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Francisco Pereira Coutinho · Martinho Lucas Pires ·
Bernardo Correia Barradas
Editors

Blockchain and the Law

Dogmatics and Dynamics



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Editors

Francisco Pereira Coutinho
Department of Law
Nova School of Law
Lisbon, Portugal

Martinho Lucas Pires
Department of Law
Universidade Católica Portuguesa
Lisbon, Portugal

Bernardo Correia Barradas
World Bank Group
Lisbon, Portugal

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Preface

Blockchains and distributed ledger technologies (DLTs) are one of the major technological developments of our times. DLTs are computer protocols designed for storing and managing data in a distributed manner, through different participants connected in a peer-to-peer, decentralized digital structure. Blockchain is the name attributed to a type of DLT that were inspired by the protocol behind the Bitcoin cryptocurrency, the first “trustless-based” payment system in the world, as per the words of Satoshi Nakamoto, its founder. The monetary value and volatility of the cryptocurrency were first to capture the attention of public opinion; since then, new technologies improving and expanding the capacity of the “genesis” protocol have appeared, morphing blockchain and crypto into a technological sector called “blockchain”.

Currently, there is an enormous offer (and continuously growing one) of projects in the blockchain landscape. While new sectors have emerged with DeFi protocols and products fighting to establish a solid and profitable decentralized financial market, crypto exchanges have become regulated and incorporated in various jurisdictions. Crypto is being used as an alternative savings and investment product, while so-called traditional “legacy” institutions—e.g., banks, investment funds, and public administrations—are developing or adopting applications to enter the market and offer DLT-based services. Long gone are the days in which blockchain and crypto were looked on as dangerous products, with the sole purpose of escaping law enforcement, and disguised as simplistic claims of libertarian desires and cyber-punkish worlds. Crypto is now mainstream.

Proponents of the technology argue that blockchain has the potential to substantially alter commercial relations, either those that are business-to-business or those that are business-to-consumer, by switching commercial trust from market agents and intermediaries to computer programs based on algorithmic trust that run on protocols distributed by computers all over the world. Blockchain technology has brought about a paradigm shift in the way we think about and exchange value. Its potential for innovation and disruption has been widely recognized across various industries. However, any new technology brings legal and regulatory challenges that must be navigated.

The law and blockchain have a difficult relationship: the core principles of privacy, decentralization, and automation of the technology conflict with classic juridical standards concerning stability and liability of legal relations, although new laws have been enacted during the past years to help.

From 2018 to 2020, the three of us have organized at Nova Law School three short post-graduate courses on the legal impacts of blockchain technology. These courses were the first of their kind to be offered in Portuguese universities, and a variety of Portuguese and international academics, entrepreneurs, lawyers, and regulators participated. This book condenses a “best of” of the sessions taught in those three courses, dealing with issues relating to the convoluted application of legal standards and rules to blockchain technology.

Staying true to the international structure of the courses, the book contains eight chapters dedicated to general and more specific intersections between blockchain or DLT-based innovations and the law.

The book starts with Martinho Lucas Pires’ chapter entitled “Blockchain and the Law: Setting the Floor” (Chap. 1). Call it a general introduction to the state of the art in the blockchain and law debate and an attempt to summarize the real challenges and the not so real hypes concerning the relationship between blockchain and its innovations and current legal standards.

Nelson M. Rosario in Chap. 2 adventures into assessing the promises and shortfalls of blockchain-based structures for voting. In Chap. 3, Renato Gomide Martinez de Almeida discusses the use of blockchain in transitional justice processes, by exploring its application in criminal prosecutions, truth commissions, reparations, in restoring democratic institutions and in reconciliation. In Chap. 4, Marta Carmo looks at the evolution of the tax treatment of crypto assets in Portugal, explaining and deconstructing the approaches by the Portuguese tax authorities that lead to the country in certain media circles being named as a “crypto tax haven”.

In Chap. 5, George Daniel Raath dives into the topic of blockchain in the execution of judgments in the context of South Africa.

João Vieira dos Santos and Guilherme Maia in Chap. 6 consider the legislative initiative of the European Union in setting up a DLT Pilot Regime and assess its possible impact on DeFi products. Anjeza Beja and Bernardo Correia Barradas in Chap. 7 look at the novel central bank digital currency, or CBDC, and its implications on anonymity. And, in Chap. 8, Ágata Ferreira concludes the book by discussing the specific relationship between smart contracts and the law, looking at the advantages of smart contracts and addressing the scholarly legal debate surrounding their implementation and use.

All in all, this book provides a comprehensive overview of the intersection between blockchain and the law. It delves into the legal implications of blockchain technology and how it is being treated under existing legal frameworks. It also explores the potential of blockchain to reshape the legal landscape and how the law will continue to evolve in response to the growing use of blockchain. The book offers valuable insights into the complex relationship between blockchain and the law. It provides a well-rounded understanding of the legal implications of blockchain and how it can be leveraged for the benefit of society.

