Josef Bergt

Decentralized Finance Unmasked

Behavioral Finance and Public Policy Insights on Financial Market Regulation



Nomos

Josef Bergt **Decentralized Finance** Unmasked Behavioral Finance and Public Policy Insights on Financial Market Regulation **Nomos**

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at http://dnb.d-nb.de

ISBN 978-3-7560-0715-8 (Print) 978-3-7489-4301-3 (ePDF)

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

ISBN 978-3-7560-0715-8 (Print) 978-3-7489-4301-3 (ePDF)

Library of Congress Cataloging-in-Publication Data

Bergt, Josef

Decentralized Finance Unmasked

Behavioral Finance and Public Policy Insights on Financial Market Regulation Josef Bergt

227 pp.

Includes bibliographic references.

ISBN 978-3-7560-0715-8 (Print) 978-3-7489-4301-3 (ePDF)

1st Edition 2023

© Josef Bergt

Published by Nomos Verlagss

Nomos Verlagsgesellschaft mbH & Co. KG Waldseestraße 3–5 | 76530 Baden-Baden www.nomos.de

Production of the printed version: Nomos Verlagsgesellschaft mbH & Co. KG Waldseestraße 3–5 | 76530 Baden-Baden

ISBN 978-3-7560-0715-8 (Print) ISBN 978-3-7489-4301-3 (ePDF)

https://doi.org/10.5771/9783748943013



DOI

This work is licensed under a Creative Commons Attribution 4.0 International License.



Online Version Nomos eLibrary

Dedication

To Tabea, whose spirit inspired every line.
And to the one who is yet to be, who will bring the story to life,
May you discover the power of dreams and the magic of your own
journey.

To those who dare to dream beyond the confines of reality,
Who find solace in the whispers of imagination,
In your hands, we entrust the magic of worlds yet unseen,
For without you, these pages would wander through eternity,
Bound to the echoes of what could have been.
Imagination, our most faithful companion and guide,
Will often carry us to realms of wonder and delight,
Weaving tapestries of stories that never were,
Yet without its embrace, our souls would remain anchored,
In the harbor of the mundane, never to embark on the infinite
seas.

So, to the dreamers, the visionaries, the weavers of tales, Let your hearts soar and your spirits take flight, For you are the architects of the worlds that never were, And it is your imagination that propels us to the stars, Boundless, free, and forever untamed.

Acknowledgements

I would like to begin by expressing my profound gratitude to my colleagues and fellow researchers in the field. Without their collective wisdom, insights, and dedication to advancing our understanding, this book would not have been possible. The collaborative spirit that defines our academic community has been instrumental in shaping the ideas presented within these pages.

My heartfelt appreciation goes to my mentors and advisors, whose guidance and encouragement have been invaluable throughout my academic and professional journey. Their wisdom, expertise, and unwavering support have not only inspired my work but also nurtured my growth as a scholar and thinker.

To my peers who have generously contributed their time and expertise by reviewing and providing feedback, I extend my deepest gratitude. Your constructive criticism and suggestions have been vital in refining the arguments and ideas presented in this work.

Lastly, I wish to express my eternal gratitude to my family and friends for their unwavering love, patience, and support throughout this journey. Their belief in me and my work has been a constant source of strength and inspiration.

To all who have played a part, both large and small, in the creation of this book, I offer my sincerest appreciation. It is my hope that this work contributes to the ongoing dialogue and furthers our collective understanding of the subject at hand.

Table of Contents

1	Abstract			
2	Introduction			
2.1	Interdisciplinarity of law and economics, sociology, psychology and information technology with regard to financial markets			
2.2	Sciences vs Humanities – the lost sociology of law in Europe?			
2.3	Scope & Research Subject			
	Methodology			
3		Current state of research on behavioral economic insights for financial market regulation		
3.1	History of behavioral finance & psychological biases related to finance		38	
	3.1.1	Representativeness bias	41	
	3.1.2	Familiarity bias	42	
	3.1.3	Cognitive dissonance	42	
	3.1.4	Endowment effect	43	
	3.1.5	Overconfidence bias	43	
	3.1.6	Status quo bias	44	
	3.1.7	Law of small numbers	44	
	3.1.8	Anchoring	44	
	3.1.9	Mental accounting	45	
		Disposition effect	45	
		Attachment bias	46	
	3.1.12	Prospect Theory – loss aversion and risk seeking	46	
		Social norming	47	
	3.1.14	Interim conclusion	48	
3.2	Biases in financial investment behavior		48	
	3.2.1	Investor decision making process and consumer biases	48	
	3.2.2	Interim conclusion	51	
	3.2.3	Behavioral corporate finance and managerial biases	52	

