

Thriving in Regulation: The case for DLTs

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Ten years following the invention of the Bitcoin by Satoshi Nakamoto and the respective device of the first blockchain database, the then “stellar” blockchain technology has become a disruptive growth model, gaining momentum in the financial transactions and being promising for the business world. This is something not implausible to suggest if one observes that in practice many new emerging blockchain-based networks have begun to be utilized in many different industries, ranging from ocean shipping, to payment methods to gaming platforms, supply chains and even in the healthcare industry.

Blockchain is in fact a distributed ledger of transactions, which has been described as leading the way to digital democratisation. As its name suggests, blockchain consists of multiple blocks of records, in which the details of the parties to a transaction are included, strung together following a validation of the records through a network of nodes. Upon the formation of a block, cryptography is involved. A unique code, called a hash, is given to each block along with the hash of the block before it, so that the blocks are added in the chain in an order according to their hash codes. The blockchain is then maintained in decentralized form across different location and people. If anyone wishes to make any amendment to the original block, this will generate an amendment to the hash as well and in effect this will break the chain, unless every single block, after the one amended, on the blockchain is updated respectively. Therefore, once a record has been added and a block has been created, it is very hard to be amended and impossible to be deleted; for this reason, blocks are characterized as immutable. Thus, this is a strong safeguard against any potential hack of the blockchain and it is a strong evidence that blockchain-based networks are secure enough and less prone to cyber-attacks.

The above analysis shows that it is not unjustifiable that blockchain is widely used nowadays across many different disciplines. However, a major concern arises with such a widespread use of this new distributed ledger technology and this rests on how this new distributed ledger is being regulated. Are there sufficient safeguards against deploying illegal activities through distributed ledger technologies? Although the well-known case of the Silk Road, an online “dark web” marketplace used for illegal purchases in bitcoins, which was shut down by the FBI, is dated back in 2013, more recent cases arose suggesting that the answer to the previous question might not be in the affirmative. The results of research conducted, from time to time, suggest that cryptocurrencies are used for illegal purposes including money-laundering, drug dealing and tax evasion, while a study conducted in 2018 for the European Parliament’s Special Committee on Financial Crimes, Tax Evasion and Tax Avoidance¹ indicates that the market value of the misuse of virtual currencies has been reported to exceed EUR 7 billion worldwide. Therefore, it is prominent that there is a dire need for regulation of distributed ledger technologies, such as blockchain-based networks.

Regulation of digital ledgers would undoubtedly be a real challenge for the governments and the regulators. In order to ensure that the regulatory frameworks are adequate for digital ledger technologies, it would be essential to ensure that such frameworks would be flexible enough while providing certainty and security, without though entailing the sacrifice of the spirit of true decentralization. However, in practice, this might be impossible. This can be realised in examining the potential of deploying blockchain-based networks for combatting money laundering. In order for this to be achieved, smart-contracts shall be used wherein a series of requirements are to be programmed, such as the need for verified ID, enabling the automatic block or red flagging of any suspicious transactions. However, this would further entail the creation of a system wherein financial

¹ Policy Department for Economic, Scientific and Quality of Life Policies Authors: Prof. Dr. Robby HOUBEN, Alexander SNYERS Dr. Robby Houben and Alexander Snyers, “Cryptocurrencies and blockchain: Legal Context and implications for financial crime, money laundering and tax evasion” [2018] available at <http://www.europarl.europa.eu/cmsdata/150761/TAX3%20Study%20on%20cryptocurrencies%20and%20blockchain.pdf>

institutions would need to participate so that they have the chance of oversight and regulation over all digital transactions made through them. Therefore, such a blockchain-based network, where all the nodes are established financial institutions may consider themselves being in conflict with the spirit of true decentralization.

In addition to that, as it has been reported in various occasions by the EU Blockchain Observatory and Forum², another issue to be considered is the real tension between the regulation of blockchain and the General Data Protection Regulation (GDPR). Amongst others, one true consideration is the fact that, since one of the cornerstones of the GDPR is the existence of a data controller, whom the data subjects can address for the enforcement of their legal rights, it is strongly questionable how the GDPR would fit in these new decentralized technologies, which seek to replace a unitary actor with dispersed nodes and whether distributed ledgers could be squared with European data protection law³. Hence, it could be alleged that unless this decentralisation is interfered with, some degree of regulation would not be achieved.

The question now is whether it is worth sacrificing the idea of total decentralization to prevent a greater harm, which is the prevention of money fraud. The challenge of the regulators is imminent and the governments must be very cautious in setting up regulations. At the European Union level, the need for Europe to cement its position as an attractive location for blockchain technology led to the carrying out of thorough studies, workshops and reports, where experts of many disciplines are involved in an attempt to conceive each and every potential aspect of the labyrinth of distributed ledgers that should be regulated. This is the reason why we have not yet seen any kind of regulation in this sector. It is interesting though to note that some of the member states, including the Republic of Cyprus, have already taken some regulatory measures. Notably, the Republic of Cyprus announced that a bill for the regulation of distributed ledger technologies is undergoing and it is now a matter of time to see whether distributed ledgers would be thriving in regulation and our country would be pioneering in this new disruptive sector.

²T. Lyons, L. Courcelas, K. Timsit, “Legal and Regulatory Framework of Blockchains and Smart Contracts”, published on 27/09/2019, available at https://www.eublockchainforum.eu/sites/default/files/reports/report_legal_v1.0.pdf?width=1024&height=800&iframe=true

³ Dr. M Finck, “Blockchain and the General Data Protection Regulation; Can distributed ledger be squared with European data protection law?”, July 2019, available at [https://www.europarl.europa.eu/RegData/etudes/STUD/2019/634445/EPRS_STU\(2019\)634445_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/634445/EPRS_STU(2019)634445_EN.pdf)