We would like to acknowledge and thank all the authors for their outstanding contribution to this volume and especially thank Frank Bakker and Kiki van Gurp from T.M.C. Asser Press for accepting this volume for publication and all the patience with the editing process. We wish all our readers an enjoyable and rewarding reading.

Lisbon, Portugal
May 2023

Francisco Pereira Coutinho
Bernardo Correia Barradas
Martinho Lucas Pires

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Editors and Contributors

About the Editors

Francisco Pereira Coutinho is Associate Professor at NOVA School of Law in Lisbon, Portugal, where he directs the Observatories of Portuguese Legislation and Data Protection Law, as well as the Moot Court Program. Specialized in Public International Law and European Constitutional Law, his research and teaching interests further encompass comparative constitutional law, data protection law, and media law.

Martinho Lucas Pires is Teaching Assistant in the Law School of Universidade Católica Portuguesa, in Lisbon, Portugal, and of Counsel at DLA Piper. His research interests include financial regulation, regulation of crypto and DLTs, Fintech, and constitutional theory.

Bernardo Correia Barradas is Lawyer and Consultant in the Payment Systems Development Group of the World Bank Group, currently based in Aix-en-Provence, France. His research interests include new technologies applied to payments, CBDC, financial inclusion, and financial market infrastructures.

Contributors

Anjeza Beja Prokop Myzegari, Tirana, Albania

Marta Carmo Banco BPI, Lisbon, Portugal

Bernardo Correia Barradas Aix-en-Provence, France

Agata Ferreira Department of Administrative Law and Public Policy, Warsaw University of Technology, Faculty of Administration and Social Sciences, Warsaw, Poland

Renato Gomide M. de Almeida São Paulo, SP, Brazil

Martinho Lucas Pires Católica Law School, Lisbon, Portugal

Guilherme Maia BCAS, Msida, MSD 1825, Msida, Malta

George Daniel Raath MinterEllison, Canberra, Australia

Nelson Rosario Rosario Tech Law, LLC; Illinois Tech, Chicago-Kent College of Law, Chicago, IL, USA

João Vieira dos Santos Lusófona University and Portuguese Securities Market Commission (CMVM), Lisbon, Portugal

Abbreviations

AI	Artificial intelligence
AML/CFT	Anti-money laundering/countering the financing of terrorism
AMM	Automated market maker
API	Application programming interfaces
ATM	Automated teller machine
BIS	Bank for International Settlements
BoE	Bank of England
BTA	(Illinois) Blockchain Technology Act
CARF	Crypto-asset reporting framework
CBDC	Central bank digital currency
CBOB	Central Bank of the Bahamas
CBU	Central Bank of Uruguay
CCP	Central counterparty
CDD	Customer due diligence
CFTC	(US) Commodity Futures Trading Commission
CIT	Corporate income tax
CJEU	Court of Justice of the European Union (see ECJ)
CMVM	(Portuguese) Securities Market Commission
CPU	Central processing unit
CSD	Central securities depository
DAO	Decentralized autonomous organizations
dapps	Decentralized applications
DeFI	Decentralized finance
DEX	Exchange
DLT	Distributed ledger technology
EBA	European Banking Authority
ECB	European Central Bank
ECCB	Eastern Caribbean Central Bank
ECCU	Eastern Caribbean Currency Union
ECJ	European Court of Justice (see CJEU)
EEA	European Economic Area

ESCB	European System of Central Banks
ESMA	European Securities and Markets Authority
EU	European Union
FATF	Financial Action Task Force
FED	Federal Reserve System (USA)
FSB	Financial Stability Board
GA	General Assembly (UN)
GPT	General-purpose technology
GTL	(Portuguese) General Tax Law
IAS	International Accounting Standard
IBM	International Business Machines (Corporation)
ICC	International Criminal Court
ICO	Initial Coin Offering
ICTJ	International Center for Transitional Justice
ID	Identification
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IMT	Municipal Tax on Onerous Transfer of Real Estate (Portugal)
International IDEA	International Institute for Democracy and Electoral Assistance
IoT	Internet of Things
KYC	Know your customer
MiCA	Market in Crypto-Assets (Regulation)
MiFID II	.
ML/FT	Money laundering/financing of terrorism
MTF	Multilateral trading facilities
NFT	Non-fungible token
NGO	Non-governmental organization
OCC	(Portuguese) Chartered Accountants Association
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OECD	Organization for Economic Cooperation and Development
OTF	Organized trading facilities
P2P	People-to-people
PBC	People's Bank of China
PIT	Personal income tax
PoW	Proof-of-work
SR	Sveriges Riksbank (Sweden)
SS	Settlement system
TA	(Portuguese) Tax authority
TC	Truth commissions
TFV	Trust fund
TJ	Transitional justice
TRC	Truth and reconciliation commissions

TSS	Trading and settlement system
UK	United Kingdom of Great Britain and Northern Ireland
UKJT	UK Jurisdiction Taskforce
UN	United Nations
UNHCR	Office of the High Commissioner for Refugees (United Nations)
US	United States (of America)
USA	United States of America
USD	United States Dollar
UTP	Unofficial Truth Projects
VAT	Value-added tax
WFP	World Food Program