

Palgrave Studies in Financial Services Technology

Series Editor
Bernardo Nicoletti
Rome, Italy

The Palgrave Studies in Financial Services Technology series features original research from leading and emerging scholars on contemporary issues and developments in financial services technology. Falling into 4 broad categories: channels, payments, credit, and governance; topics covered include payments, mobile payments, trading and foreign transactions, big data, risk, compliance, and business intelligence to support consumer and commercial financial services. Covering all topics within the life cycle of financial services, from channels to risk management, from security to advanced applications, from information systems to automation, the series also covers the full range of sectors: retail banking, private banking, corporate banking, custody and brokerage, wholesale banking, and insurance companies. Titles within the series will be of value to both academics and those working in the management of financial services.

More information about this series at
<http://www.palgrave.com/gp/series/14627>

Rosario Girasa

Regulation of Cryptocurrencies and Blockchain Technologies

National and International
Perspectives

palgrave
macmillan

Rosario Girasa
Lubin School of Business
Pace University
Pleasantville, NY, USA

Other publications by the author writing under the name of Roy J. Girasa
Cyberlaw: National and International Perspectives
Corporate Governance and Finance Law
Laws and Regulations in Global Financial Markets
Shadow Banking: Rise, Risks, and Rewards of Non-Bank Financial Services

Palgrave Studies in Financial Services Technology
ISBN 978-3-319-78508-0 ISBN 978-3-319-78509-7 (eBook)
<https://doi.org/10.1007/978-3-319-78509-7>

Library of Congress Control Number: 2018942528

© The Editor(s) (if applicable) and The Author(s) 2018

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Printed on acid-free paper

This Palgrave Macmillan imprint is published by the registered company Springer International Publishing AG part of Springer Nature.
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

*To a most remarkable family
Giorgio, Concetta, Rita, and Giuseppe Alescio*

Preface

Most people who have read about Bitcoin and numerous other imitators have noted the incredible rise in monetary value of these offerings, leading to questions such as “What in the world is Bitcoin?”, “Why is there such madness among individuals purchasing and engaging in not only Bitcoin but also in the technology underlying it?”, “What is the identity of its creator?”, and many other related questions. Having written several volumes on finance law topics, it was bewildering to come across an entirely new mode of financial transactions that contradicts almost all of the established norms of safety provided by governmental backing of currencies, rules and regulations that essentially keep wrongdoers at bay in their attempts to take advantage of fault lines in the system, and other safety nets.

This author’s interest was sparked in part when his undergraduate students spoke about Bitcoin but he was also alerted to the many types of digital coins and tokens, their investment, and the immediate sizeable profits gained through their purchase. It was the first time in decades of teaching when students not only expressed interest in the subject matter of cryptocurrencies but were also investing in them. Thus, this author believes there was little choice but to learn about the new phenomenon and hopefully aid others interested in the subject matter.

Inasmuch as there are innumerable articles that assist the reader in understanding both the nature and how to invest in Bitcoin and other

cryptocurrencies, there is little need for a volume repeating what is already widely known. This author, in each of his prior books, was interested in the government's role in safeguarding investors and consumers. Thus, the focus of this volume is the protection of purchasers of the new currencies from the inevitable fraud and other malfeasance that accompanies the world of finance. Although the concentration is on regulations that have and will arise in the United States (U.S.), the actions of other nations are also examined in an attempt to comprehend how nations grapple with Bitcoin, and its offspring. We will review governmental efforts to ban, significantly control, or simply tolerate the inevitable use of cryptocurrencies that cannot be prevented any more than government endeavors to control the use of the Internet. Regardless of how Bitcoin and other coins and tokens fare in the marketplace, it is beyond any reasonable doubt that the underlying technology will profoundly affect how the manifold types of business transactions and social activities transpire.

Having researched alone all of the materials indicated herein, any errors are mine alone. The ideas expressed are not unique but are based on hundreds of articles and sources downloaded from numerous websites globally. It is hoped that this volume brings together the collective undertakings in a manner that both the experienced entrepreneur and average reader will comprehend.

Thanks to all at Palgrave Macmillan who assisted in the publication of this work especially Alison Neuberger for her input, Tula Weis for numerous correspondence and seeing this through, and Ruth Noble for final completion of the administrative details of the text. Thanks also to D. Pavithra Muralikrishna at SPi Global for supervising the production process.

Please note. This volume is not intended to offer legal advice but rather is the author's analysis and opinions based on the numerous articles, commentaries, speeches, regulations, and other material read and downloaded in an attempt to understand the new technologies and provide a text in readable form for students and all others interested in the subject matter. Personal legal questions should be referred to knowledgeable counsel.