Table of Contents

	3.2.4	Interim conclusion	53
	3.2.5	Behavioral biases, financial literacy and demographic	
		variables	54
3.3	The ro	ole of bias in financial regulation	57
	3.3.1	How attention and presentation impact information	
		processing and memory retention	57
	3.3.2	The impact of omission bias on decision making, social	
		norms and procyclical behavior	58
	3.3.3	How ideological dimensions may shape financial	
		regulation	63
	3.3.4	Interim conclusion	65
3.4	Regulatory behavior or behavioral public policy with regard to		
	regula	tion	66
	3.4.1	Diversification and the value of financial intermediation	69
	3.4.2	Regulation of investors? Balancing investor protection	
		and diversification in regulatory frameworks	71
	3.4.3	Negative implications of the fix-it-fallacy on social	
		policymaking	73
	3.4.4	Exploring the role of regulatory ideologies in shaping	
		economic public policy	75
	3.4.5	Advancing policy instruments research: Addressing key	
		gaps and enhancing public policy outcomes on the	
	2.4.6	crossroads of behavioral finance and neuroscience	77
	3.4.6	Interim conclusion	82
3.5	Regulation of centralized Finance		
	3.5.1	Considerations when applying behavioral economic	
		findings in real-world situations and policymaking	87
		Who does banking regulation protect?	91
		Case study 1	91
		Case study 2	93
		Case study 3	94
	3.5.6	Interim conclusions	97
4	Applic	cation of regulatory mechanisms to decentralized finance	99
4.1	Decentralization shams vs real DeFi		100
	4.1.1	Types of blockchains	100

	4.1.2		centralization promise of DeFi	102	
	4.1.3	DeFi architecture			
	4.1.4	Decent	ralization shams and other supervisory challenges	105	
	4.1.5	Interim	conclusion	108	
1.2	Emerging markets of DeFi & regulatory approaches, MiCAR				
	and D	LT pilot	regimes	110	
	4.2.1	DAOs,	the tokenization of assets and rights and the		
		regulate	ory goals of MiCAR	110	
		4.2.1.1	Evolution of the theory of the firm, social		
			economy organizations and decentralized		
			autonomous organizations	112	
		4.2.1.2	Public policy goals of MiCAR and classification		
			of crypto assets	115	
		4.2.1.3	Interim conclusion	126	
	4.2.2	Regulat	ted markets, lateral exchange markets,		
		decentr	alized exchanges and trust in intermediating		
		technol	ogy platforms	127	
		4.2.2.1	Traditional regulated markets	128	
		4.2.2.2	Trust in intermediating technology platforms	130	
		4.2.2.3	Lateral exchange markets in the form		
			of blockchain-based decentralized exchanges		
			(DEX)	134	
		4.2.2.4	DLT Pilot Regime	136	
		4.2.2.5	Interim conclusion	142	
	4.2.3	Crowdi	funding Services & emerging markets of DeFi		
		lending		144	
	4.2.4	Decent	ralized derivatives – a growing trend in the DeFi		
		ecosyst	em	147	
	4.2.5	DeFi po	ortfolio management and investment schemes	149	
	4.2.6	The rol	e of crypto asset mixers as privacy enhancing		
		protoco	ols and financial intermediaries	150	
	4.2.7	DORA	- digital operational resilience	154	
	4.2.8	Global	financial regulation?	158	
1.3	Further behavioral finance and regulatory public policy aspects				
	in the context of DeFi and new developments				
	4.3.1	Perceiv	ed risk and uncertainty in decision research and		
			tions for public policy and behavioral finance	161	

Table of Contents

	4.3.2	Choice architecture, framing effects, and default options in DeFi policy	169
	4.3.3	Potential for herding and mass contagion in AI-driven investment decisions	173
	4.3.4	The role of behavioral economics in public policy and its challenges	178
4.4	Interi	n conclusion	182
	4.4.1	Decentralized organizations, tokenization as well as centralized and decentralized market infrastructures	
	4.4.0	under the EU digital finance package	183
	4.4.2	DeFi lending, derivatives, portfolios and privacy	104
	4.4.3	enhancing protocols Additional EU digital finance packages	184 185
		Behavioral finance and regulatory public policy	100
	7,7,7	implications	186
5	Key fi	ndings & future prospects	189
5.1	Interpretation and classification of the results		193
5.2	2 Implications in practice		196
5.3	Implications in theory and research		198
5.4	Limitations and future research		199
5.5	5 Conclusion		202
6	List of sources		

Table of Figures

Figure 1:	Taxonomy of Literature Reviews (Becker, 2012), following Cooper, 1988, with categories applied on this work being emphasized in green.	33
Figure 2:	Blockchain type matrix based on read and write rights (Bergt, 2020).	101
Figure 3:	Multi-layered DeFi architecture following Schär (2021).	104
Figure 4:	MiCA-Regulation Token Classification, own figure.	118
Figure 5:	Trading facility or stock exchange functioning based on Bergt (2020, p. 228; 2021b, p. 55).	129

Editorial Notes

For better readability, the use of gender-specific forms of speech is dispensed with in work. All gender identities are expressly included.

