

WRITING SAMPLE ONLY, CONTAINS SECTION 1 - INTRODUCTION & MARKET

DEMAND

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INTRODUCTION & MARKET DEMAND

Digitized banking via blockchain technology has permeated underbanked regions, ushering in a new era in digitized money transactions and record-keeping. In response, banks have expanded internationally in order to develop *enterprise-level* global banking infrastructure. With numerous financial enterprises attempting to expand without considering new privacy laws and technology protocols, central points of failure and information security breaches are at risk of multiplying.

Tragically, the future of siloed enterprise level banking is set to repeat the same unnecessary redundancies, energetic waste, and consumption of limited resources. The risks are exponentially greater due to the global scale and digital speed. For example, if the current outdated state of "Know Your Customer" (KYC) compliance processes continues, each financial enterprise will repeatedly consume time intensive resources on the same KYC processes for the same customers who may have accounts at several banks.

Consider how many bank or loan accounts a person or business may be connected to and add them up. Each account has a KYC file containing sensitive personal data about the person or business. This outdated, siloed KYC process per financial enterprise will create copies of the same sensitive, personal KYC data on a global, digitized scale.

Prior to May 25, 2018, when the European Union's General Data Protection Regulation (GDPR) went into effect, all KYC data and data privacy controls had been legally under the ownership of financial enterprises, not the person or entity. Due to the GDPR's international reach, financial enterprises have entered into a state of non-compliance with regard to the GDPR's conflicting stance towards current KYC processes. 2

In order for financial enterprise companies to become GDPR and KYC compliant,3 this paper presents cooperative solutions founded on blockchain technology principles that facilitate the coexistence of KYC compliance and GDPR-mandated privacy regulations.

In addition, this paper discusses a wholistic view of the future of banking through the lens of the Internet of Things (IoT), decentralized networks, sovereign economies, statelessness, internal record-keeping, cyber risk, and gamification.

Under the U.S. Security and Exchange Commission, public financial enterprises are mandated to create reports derived from internal ledgers containing payments, past due loans, and reserves.⁴ Due to the fragmentation of timing in the confirmation, application, and recording of payments, current credit reporting processes suffer from inefficiencies and inaccuracies.

¹ Jet Propulsion Laboratory, California Institute of Technology: Science & Technology, Office of the Chief Scientist and Chief Technologist. *Deep Space Communications*, scienceandtechnology.jpl.nasa.gov/research/research-topics-list/communications-computing-software/deep-space-communications. Accessed: 11 December 2019.

² Hughes, Jessica. "The Importance of Incorporating Data Privacy into Anti-Money Laundering and Anti-Corruption Compliance Programs." ACAMS. files.acams.org/pdfs/2017/The_Importance_of_incorporating_Data_Privacy_J.Hughes.pdf. Accessed: 12 December 2019.

³ Verifier. "The Impact of GDPR on KYC—What You Need To Know." Medium, 29 Oct 2018. medium.com/@Verifer/the-impact-of-gdpr-on-kyc-what-you-need-to-know-3e9af837de7e.

⁴ U.S. Securities and Exchange Commission. "SEC Adopts New Rules and Amendments under Title VII of Dodd-Frank." U.S. Securities and Exchange Commission, 19 September 2019. www.sec.gov/news/press-release/2019-182.

Hence, fintech companies and associations have allocated resources into researching blockchain's distributed ledger technology for upgrades in record keeping.5 6 The importance of accurate, real-time, internal record-keeping carries even greater weight in the IoT context. Externally, innovators of digital networks are connecting endpoint devices such as smart phones, tablets, laptops, watches, and VR/AR glasses for global and interplanetary networks.7

Consequently, banking and finance systems will need systemic upgrades in order to accommodate the next phase of digitization.

Enter the blockchain—a force of disruptive good for internal record-keeping and incentivizing digitized external compliance tasks.

Currently, a small number of entities and individuals interact as nodes and wallets on the Bitcoin and Ethereum blockchains, the two largest blockchains in existence. However, regulation and governance, the trust-making pieces to enabling mass adoption, are still missing.8 Integrating the missing pieces of regulation and governance into a blockchain network will not only make it safe for mass adoption but will automate some of banking's external compliance and internal reporting processes.

Facebook's highly publicized *Calibra Association* and its *Libra* coin represent a post-Ethereum prototype of global digitized banking. Nonetheless, missing compliance and governance protocols within the Libra blockchain (and Facebook HQ) have invoked distrust amongst governments, banks, and regulators. Despite the missing pieces, demand for comprehensive transactional and digitized banking infrastructure has increased. 10

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⁵ Viens, Ashley. "Visualizing the New Cryptocurrency Ecosystem." Visual Capitalist, 19 November 2019. www.visualcapitalist.com/visualizing-the-new-cryptocurrency-ecosystem.

⁶ Iron Mountain. "What is Blockchain and Why Should Records Management Professionals Care?" Iron Mountain. www.ironmountain.com/resources/general-articles/w/what-is-blockchain-and-why-should-records-management-professionals-care. Accessed 17 January 2020.

⁷ Zion Market Research. Global Blockchain IoT Market Will Reach to USD 3,033 Million By 2025: Zion Market Research, 9 August 2019.

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⁸ Yafimava, Darya. "Blockchain And The Law: Regulations Around the World." Open Ledger Insights, 17 January 2019. openledger.info/insights/blockchain-law-regulations.

⁹ Smith, Dave. "Facebook must overcome a severe lack of trust if it hopes to bring Libra, its new cryptocurrency, to the masses." Business Insider, 17 July 2019. www.businessinsider.com/facebook-libra-cryptocurrency-calibra-use-cases-trust-2019-6.

¹⁰ Sharma, Rakesh. "The Blockchain Job Market is Booming." Investopedia, 25 June 2019. www.investopedia.com/news/blockchain-job-market-booming/