

Introduction

Cryptocurrencies have been the subject of much attention in recent history. Most of the public became acquainted quite recently, as values of cryptocurrencies, from bitcoin to Ether, including hundreds of more or less eccentric currencies, saw their valuation sky-rocket – and then lose much of it. More recently, initial coin offerings (ICOs) have emerged as alternatives to classic ways of financing projects and companies such as initial public offerings (IPOs). Those ICOs have particularly marked the public opinion as extremely high amounts were raised at a speed never reached before.

There is, however, much more to cryptocurrencies than their mere valuation or ICOs. As Vincent Mignon puts it in the first contribution of this book, ‘the linking of cryptocurrencies to blockchains allows for storage and transmission of information through the Internet in a secure manner without the need to rely on a trusted third-party’. More than just databases on the Internet, blockchains, as decentralised, secure ledgers in combination with the incitation that constitutes cryptocurrencies are becoming real alternatives to third party entrusted ledgers. These features, which actually seem quite simple, represent rather an *evolution* than a *revolution*; however, they present tremendous perspectives as classic business models such as those of financial institutions and classic ways of exercising State sovereignty are being questioned and face re-modelling. Blockchains offer the possibility to avoid recourse to third party intermediaries, hence giving access to more direct and democratic decision-making processes and reducing costs. This may be seen amongst others in the banking, logistics and real estate sectors. But the same is true for official activities such as those of public notaries or of official registries. Blockchains may also serve the purpose of digitalising and automatising contracts in a way that could deeply simplify day-to-day life such as paying one’s rent for flats, cars, leasing or transferring property through so-called smart contracts which allow for contracts to be automatically executed as soon as conditions (such as that of paying) are fulfilled. Going even further, smart contracts could manage decentralised autonomous organisations (DAOs) and democratise corporate governance, making it possible for any token holder to participate in the decision-making of an organisation and limiting to the minimum the intervention of humans. We are at the verge of a real peer-to-peer socio-economic model which represents

the next generation of Ubers, Airbnbs and Spotifys that have already deeply changed the way people, businesses and society interact.

Such speedy developments and opportunities present many challenges for society. Once again – as has been the case for the development of the Internet and the GAFAs (Google, Amazon, Facebook and Apple), technology and the economic world have been faster – and too fast – for the legislators. In such cases, legislators (and central banks) rather tend to be on their guard and change-resistant. So how should the law deal with the latest developments of blockchains, cryptocurrencies, smart contracts, DAOs, ICOs and what is still to come?

In a totally decentralised and distributed context, issues arise such as applicable law and competent tribunals (Florence Guillaume). However, coordination can also take place through harmonisation, and standardisation at the international public law level will play an important role as well (Panagiotis Delimatsis). Most importantly, blockchains and in particular smart contracts also have the potential to turn upside down the fundamentals of contract law. They question the way exchange of mutual expression of intent by the parties can and must take place; unless, on the contrary, they could call for an application of basic principles, as we have known them for centuries (Blaise Carron and Valentin Botteron). The first wave of ICOs had an appearance of Wild West and gold rush, and showed that some level of regulation is needed in order to protect investors (Biba Homsy), including in cases of insolvency (Olivier Hari). How criminal law may intervene in cases of money-laundering or ‘theft’ depends on the qualification of cryptocurrencies. As we are moving in a virtual world Nadja Capus and Maëlle Le Boulec recommend some modifications that should be made in criminal law. The present book provides a comprehensive overview of the legal environment of blockchains, cryptocurrencies and smart contracts, including intellectual property (Daniel Kraus and Charlotte Boulay), data protection (Adrien Alberini and Vincent Pfammatter) and tax issues (Thierry Obrist and Roland A. Pfister).

Pascal Witzig and Victoriya Salomon draw the socio-economic landscape necessary to understand the legal context and potential necessity for regulation.

We have taken a Swiss-centred approach, as Switzerland is recognised as one of the legal regimes sufficiently flexible to allow start-ups and companies to develop in that field of activity. The financial regulator has adopted an open sandbox approach and contract and company law provides a wide autonomy to parties. This has led to the development of the ‘crypto valley’ in the Zug areas, but also in other traditionally innovative regions such as Neuchâtel and elsewhere.

Much will still evolve and we hope the present contributions provide food for thought in many jurisdictions.

Daniel Kraus

