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# The Potential and Limitations of Bitcoin and Ethereum

*A Framework to Assess  
Blockchain Projects from  
a Business and Economics  
Perspective*

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ISBN 978-3-031-56782-7      ISBN 978-3-031-56783-4 (eBook)  
<https://doi.org/10.1007/978-3-031-56783-4>

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# PREFACE—THE NEEDS IN BLOCKCHAIN PRACTICE

Blockchain is a socio-technical invention. But there is currently no systematic discussion of the interdisciplinary concepts that fit together to explain how it works. This book formulates and discusses the interdisciplinary and intertwining concepts that make up blockchain and its functions in society, starting from the social and technical circumstances that inspired it, and without assuming any previous knowledge of the subject from the reader.

Then, this book distils the central non-technical concepts of blockchain into a framework summarized as the “EBC Pyramid”.

This book has contributed to practice in two ways.

First, blockchain development has lacked conceptual guidance from non-technical fields. For example, a lot of recent efforts in blockchain have focused on solving technical challenges and building programming tools without regard to actual problems in society to address. While engineering advances can be inherently valuable, the most promising use of engineering effort is to address existing needs in society. There are economic, political, and legal problems that blockchains may address in society without fundamental advances in algorithm research. With the conceptual proposals in this book, engineering efforts might be directed more productively.

Second, and more practically, blockchains have become a new investment arena. The way most blockchain projects relies on incentives for participation means there is an investment market in cryptocurrencies

from blockchain projects. These cryptocurrencies have made many people either wealthy or guilty. There is now an increasing need for systematic and reasoned blockchain analysis to assess and evaluate cryptocurrencies and blockchain projects. Indeed, an interdisciplinary conceptual understanding of blockchain will lead to more reasoned criteria in judging blockchain applications.

For the two purposes above, this book ultimately presents through its discussions a summarized “EBC Pyramid” framework. This framework distills the most relevant non-technical concepts that affect the viability and potential of blockchain applications. There is no other framework on this at the moment, and such a conceptual framework is much needed.

This EBC Pyramid framework, it is hoped, gives a structure to assist in the evaluation, critique, and otherwise discussion of individual blockchain applications. It is phrased as a few non-technical questions to consider when looking to start, participate in, or otherwise examine a particular blockchain application. The book then uses this framework to propose the possible non-technical foundations of Bitcoin and Ethereum. It is hoped the reader find the discussions and framework useful in an emerging world of blockchains.

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