对Financial Service Industry的一种技术革新 Technology Innovation Concept 对Design&Delivery of Financial Services&Products的技术革新 Stock Price, Financial Statement 传统数据 Analysis of Large Datasets Social Media Sensor Networks 非传统数据 What is Fintech Machine learning 人工智能 **Analytical Techniques** Areas of Fintech development **Automated Trading** 智能投顾 **Automated Advice** 分布式账本技术 Financial Record Keeping 由各个领域产生的极大数量的传统或非传统数据 Definition Very Large Volume Velocity(即使/接近即时) Characteristics Structure Data Variety (结构与否) Semi-Structured Data Unstructured Data Individuals 公司在日常运营中产生的数据,区别于传统的财报数据 **Big Data&Data Science Business Processes** Satellites Non-traditional Data Geolocation Sensors Internet of Things Other Sensors Quality, Volume, Appropriateness Big Data Challenges 在分析前must be Sourced, Cleansed, Organized Grown Out of Wider AI Field Supervised Learning Types Unsupervised Learning Machine Learning Artificial Intelligence **Advanced Analytical Tools** Overfitting, 过度拟合 **Errors** Underfitted, 拟合不足 **R43 Fintech in Investment** Management Large Unstructured text/voce-based Datasets **Text Analytics** Natural Language Processing SEC (USA) FCA (UK) Regulation Governing,和人类投顾一样都需要被监管 ASIC (AUS) Automated Asset Allocation Trade Execution 功能 Portfolio Optimization Tax-loss Harvesting Robo-advisers Services Rebalancing Portfolio Fully Automated Digital Wealth Management Services Adviser-assisted Digital **Applications of Fintech** Passive or Fairly Conservative Investment Approach Charateristics Low Fees&Low Account Minimums Reach underserved populations Stress Test Risk Analysis Risk Assessment **Backtesting Simulations** Computerized,按照既定规则和引导 Slicing Orders into Small Pieces 增加流动性 执行算法 Speed, Anonymity, Lower Transaction Costs Algorithmic Trading Benefits Continuously Update&Revise 以获利为目的 High Frequency Trading Consensus Mechanism 共识机制 Cryptography 密码算法 Involved technical concepts Smart Contracts 智能合约 Blockchain Permissionless Networks Permissioned **Distributed Ledger Technology** Cryptocurrency Tokenization DLT application Post-trade Clearing and Settlement Compliance

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