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Book review: Blockchains, Smart Contracts, Decentralised Autonomous Organisations and the Law

Daniel Kraus, Thierry Obrist, Olivier Hari (eds.) Cheltenham, UK: Edward Elgar, 2019. 384 pages. ISBN 9781788115124. £110.00.

Reviewed by Ondřej Svoboda*

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Blockchain, formally referred to as a distributed ledger technology and known particularly for its cryptocurrency application, has been recently described as the most disruptive technology in decades.¹ Although it may sound over-hyped, this technology which began to emerge rapidly in 2016 and 2017 is increasingly popular. Blockchain applications are already highly varied and there are many options for using this technology. Beyond cryptocurrencies, blockchain is used across a variety of industries and services such as global shipping, public registers, healthcare or fintech. Given the recent developments in this field, *Blockchains, Smart Contracts, Decentralised Autonomous Organisations and the Law* offers a very useful insight to emerging legal issues. Therefore, its timing is particularly apt.

The book consists of eleven chapters. Their focus varies from private international law, international standardization, and data protection to intellectual property law. Six of these chapters provide a pertinent case study focusing on Switzerland providing among others a comprehensive view on regulation of smart contracts, the tax treatment of cryptocurrencies or a criminal law perspective. The selection of Switzerland is a natural choice not only because the majority of authors are based in Switzerland. At the time of writing, Switzerland was home to four of the ten largest initial coin offerings (also referred to as token launches) which had ever taken place. The structure of the book could at first sight seem disproportional with the focus on just one country. The chapters, however, nicely complement each other, as the more theoretical parts are followed by more practice-oriented texts analysing the current state of play in Switzerland.

¹ Lucas Mearian, "What is Blockchain? The Most Disruptive Tech in Decades" (*Computerworld*, 18 January 2018), available at <u>https://www.computerworld.com/article/3191077/what-isblockchain-the-complete-guide.html#tk.ctw-infsb</u> (accessed 13 February 2020).

The Swiss regulatory framework certainly deserves the attention of people who are curious about the legal implications of blockchain development. Switzerland is said to be a particularly attractive environment for blockchain and fintech start-ups. The Swiss fintech model was created in August 2017 when the Swiss Federal Council adopted an amendment of the Banking Ordinance. The amendment reduced barriers for fintech firms to entry into the Swiss financial market. The decision can be explained by the recent international pressure on the Swiss financial sector due to its banking secrecy law. To reinvent their business model and offer new services, Swiss banks opened to innovation and integrated blockchain technology. Still, it is evident from research conducted by the authors that businesses active in this fast-developing field prefer a clear-cut set of rules to legal uncertainty and ambiguity. Another important conclusion presented in the book is that blockchain technology has successfully stimulated the Swiss services industry (p. 48).

On the other hand, the authors warn of frenetic attempts of some States to promote its position within the digital economy by supporting the use of blockchain. Primarily, the authors are of the position that the growing application of blockchain "requires a legal framework that is as clear as possible" (p. 57). They observe that there is currently no law at the domestic or international level applying specifically to blockchain transactions. The lack of regulation may subsequently lead to a variety of economic and legal risks.

It is also important to highlight the international dimension concerning the use of the blockchain since "it is statistically unlikely that all the nodes involved in transaction will be located in the same State" (p. 59). The authors at this point rightly recall the United Nations Convention on the Use of Electronic Communications in International Contracts as a legal instrument possibly useful for interpreting the formation of smart contracts. Yet, the rules are still entirely insufficient to govern legal issues raised by the growing use of modern technologies. That is also a reason why the Czech Republic has recently submitted a proposal for future work of the International Institute for the Unification of Private Law (UNIDROIT) and the United Nations Commission on International Trade Law (UNCITRAL) to focus on this development.² Based on this activity, both the UNIDROIT and the UNCITRAL held a joint conference in May 2019 in Rome which has increased the likelihood of future involvement of international organisations in this field.³

The topic of regulation of blockchain is also closely connected with its standardisation, which is the subject of chapter *When Disruptive Meets Streamline: International Standardization in Blockchain* by Panagiotis Delimatsis. Indeed, standard-setting as a form of codified technical knowledge provides various benefits, such as a consolidation of best practices, reducing costs or increasing trust. The book investigates in detail current blockchain-related work of the International Organisation for Standardisation (ISO), drawing attention to Australia's recent initiative within the organisation. In April 2016, Standards Australia, the Australian standard-setting organisation, proposed to establish an ISO technical committee aiming at the creation of international standards for blockchain. The committee was established in September 2016 and it now provides an international forum for consultation on this topic. The chapter investigating the ISO activities thus offers a very interesting view on a rather overlooked aspect in the development of blockchain.

While blockchain can be deployed in almost unlimited spheres of human activity it raises a pertinent question of data protection. Despite the fact that data protection has received limited attention, the authors decided to tackle this

² UNCITRAL, "Work programme of the Commission - Legal aspects of smart contracts and artificial intelligence: submission by the Czechia", A/CN.9/960 (30 May 2018).

³ UNCITRAL/UNIDROIT, "Summary of the Discussion and Conclusions of a joint workshop" (6-7 May 2019).

complex issue as well. They do it in a comprehensive way, taking into consideration the General Data Protection Regulation, the European Court of Justice's case law as well as the peculiar nature of blockchain, often at odds with the fundamental legal principles governing data protection (p. 296). Still, the chapter ends rather optimistically, calling blockchain developers and operators for the effort to incorporate data protection requirements.

This is just one example of a number of controversial issues raised by the book. Blockchain also raises controversy with respect to bitcoin, blockchain's best-known, most used and highest-impact application, and related criminal aspects. Such concerns understandably contribute to disputes over its legitimacy particularly in public policy, as well as in the legislative and regulatory spheres. And there are many further questions. However, one cannot blame the authors for leaving a number of them unanswered. Certainly, the current fluid environment of blockchains' application and regulation is a vastly complex area.

To conclude, the collection of contributions in *Blockchains, Smart Contracts, Decentralised Autonomous Organisations and the Law* is insightful food for thought providing readers with concrete manifestations of the practical legal issues raised by the spreading application of blockchain. In addition, it is highly relevant at a normative level and as such it deserves particular attention by legislators and policymakers who would like to innovate their legal system to keep up with the rapid developments in this new technology field. The book's case studies based on the latest Swiss experience have definitely a lot to offer as well.