THE DEFINITIVE GUIDE TO BLOCKCHAIN FOR ACCOUNTING AND BUSINESS

Understanding the Revolutionary Technology

SAURAV K DUTTA

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ENDORSEMENTS

Praise for *The Definitive Guide to Blockchain for Accounting and Business*

I have no doubt that Professor Dutta's book will be very well-received. He presents a clear and comprehensive overview of developments in blockchain technology that is both timely and highly accessisble to those looking to understand its wide range of business and industry applications.

Deborah Terry. *AO Vice-Chancellor,*
Curtin University, Perth, Australia.

A very intuitive and comprehensive book on blockchain technology and its business applications. Particularly relevant for professionals to understand the implications for business and accounting.

Wes Bricker, *Vice Chair—US and Mexico Assurance Leader,*
PricewaterhouseCoopers (PwC), U.S.A.

Blockchain technologies have redefined the way businesses operate. A great book for those who want to master the knowledge of blockchain.

Deborah Leung, FCPA, *Executive General Manager International,*
CPA Australia, Hong Kong.

A well written book that provides a timely examination of the many challenges and opportunities afforded by blockchain technology. Thoroughly recommended reading for professionals, managers and educators.

John Cordery, *Provost,*
Curtin University, Perth, Australia.

Through the description of various scenarios, this book illustrates blueprints for possible applications of blockchain. This book will lead in the education of future professionals in accounting and business.

Birong Dong, *Vice President,*
Nanjing Audit University,Nanjing, P. R. China

A great account of evolving blockchain technology and its application across varying industry sectors. Will be a key resource in educating accounting and business professionals of the future.

Colin Pavlovich, *Group CFO,*
Navitas, Australia.

An excellent coverage of blockchain evolution with an industry perspective of how it will mature in the future. It has several examples of how blockchain will be used, and that makes it easier for readers to apply the blockchain techniques as well.

Shyam Mamidi, Director,
Natsoft Corporation, Singapore.

Professor Dutta is a brilliant researcher, recognized teacher and an accomplished administrator. In this timely book, he guides a non-technical reader through a complex topic with effortless ease. A must-read for everyone connected with Business.

Bin Srinidhi, *Carlock Endowed Distinguished Professor,*
University of Texas at Arlington, U.S.A.

Professor Saurav Dutta has been engaged in accounting education and research for many years. The blockchain era has arrived which will bring many changes to accounting and finance professions. This book will enhance our understanding of the subject, deeply and comprehensively.

Xiao Xue. *Editor in Chief*
Friend of Accounting. P.R. China

A valuable resource for business and accounting professionals to gain a non-technical perspective on the inherent opportunities in blockchain.

Professor Carla Wilkin, *Head of Accounting,*
Monash University, Sydney, Australia.

This is a timely book explaining the essence of blockchain technology as digital ledger creating an incorruptible and de-centralised record-keeping system. Professor Dutta discusses the potential impact on bookkeeping processes and the required skillsets. The book is highly recommended for teaching students and upskilling professionals in the industry.

Claus Otto, *Director, Oil and Gas Innovation Centre,*
Curtin University, Perth, Australia.

An outstanding and valuable work for the accounting professionals and learners to understand how to apply the method of blockchain on accounting and business management.

Professor Tao Meng, *Dean of International Business College,*
Dongbei University of Finance and Economics, Dalian, P.R. China.

Professor Dutta has provided a fascinating and comprehensive introduction to a technology with critical applications to financial reporting, risk management, and auditing.

David Marcinko, *Emeritus Professor*
State University of New York, NY, U.S.A.

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Curtin University, Australia

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DEDICATION

I dedicate this book to my beautiful wife Ushashi
who for over thirty years has maintained
a detailed, easily accessible, immutable and time-stamped record
of my every foible, folly and flub.

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FOREWORD

Saurav Dutta's *The Definitive Guide to Blockchain for Accounting and Business: Understanding the Revolutionary Technology* is a timely tour de force for blockchain business understanding. It's crisply written with clear concise non-technical explanations of the key concepts that business professionals need to understand around the technology. But it's not a technical primer, rather it stands out as a seminal work in bridging the gap between technology and business. By first building or solidifying the reader's understanding of the core foundational concepts of blockchain and distributed ledgers, Saurav provides a graceful onramp into an exploration of the implications for business and accounting professionals. Through the highlighting of emerging business models built on these new technologies, then exploring the implications for careers in accounting and internal controls, the reader is provided an unbroken view of the whole region surrounding and supporting the emergence of one of the most important technologies of the twenty-first century.

David Deputy
President, Accounting Blockchain Coalition
Director, Strategic Development and Emerging Markets
Vertex, Inc. (U.S.A.)

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ABOUT THE AUTHOR

Professor Saurav Kumar Dutta is the Head of School of Accounting at Curtin University, Australia. He previously was the Chairman of the Department of Accounting and Business Law at the State University of New York and has held faculty appointments at Rutgers University (New Jersey, U.S.A.) and the City University of New York. He holds a Bachelor of Technology from the Indian Institute of Technology, Bombay (India), and a Ph. D. from the University of Kansas (U.S.A.). He was awarded the 1989 Robert Beyer Silver Medal for securing the second highest total score in the CMA examination and was also the recipient of the National Talent Search Scholarship awarded by the Government of India.

