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Autore	Jiang Peng
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Sommario/riassunto	The rapid development and widespread application of blockchain technology have led to a diverse and heterogeneous blockchain ecosystem. Independent operations, resembling isolated data islands, increase the difficulty of data exchange among blockchains. Cross-chain technology has emerged to connect independent blockchains, facilitating asset transfer and information interaction. As a promising new technology, cross-chain solutions with strong interoperability have garnered attention from both academia and industry. However, cross-chain financial incidents have exposed significant information leakage and property loss, highlighting the need for regulation and privacy in

cross-chain environments. The lack of uniformity in cross-chain architecture and the use of common plain-format transactions increase the difficulty of both regulation and privacy preservation. This book, for the first time, explores the challenges and solutions related to cross-chain regulation and privacy. We provide a comprehensive understanding of how to design full life-cycle regulation mechanisms, from multi-dimensional detection to efficient provenance tracking, and lightweight privacy-preserving mechanisms. Additionally, we discuss how to balance regulation and privacy in cross-chain environments. This book will be of particular interest to researchers in the fields of blockchain, privacy concerns, and network security. It is the first book to comprehensively summarize cross-chain architecture and classification, analyze security challenges and potential requirements, and present numerous innovative technologies and practical solutions for regulation and privacy.