Furthermore, it should be noted that the abbreviation and citation rules of the American Psychological Association (2020), Publication manual of the American Psychological Association (APA), 7. ed. Washington: APA, are predominantly followed with regard to citation in this work. Parts of the work have been used at the Seeburg Castle University, Seekirchen am Wallersee, Austria.

Lastly, where implementation has already taken place in the respective jurisdictions, the European Case Law Identifier (ECLI) is used to cite court decisions. Similarly, secondary European law is cited using the European Legislation Identifier (ELI).

1 Abstract

English

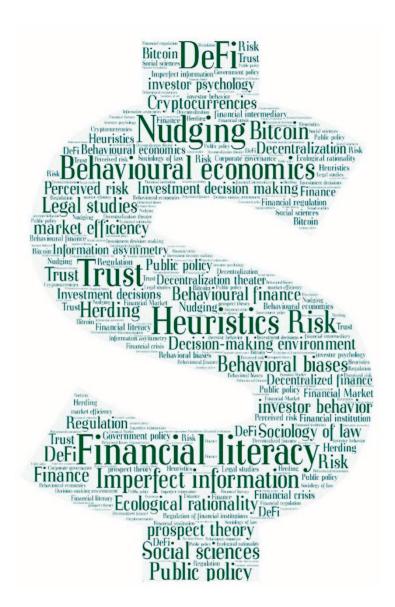
The advent of decentralized finance (DeFi) has engendered a myriad of 1 novel challenges and prospects for investors, intermediaries, and regulatory bodies alike. To navigate this complex landscape, it is imperative to understand the intricate interplay between behavioral finance and public policy, enabling the development of efficacious regulatory strategies that tackle these challenges while harnessing and capitalizing on the advantages and benefits offered by DeFi. This conceptual literature review investigates DeFi's transformative potential within financial systems and the associated risks, encompassing smart contract vulnerabilities, dependencies on other protocols, decentralization shams and trust mechanisms. By dissecting the complexities at the intersection of behavioral finance and public policy, this study delves into the decision-making processes in financial markets and regulatory public policymaking, particularly within the context of DeFi. Subsequently, recommendations for refining regulatory frameworks and practices to facilitate a more robust and adaptive financial ecosystem are proposed, taking findings from behavioral finance into account. In short, the answer to regulating DeFi, may be found in regulating peers based on their offered services (if any), making them responsible for compliance with financial market regulation, trade law, tax law, and other provisions as applicable.

German

Das Aufkommen von decentralized Finance (DeFi) hat eine Vielzahl 2 neuer Herausforderungen und Chancen für Anleger, Intermediäre und Regulierungsbehörden gleichermaßen geschaffen. Um in dieser komplexen Landschaft navigieren zu können, ist es unerlässlich, das komplexe Zusammenspiel zwischen behavioural finance und public policy zu verstehen, um wirksame Regulierungsstrategien zu entwickeln, um diese Herausforderungen zu bewältigen und gleichzeitig die Vorteile und Chancen, die DeFi bietet, nutzen und ausschöpfen zu können. Diese konzeptionelle Literaturarbeit untersucht das transformative Potenzial von DeFi innerhalb der Finanzsysteme und die damit verbundenen Risiken, einschließlich der Schwachstellen von Smart Contracts, Abhängigkeiten von

anderen Protokollen, Dezentralisierungsschwindel und Vertrauensmechanismen. Durch die Aufgliederung der Komplexität an der Schnittstelle von behavioral finance und public policy analysiert diese Arbeit die Entscheidungsprozesse in Finanzmärkten und regulatorischen public policy Entscheidungen, insbesondere im Kontext von DeFi. Anschließend werden Empfehlungen zur Verfeinerung der regulatorischen Rahmenbedingungen und Praktiken vorgeschlagen, um ein robusteres und anpassungsfähigeres Finanzökosystem zu ermöglichen, unter Berücksichtigung von Erkenntnissen aus dem behavioral finance Bereich. Kurzum, die Antwort betreffend die Art der Regulierung von DeFi könnte darin bestehen, Peers auf der Grundlage der von ihnen angebotenen Dienstleistungen zu regulieren und sie für die Einhaltung der Finanzmarktregulierung, des Handelsrechts, des Steuerrechts und anderer Vorschriften, soweit anwendbar, verantwortlich zu machen.

Keywords: Financial literacy, behavioral economics, imperfect information, heuristics, trust, nudging, decision-making environment, ecological rationality, behavioral finance, behavioral biases, investment decision making, information asymmetry, public policy, sociology of law, DeFi, decentralized finance, market efficiency, prospect theory, investor psychology, investor behavior, social sciences, legal studies, investment decisions, cryptocurrencies, decentralization, herding, bitcoin, risk, perceived risk, behavioral economics, regulation, public policy, finance, financial market, financial institution, financial regulation, government policy, corporate governance, financial crisis, regulation of financial institutions.



Bergt, J. (2023). Word cloud - financial markets, DeFi & public policy





Bergt, J. (2023). Sociology of law as a candle in the dark & decentralization theater