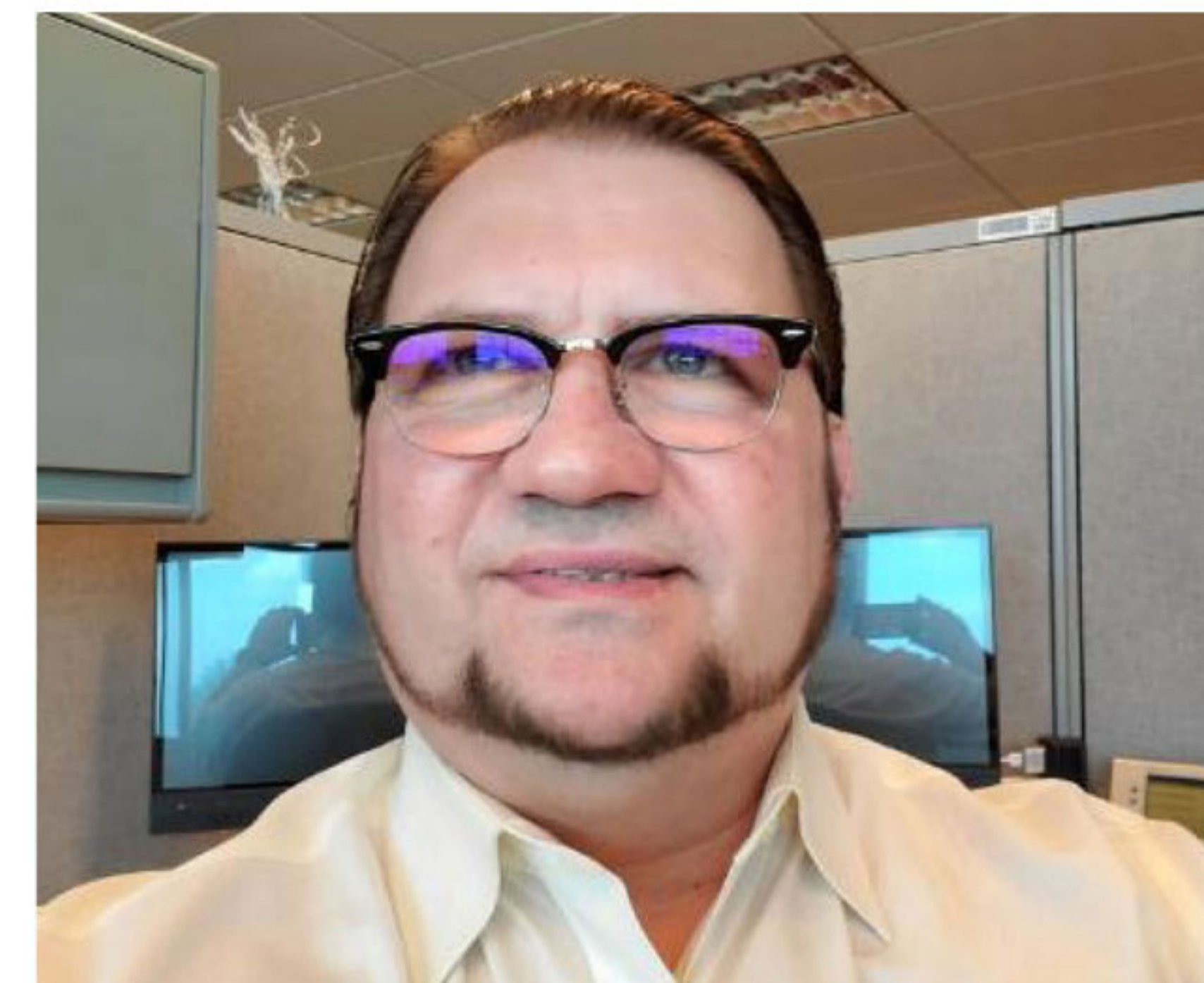


DOING BUSINESS ON THE BLOCKCHAIN SUPERHIGHWAY²

– Capital Markets and Blockchain Technology Paradigm –



Interface, for instant transfers). This in return, allows companies like Ripple to position themselves as a better alternative for on-demand liquidity offerings and solutions to many institutional players in the investment banking industry. In conclusion, it can be stated that, the most realistic and foreseen capital markets, and payment transfer services architecture of the future, would be a hybrid market landscape of traditional SWIFT global platform (continuously re-inventing itself), competing with the ever-growing Distributed Ledger Technology (DLT), i.e., blockchain technology players (such as Ripple, Oracle with Oracle's Blockchain Cloud Service, IBM with IBM's Blockchain, IOTA's Tangle, SDF's Stellar).

References and Notes:

1. Qosej T., "Doing Business on the Information Superhighway", February 14, 1996 (The Stony Brook Press, SBU, New York).
2. Dhaliwal Sh., "Canada Invoking Emergency Rules Means Bitcoin, Ethereum, Dogecoin Can Also Be Seized", February 21, 2022 (Benzinga News, Canada).
3. McGleenon B., "Crypto crime wave accelerates as report finds thousands of 'whales' hold \$25 billion in stolen funds", February 15, 2022 (Evening Standard, UK).
4. "The March of Financial Services Giants into Bitcoin and Blockchain Startups in one Chart", February 19, 2017 (CB Insights, New York).
5. Hum Th., "US is now the 'Bitcoin mining capital of the world': GEM Mining CEO", February 13, 2022, (Yahoo Finance, US).
6. Voshmgir Sh., "Token Economy – How the Web3 reinvents the Internet", Second Edition, Nov. 2020, 364 pgs, Token Kitchen, Berlin.

