BRIAN KELLY

The Bitcoin Big Bang

How Alternative Currencies Are About to Change the World

WILEY

THE BITCOIN BIG BANG

THE BITCOIN BIG BANG

How Alternative Currencies Are About to Change the World

Brian Kelly

WILEY

Cover image: © iStock.com/pixelparticle
Cover design: Wiley

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.
Published simultaneously in Canada.

ISBN 9781118963661 (Hardcover)
ISBN 9781118963647 (ePDF)
ISBN 9781118963654 (ePub)

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

For my wife, Dawn, this book is a testament to your unwavering faith in my stupid ideas.

Contents

Preface

Every so often I find myself with the insatiable desire to jump off a cliff and think about the consequences later. Some may call it curiosity, while others think I am just plain crazy. I typically relish the skepticism, as I have found that the best opportunities arise when everyone else thinks I am a little nuts. The Bitcoin Big Bang was one of these times—actually, truth be told, this time I was the one who was skeptical. Despite my fear, uncertainty, and doubt, I jumped anyway.

When I began writing *The Bitcoin Big Bang,* it was for selfish reasons: I had bought Bitcoin near the peak and now was in a losing trade and needed to know everything about this "investment." I figured I could turn my research into a book and learn a few things in the process. I did not know that I had stumbled on one of the most fascinating and promising technological advances since the Internet. When I first heard of Bitcoin, it was through the currency markets, and that is where my journey to Bitcoin Enlightenment began.

I mistakenly assumed that Bitcoin was an interesting new currency that had held little promise. After all, was the U.S. government really going to allow an unregulated currency based on computer code to replace the dollar? What I now realize is that the currency is

not the innovation; the blockchain technology is the game changer. The currency—bitcoin—is a fascinating alternative currency that has the potential to disrupt the global payment networks. However, it is the blockchain technology that is revolutionary.

The concept of the blockchain enables the transfer of secure information over an unsecured network. This may sound like a small step, but it is the first time in human history that this has been possible. The blockchain solves a multidecade-old problem in computer networking, and it can be applied to more than just currencies. It has the potential to end identity theft, create a secure Internet without the need for passwords, and revolutionize the way corporations do business.

When Jeff Bezos left a lucrative job as an investment banker to start an Internet bookstore called Amazon, everyone thought he was crazy. At that time, video stores like Blockbuster were in their prime and smartphones were landlines with an answering machine attached. Today, that same company (Amazon) is a leader in streaming video content to a handheld computer called a smartphone.

I do not know what alternative currencies will look like or accomplish over the next 20 years, but I do know that when a revolutionary technology is born, the world changes.

My goal with the book was to answer four questions:

1. What is Bitcoin, and why is it revolutionary?
2. How does it work?
3. Why are digital currencies a new type of investment?
4. How are alternative currencies going to change the world?

To this end, the book was written with two sections in mind. The first half of the book describes what Bitcoin is and how it works, while the second half illustrates the multiple uses of the blockchain technology and explores the ramifications for investments, business, and government.

An innovative technology was created by an anonymous programmer, who has given it away for free. This creation has spurred a technological explosion similar to the personal computer and the Internet, and, like its predecessors, alternative currencies are about the change the world.

—BK

Acknowledgments

When I began writing this book I thought it would be a solitary endeavor—countless hours writing alone to produce a manuscript that somebody might decide to read. Boy, was I wrong! This book would not exist without the contributions from friends and colleagues.

Let me start by thanking Jeffery Krames, who contacted me four years ago and convinced me I should write a book. It took a while, but this book is a testament to your persistence, patience, and conviction. You always knew I had a book in me.

To the CNBC *Fast Money* production team: thank you for supporting this project and for being an integral part of launching Nautiluscoin. Lisa Villalobos, the multitalented executive producer of *Fast Money*—you were able to take my slides of cryptographic hash functions and economic theory and turn them into a digestible television segment. You make it look easy. Michael Newberg, who was charged with producing a segment on a subject that I was still struggling to comprehend—you skillfully took an esoteric concept and turned it into a television segment that everyone could understand.