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Maximilian Markus Grossmann

# Blockchain-Based Bonds

A Game Changer in Corporate  
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# Blockchain-Based Bonds

A Game Changer in Corporate  
Financing?

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## Abstract

This study delves into the impact of blockchain-based bonds on corporate financing and the bond market, with a specific focus on Germany. Utilizing qualitative insights from 19 experts, it compares blockchain-based bonds with traditional bonds, explores market-adoption dynamics, assesses the evolving roles of market intermediaries, and considers future development prospects. The findings suggest that blockchain-based bonds could offer long-term benefits in terms of accessibility, overall risk, cost efficiency, and transparency. However, they currently face significant challenges, including technological fragmentation, high liquidity risks, large investment requirements, and regulatory complexities. Market adoption is still in its nascent stages, with development initiatives like the DLT Pilot Regime not yet making a substantial impact. The study also highlights a potential shift in the roles of market intermediaries in the blockchain era, indicating new functions and possible obsolescence for some traditional roles. Experts offer varied predictions for the future of blockchain-based bonds, from the possibility of replacing traditional bonds to serving as complementary solutions or being superseded by other digital approaches. The study concludes that while blockchain-based bonds hold considerable potential for transforming the financial sector, their full adoption and impact depend on overcoming current challenges and adapting to the evolving regulatory and overall market dynamics.

**Keywords:** Blockchain-based bonds · Corporate financing · DLT · Financial markets transformation · Fintech

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## Abbreviations

AI	Artificial intelligence
AML	Anti-money laundering
<i>BaFin</i>	<i>Bundesanstalt fuer Finanzdienstleistungsaufsicht</i> [Federal Financial Supervisory Authority]
BCBS	Basel Committee on Banking Supervision
BTC	Bitcoin
CBDC	Central Bank Digital Currency
CBECI	Cambridge Bitcoin Energy Consumption Index
CCP	Central counterparty
COVID-19	Coronavirus disease 2019
CSD	Central Securities Depository
CSDR	Central Securities Depositories Regulation
dApp	Decentralized application
DLT	Distributed ledger technology
DvP	Delivery versus payment
<i>e.g.</i>	<i>Exempli gratia</i> [for example]
ECB	European Central Bank
EIB	European Investment Bank
EMIR	European Market Infrastructure Regulation
ESG	Environmental, social and governance
ESMA	European Securities and Markets Authority
ETH	Ether
EU	European Union
EUGB	European Union green bonds

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EVM	Ethereum Virtual Machine
<i>eWpG</i>	<i>Gesetz ueber elektronische Wertpapiere</i> [German Electronic Securities Act]
<i>eWpRV</i>	<i>Verordnung ueber Anforderungen an elektronische Wertpapierregister</i> [Ordinance on Requirements on Electronic Securities Registers]
Fintech	Financial technology
FMI	Financial market infrastructure
GB	Gigabyte
ICO	Initial coin offering
<i>i.e.</i>	<i>Id est</i> [that is]
IoT	Internet of things
KWG	<i>Kreditwesengesetz</i> [German Banking Act]
KYC	Know your customer
MB	Megabyte
MiCA	Markets in Crypto-Assets Regulation
MiFID	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
MTF	Multilateral trading facilities
NFT	Non-fungible token
OTC	Over-the-counter
P2P	Peer-to-peer
PoS	Proof of stake
PoW	Proof of work
RQ	Research question
SegWit	Segregated Witness
SME	Small and medium-sized enterprises
SPV	Simplified payment verification
SS	Settlement systems
TSS	Trading and settlement systems
TWh	Terawatt hour
UK	United Kingdom
U.S.	United States of America
y-o-y	Year-over-year

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