Contents

The Digital Transformation	1
Technology Underlying Cryptocurrencies and Types of Cryptocurrencies	29
Legal Issues of Digital Technology	57
Federal Regulation of Virtual Currencies	71
States' Regulation of Virtual Currencies	115
Criminal Prosecutions and Civil Litigation Concerning Virtual Currencies	139
Crowdfunding and the Taxation of Virtual Currencies	169
International Regulation	199
Conclusion: The Future of Cryptocurrencies	247

Appendix 1: How Bitcoins Enter into Circulation and Are Used in Transactions	253
Appendix 2: SEC Commissioner Jay Clayton’s List of Questions Investors Should Ask Before Engaging in Cryptocurrencies	255
Index	257

Acronyms

AICPA	American Institute of Certified Public Accountants
AIFMD	Alternative Investment Fund Managers Directive
AML	Anti-Money Laundering
API	Application Programming Interface
ASIC	Specific Integrated Circuit
ATM	Automated Teller Machine
B2B	Business-to-business
BSA	Bank Secrecy Act
BIS	Bank for International Settlements
BRIC	Brazil, Russia, India, and China
BTC	Unit of Currency or Amount
CBOE	Chicago Board Options Exchange
CEA	Commodity Exchange Act
CFD	Contract for Difference
CFE	CBOE Futures Exchange
CFPB	Consumer Financial Protection Bureau
CFTC	Commodity Futures Trading Commission
CIS	Collective Investment Scheme
CME	Chicago Mercantile Exchange
CPU	Central Processing Unit
CSA	Canadian Securities Administrators
CSBS	Conference of State Bank Supervisors
CSDR	Central Securities Depositories Regulation

xii **Acronyms**

DAO	Decentralized Autonomous Organization
d.b.a.	doing business as
DCM	Designated Contract Market
DCO	Digital Clearing Organization
DLT	Distributed Ledger Technology
ECB	European Central Bank
EEU	Eurasian Economic Union
EMIR	European Market Infrastructure Regulation
ENISA	European Union Agency Network and Information Security
ESMA	European Securities and Markets Authority
EU	European Union
FATCA	Foreign Account Tax Compliance Act
FATF	Financial Action Task Force
FBI	Federal Bureau of Investigation
FDIC	Federal Deposit Insurance Corporation
Fed	Federal Reserve Board
FIA	Futures Industries Association
FinCEN	Financial Crimes Enforcement Network
FINRA	Financial Industry Regulatory Authority
FMP	Financial Market Participant
FOREX	Foreign Exchange
FPGA	Field-Programmable Gate Array
FSOC	Financial Stability Oversight Council
FTC	Federal Trade Commission
GPU	Graphics Processing Unit
GSA	Government Services Administration
HSI	Homeland Security Investigations
ICE	Immigration and Customs Enforcement
ICO	Initial Coin Offering
IFPCU	Illicit Finance and Proceeds of Crime Unit
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IP	Intellectual Property
IPO	Initial Public Offering
IT	Information Technology
ITO	Initial Token Offering
KYC	Know Your Customer
MiFID	Markets in Financial Instruments Directive

MiFIR	Markets in Financial Instruments Regulation
MSB	Money Services Business
NAFTA	North American Free Trade Agreement
NASAA	North American Securities Administrators Association
NDF	Non Deliverable Forward
NFA	National Futures Association
NYSE	New York Stock Exchange
OCC	Office of the Comptroller of the Currency
OECD	Organisation for Economic Co-operation and Development
OM	Offering Memorandum
P2P	Peer-to-Peer
PCAST	President's Council of Advisers on Science and Technology
PCS	Payment, Clearing, and Settlement
SDRs	Special Drawing Rights
SEC	Securities and Exchange Commission
SEF	Swap Execution Facility
SFD	Social Fund for Development
SQL	Structured Query Language
TITANIUM	Tools for the Investigation of Transactions in Underground Markets
UCITs	Undertakings for Collective Investments Securities
UN	United Nations
U.S.	United States
VAT	Value Added Tax
WEF	World Economic Forum