Throughout his academic career, spanning over 25 years, he has engaged in high-impact research which has greatly informed industry practices. He has influenced public policy in his role as an Academic Fellow in the Office of Chief Accountant at the U.S. Securities and Exchange Commission (SEC). In that role, he helped implement the Dodd-Frank Act and other measures from 'lessons learned' during the 2008 global financial crisis. While at the SEC, Saurav also served as a liaison with FASB, PCAOB, IASB and IAASB, all of which are critical standard-setting bodies that affect the accounting profession.

Saurav has been engaged by the New York State Attorney General's Office to investigate billing practices for a multi-national wholesale distributor. He was also engaged by the SEC to determine appropriateness of derivative accounting of a Fortune 50 insurance company and treatment of consolidation accounting of a Fortune 500 company resulting in settlement and

imposition of monetary fines on the companies. Under the purview of the United States District Court of the Southern District of New York, he was involved in designing statistical procedures to aid in the disbursement of amounts ranging between $500 million and $6.1 billion for settlements of MCI-WorldCom, Global Crossing, Cendant, and HealthSouth. He was also involved with the reparations of more than 400 million Swiss Francs from the Swiss banks to Holocaust victims, under the purview of the U.S. District Court of Eastern District of New York. Recently, he was engaged by Apple Computers as a defense expert in $600 million lawsuit under the jurisdiction of the U.S. District Court in the Northern District of California.

Saurav has authored a book, *Statistical Techniques for Forensic Accounting*, published by Financial Times Press in 2013. He has also authored White Papers and Course material for the Institute of Management Accounting. He has published more than 40 academic papers in reputed U.S. and international journals and has presented his work in numerous national and international venues.

ABOUT THE CONTRIBUTORS

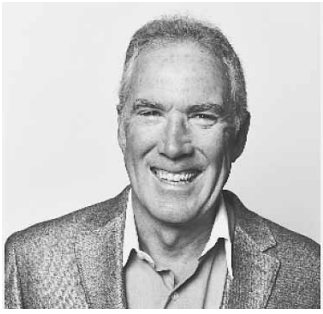
Roger M. Benites (Chapter 7)

Roger has been in the finance sector since 2010, starting in Fort Lauderdale, Florida, and then moving to Lima, Peru in 2012. Roger was introduced to Bitcoin and Blockchain technologies in 2013 due to the Argentinian and Venezuelan economic crisis. Roger assisted in establishing one of South America's first cryptocurrency exchanges. In 2017, Roger assisted state legislators in drafting Connecticut's first blockchain bill. Most recently he has been working with the Bitcoin Center, featured on Netflix's "Banking on Bitcoin", developing blockchain education and incubator programs.

Phillip G. Bradford (Chapter 7)

Dr. Bradford is the director of the computer science program at the University of Connecticut, Stamford. He worked for General Electric Asset Management, BlackRock, Reuters Analytics, and he co-founded a firm. He also was on the faculty at University of Alabama School of Engineering and at Rutgers Business School. Phil was a post-doctoral fellow at the Max-Planck-Institut für Informatik. He earned his PhD in computer science at Indiana University, an MS in computer science from the University of Kansas, and a BA in mathematics from Rutgers University.

Gerard (Rod) Brennan, CFE, MBA, Ph.D. (Chapter 12)



Rod is the Audit Technologies Director for Lukka, based in New York, New York. He is the former Audit Director and North America Risk & Internal Control Officer for Siemens Corp. and an Adjunct Professor at Rutgers Univ. Rod is an audit practitioner, frequent speaker and published researcher on the topics of blockchain, continuous auditing/monitoring/analytics, Rod continues to speak and do research in the area of automated audit and reporting for applications on DLT / Blockchains.

Mike Rogers, CPA (Chapter 8 and 10)

In 2018, Mike founded Millennials In Blockchain (MIB), a globally distributed learning collaborative. Mike currently serves as the head of MIB Consulting, a New York based digital transformation firm. Mike's tokenization research has been distributed by numerous corporations, including Securitize, Inc. and Deloitte. Mike formerly worked in financial services at Ernst & Young and The Blackstone Group L.P. He holds a B.S. in finance and a M.S. in accounting from The University at Albany, where he graduated Summa Cum Laude.

Lee Williams (Chapter 9)

Dr. David Lee Williams MD CCBOM is Minespider's regulatory expert with 15 years of experience in industrial raw material policy. He was previously the occupational health and safety regulatory expert for Michelin and chair of the technical group for the Cobalt Reach Consortium. He has been involved with blockchain since 2016.

Nathan Williams (Chapter 9)

Nathan Williams is a Canadian blockchain entrepreneur, based in Berlin, Germany. He is the Founder & CEO of Minespider, a decentralized protocol for responsibly sourced raw material data. Nathan has been featured in Forbes, Bloomberg, CNBC, Huffington Post, and Wired Germany. He is a UNECE/CEFACT Expert with a focus on blockchain and traceability related matters. He has his B.Sc. in computer science from McGill University, and his MBA from Concordia University in Montreal, Canada.