

# Contents

Introduction 1

## Part 1 • The Technology 11

- 1 Blockchains, Bitcoin, and Decentralized Computing Platforms 13
- 2 Characteristics of Blockchains 33

## Part 2 • Blockchains, Finance, and Contracts 59

- 3 Digital Currencies and Decentralized Payment Systems 61
- 4 Smart Contracts as Legal Contracts 72
- 5 Smart Securities and Derivatives 89

## Part 3 • Blockchains and Information Systems 105

- 6 Tamper-Resistant, Certified, and Authenticated Data 107
- 7 Resilient and Tamper-Resistant Information Systems 117

## Part 4 • Organizations and Automation 129

- 8 The Future of Organizations 131
- 9 Decentralized Autonomous Organizations 146
- 10 Blockchain of Things 156

## Part 5 • Regulating Decentralized, Blockchain-Based Systems 171

- 11 Modes of Regulation 173
- 12 Code as Law 193

Conclusion 205

Notes 213

Acknowledgments 289

Index 291