Table of Cases

- Asahi Metal Industry Co. v. Superior Court*, 480 U.S. 102 (1987).
- BFXNA Inc. d/b/a BITFINEX*, CFTC Docket No. 16–19 (June 2, 2016).
- CFTC v. Dean*, No. 18-cv-00345 (E.D.N.Y., Jan. 18, 2018).
- CFTC v. Gelfman Blueprint, Inc.* No. 1-17-cv-07181 (S.D.N.Y., Sept. 21, 2017).
- CFTC v. McDonnell*, No. 18-cv-0361 (E.D.N.Y., Jan. 18, 2018).
- CFTC v. My Big Coin Play*, No. 18-cv-10077-RWZ (D.C. Ma., Jan. 16, 2018).
- Chino v. N.Y. Dept. of Fin. Services*, Claim N. 124835. Index No. 101880-15 (NY Ct. Cl. 2015).
- Chino v. N.Y. Dept. of Fin. Services*, 2017 NY Slip Op 51908 (N.Y. Sup. Ct. 2017).
- Doran v. Petroleum Mgmt. Corp.*, 545 F.2d. 893 (1977).
- FTC v. BF Labs, Inc.*, No. 4:14-cv-00815-BCW (D.C. Mo., Sept. 14, 2014).
- FTC v. Chevalier*, No. 3:15-cv-01029-AC (D.C. Or. June 10, 2015).
- Gordon v. Dailey*, No. 14-cv-7495 (D.C.N.J., July 25, 2016).
- In re Caviar and Kirill Bensonoff*, Docket No. E-2017-0120 (Ma. Adm. Proceeding, Jan. 17, 2018).
- In re Coinflip d/b/a Derivavit*, CFTC Docket No. 15–29 (Sept. 17, 2015).
- In re John Doe*, No. 3:16-cv-06658-JSC (N.D.Ca. Nov. 17, 2016).
- In re TeraExchange LLC*, CFTC Docket No. 15–33, (Sept. 24, 2015).
- In re Virtual Mining, Corporation*, Mo. Sec. State, Case No. AP-14-09 (June 2, 2014).
- In re Voorhees*, SEC No. 3–15902 (June 3, 2014).
- International Shoe Co. v. Washington*, 326 U.S. 310 (1945).
- Long v. Shultz Cattle Co.*, 881 F.2d 129 (1989).

- Ripple Labs Inc. v. R3 LLC*, No. CGC 17-561205 (Sup. Ct. San Fran, Sept. 8, 2017).
- R3 Holdco v. Ripple Labs, Inc.*, No. 655781/17 (Sup.Ct. N.Y.Cty.)
- SEC v. Arisebank*, 3:118-cv-00136-M (N.D. Tx. Jan. 25, 2018).
- SEC v. PlexCorps*, No. 17 Civ-7007 (E.D.N.Y. Dec. 1, 2017).
- SEC v. REcoin Group Foundation, LLC*, No. 17 Civ 0725 (E.D.N.Y. Sept. 29, 2017).
- SEC v. Shavers*, No. 4:13-CV-416 (S.D. Tex. Aug. 6, 2013).
- SEC v. Sand Hill Exchange*, SEC 3-16598 (2015).
- SEC v. UBI Blockchain Internret*, SEC Release No. 82452 (Jan. 5, 2018).
- SEC v. W.J. Howey & Co.*, 328 U.S. 293 (1946).
- SEC v. Willner*, 1:17-cv-06305 (E.D.N.Y. Oct. 30, 2017).
- U.S. v. Benthall*, No. 14 MAG 2427 (S.D.N.Y. 2016).
- U.S. v. Bridges*, No. 1:15-mj-02125-BPG (D.C. Md. Dec. 17, 2016).
- U.S. v. BTC-e*, No. CR 16-00227-SI (N.D. Ca. Jan 17, 2017).
- U.S. v. Cazes*, No. 1:17-at-00597 (N.D. Ca. July 17, 2017).
- U.S. v. Coinbase*, No. 17-cv-01431-JSC (D.C.N.D. Ca. Nov. 28, 2017).
- U.S. v. Faiella*, No. 14-MAG-0164 (S.D.N.Y. Jan. 24, 2013).
- U.S. v. Force*, No. 3:15-cr-01319-RS-2 (N.D. Ca. Oct. 20, 2015).
- U.S. v. Lord*, Cr. No. 15-00240-01 (W.D. La., Apr. 20, 2017).
- U.S. v. Liberty Reserve*, 13cr368 (DLC) (S.D.N.Y. Sept. 23, 2015).
- U.S. v. Murgio*, No. 15-MAG-2508 (S.D.N.Y. July 17, 2015).
- U.S. v. Ulbricht*, No. 15-1815 (2d Cir. March 31, 2017).
- Zippo Mfr. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119 (W.D. Pa. 1997).