

**Werner, Daniel. *Necessity and Approaches: Regulation of Cryptocurrencies*.  
Norderstedt: StudyLab, 2018, 78 pp.**

This book promises to provide an overview of approaches towards the regulation of cryptocurrencies in general from the beginning as well as to demonstrate their main pros and cons. Its objective is to evaluate the need of a stricter regulatory frame for cryptocurrencies and to discuss the most popular and most feasible approaches to handle current risks this new market faces. This topic corresponds to the needs of legal literature for the purpose of achieving a deeper understanding of virtual currencies' environment to grasp its technological basics, resulting in the deduction of fundamental premises and models for their regulation.

Already at the beginning, author warns against very optimistic view on cryptocurrencies when their unregulated nature represents a significant challenge for regulators, resulting in cryptocurrencies becoming a victim of illegal activities.

Following a short introduction and division of standard payment methods to non-virtual and virtual, along with a brief history, author proceeds to a general evaluation of methods. At first, he mentions respective popular methods through which he proceeds to the latest payment method using cryptocurrencies. For the purpose of better understanding of cryptocurrencies, author finds it important to introduce its basis, the distributed ledger, dedicating a separate chapter thereto.

Before moving to specific chapters, attention is paid to terminology, criticizing a frequent use of the term of digital currency for cryptocurrencies. Author rightfully points to the fact that the term digital currencies includes also other electronic money as e.g. funds at PayPal that may not be qualified as cryptocurrencies. This terminology causes frequent problems when dividing categories. Virtual currencies include unregulated money and the sole cryptocurrencies are defined by author as digital and virtual currencies with respective cryptography for the purpose of protection.

Subsequent analysis of cryptocurrencies from the perspective of three main functions of money results in a pessimistic view of cryptocurrencies where the author clearly deducts weak points of cryptocurrencies, in particular with regards to its function as a unit of account and store of value.

Description of bitcoin provides a detailed analysis, history and pros and cons of the use of this cryptocurrency. As expect, its advantage is its security, decentralized nature, certain benefits of anonymity and the access to cryptocurrencies for people outside of standard financial system, so for the people without any bank account. Conversely, when it comes to disadvantages, he points to its misuse for illegal activities, blockchain capacity for global payments etc. Another description of author is dedicated to Ethereum or to altcoins, however, not to such a scale.

Residual part of this chapter comprises of a descriptive summary of the most known mining pools, crypto exchanges or services of crypto-wallets.

For the reader to understand the need of regulation of cryptocurrency activities, at first, author mentions the most important problems occurring in unregulated environment with an emphasis on basic topics. These are, in particular, illegal activities including hackers, investment frauds, price manipulations, money laundering, terrorism etc., when public interest should have significant effect on motivating lawmakers against such activities. Another important aspect mentioned by author is the protection of consumers in relation to financial bubbles affecting bitcoin prices, or monetary policy, when the monetary base consisting of cryptocurrencies is partially beyond control of central monetary authorities.

After the summary, author makes a compilation of statements of other authors towards the need of cryptocurrency regulation from different points of view, in relation to previous chapter. He points out its pros and cons, albeit he adds that most of the countries took the wait-and-see approach.

Fourth chapter represents a final deduction in a form of approaches towards regulation of cryptocurrencies. As author states, decentralized nature is a serious issue for respective supervisory authorities. At first, he pays attention to the European Union by pointing out certain member states and providing a brief overview of their approaches towards cryptocurrencies (e.g. Denmark, Ger-

many, Sweden), while subsequently, he focuses on other countries outside of the EU, e.g. Brazil, United States, Russia or China.

An interesting part is the subsequent description of potential approaches towards centralized cryptocurrencies. In the first case, these would be cryptocurrencies issued by a central bank (or analogical authority), released to circulation for individuals and entities when, instead of miners, there will be issuing authorized institutions. Thus, a centralized body or a system of bodies would monitor the amounts of cryptocurrencies in circulation. Problems of this system could be seen, in particular, in the financial and energy demanding nature of mining.

Second approach is based on the opening of accounts of individuals and entities at a central monetary authority (central bank) where each such subject would have to undergo a standard due diligence procedure with subsequent execution of payments through the account of such authority. The advantage is its low demanding nature and monitoring of each opportunity for money laundering or terrorism financing, thus suppressing anonymity and disallowing account opening for cryptocurrencies for certain subjects.

Subsequent analysis of opinions for the introduction of above-mentioned centralized cryptocurrency provides advantages and disadvantages of this approach.

With regard to the inability to check each node in blockchain system, another approach with the checks of main intermediaries is available with emphasis on due diligence, so the so-called Know Your Customer procedures.

The last important approach is the absolute prohibition, applied by China or Russia.

In fact, the author met the objectives of his book, what I personally consider as markedly beneficial mainly due to a weak covering of this topic by now, while we may add that with certain exceptions, this topic is practically missing in Czech environment of legal literature, therefore, the author and student of this area is referred only to foreign literature.

With regard to the extensive nature of this topic and a brief, but very apt definition of regulations of respective countries and also to an overview of respective payment methods, we can see that author has wide knowledge from a theoretical as well as from a practical point of view, providing added value to this book.

In particular the fourth chapter is of an extraordinary value, comparing respective jurisdictions and stating basic characteristics of approaches with subsequent deductions for the reader to evaluate them.

As for the mistakes, I found only few of them in this book, all of them being of a minor importance, e.g. a typo stating centralized instead of decentralized Bitcoin at page 44, nevertheless, I was not aware of factual mistakes.

With regard to the fact that this topic remains very much discussed and numerous topics in relation thereto are weakly covered, I consider this book as very beneficial, even for academic discussions.

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