, be they statutory or implementing provisions of the law of the State of Vermont or of federal law, including state and federal securities laws. Except for the special provisions on BBLLCs, they are subject to the provisions of the Limited Liability Company Act of the State of Vermont.

At the same time, the Vermont State Archives and Records Administration, in collaboration with Vermont League of Cities and Towns, Vermont Municipal Clerks' and Treasurers' Association, and Agency of Digital Services were obliged to assess blockchain technology until 15 January 2019 for the purpose of systematic and effective management of public registers and to adopt the provisions necessary for supporting blockchain technology, including to make entries in the land registry<sup>265</sup>.

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<sup>265</sup> See <https://legislature.vermont.gov/assets/Documents/2018/Docs/BILLS/S-0269/S-0269%20As%20passed%20by%20the%20Senate%20Official.pdf> of 25 July 2018.

A number of publications and reports demonstrate many ways of using blockchains, in many disciplines, such as: finance, insurance, power, logistics, securities, state and public registers, but also copyrights, digital content, parliamentary voting, referenda and others. Some of them require modification of the previous regulations, while others may be introduced without significant changes. In any case, nowadays there is no need to create new, suprateritorial cyberspace to regulate the issues of cryptocurrencies or blockchains. In turn, it is necessary to notice the new technology with its associated problems and to adapt legal regulations properly and, in particular, to interpret the current provisions of the law properly.

The blockchain is the next stage of evolution of the tools used in the law, not a legal revolution. It is a tool, in which the legal concepts and theories that are several hundred years old continue to apply.

The fact that the European Union noticed the potential of blockchains should be considered a significant event that will result in greater involvement of the Community in the activities related to that technology. What seems necessary is a comprehensive legal regulation of the European and domestic regulations, the purpose of which would be to make best use of that technology, the potential of which, it seems, highly exceeds the previous implementations and will significantly, as the next stage of digital evolution, impact the way of recording data, evidentiary process, etc. As a technology, the blockchain may solve a number of existing technical and legal issues. However, it generates a number of new ones. A lot, including the resources invested in blockchains, but also the size of pilot implementations, indicates that the blockchain is not just one of many technology-related fads of recent years. This publication is aimed at presenting the issue, but mainly to perceive it from the point of view of the law and a lawyer, which are often different from the points of view of IT specialists, economists or entrepreneurs. It does not assess the feasibility of introducing the blockchain technology in the respective areas of functioning of society, the state or business, but constitutes an attempt to explain the basic legal rules associated with it and to answer the question:

“Is the blockchain a revolution or “just” another stage of evolution of development of the digital economy, and what is its impact on the previously applicable principles, rules and provisions of the law?”.

We will soon answer that.