Triumf H. Qosej¹

Abstract:

Besides the obstacles, abuse with the cryptocurrency notion and technology by individual speculators, the blockchain technology and distributed blockchain networks (or "Internet of Finance" as some like to call them), are making gains in the well-regulated financial, banking, investment and brokerage industry.

Major banks and financial institutions (such as JP Morgan Chase with JPM Coin, IIN, and Distributed Ledger Technology Applications; Deutsche Börse, Deutsche Bank, Banco Santander, Credit Swiss, Goldman Sachs, Deloitte Touche Tohmatsu - Deloitte, American Express, CitiGroup, Canadian Imperial Bank of Commerce - CIBC, Wells Fargo, and Thomson Reuters, to name a few), are introducing and acquiring the blockchain technology and DeFi, to increase efficiency in the capital markets value chain, stock and trading markets, and shorten the operation time of peer-to-peer transactions, payments and settlement time.

Banks are joining efforts, to group and agree upon an all-approved and certified electronic virtual currency, upon which they want to operate and transact among each other on peer-to-peer group operations, so streamlining the transaction and payment management process, providing better transparency, eliminating paper and providing a green solution on the way.

It is expected that a hybrid architecture landscape would dominate the future of capital markets, and payment transfer and settlement market.

The current landscape of non-institutional and unregulated cryptocurrency utilization markets

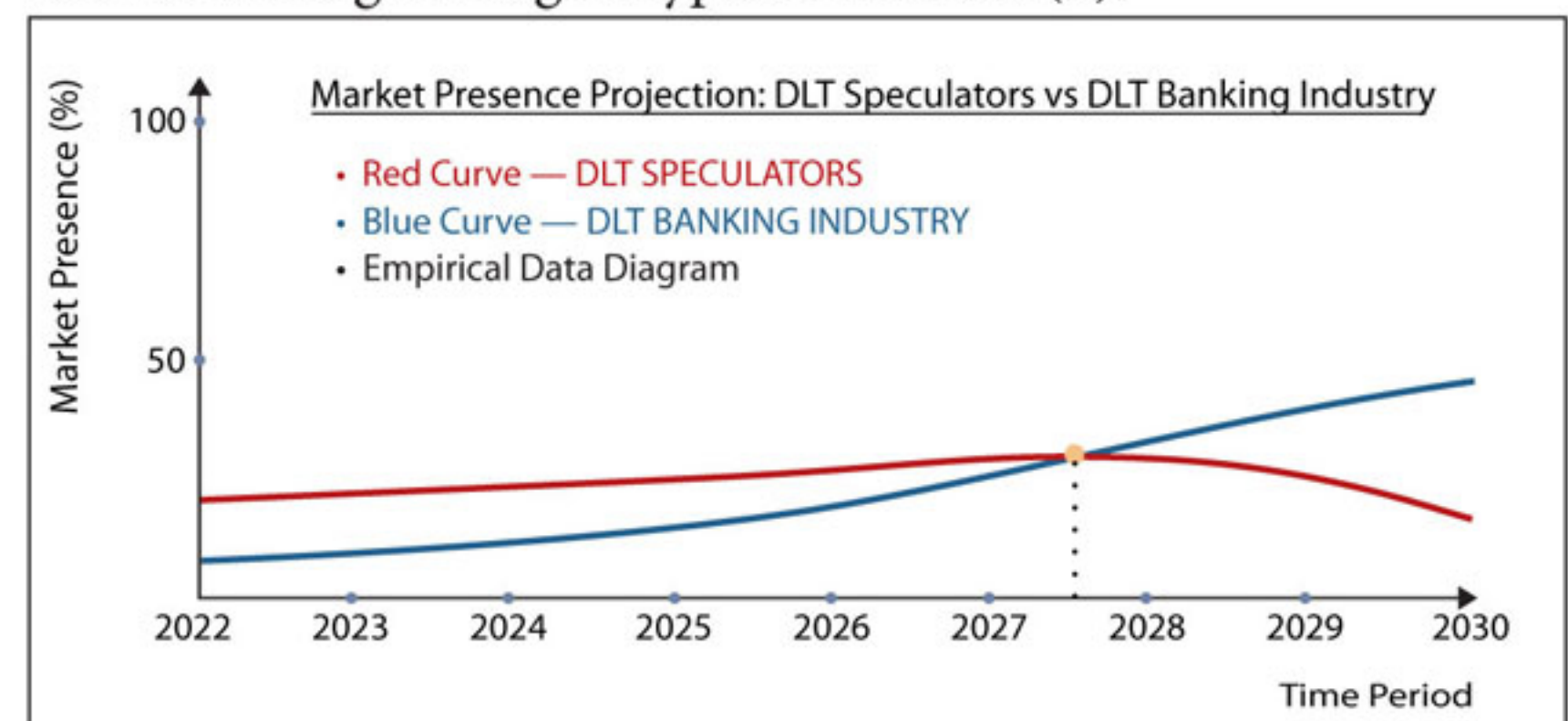
The current US and global cryptocurrency market landscape is mostly dominated by unregulated individuals and/or independent entities that operate on different "agreed" or "designated" cryptocurrencies.

This "Internet of Finance" market landscape mirrors in a great degree, the introduction of the Internet, in early 90', when the security risk of doing business on Internet, was on the high side, and the Internet market was dominated by fly-by-night operators (1).

Most of these crypto players, depict a profile with little or no predictability or forecast as per their term in the market, or reliability of the blockchain business model deployed.

Several of the said operators of such blockchain systems, end up of sudden dissolved system and the cryptocurrency liquidity disappearing, living crypto players to scratch their heads.

Canada, for example has invoked emergency rules that allows for the cease-and-desist operations against illegal cryptocurrencies like Dogecoin (Crypto: DOGE), Ethereum (Crypto: ETH), and Bitcoin (Crypto: BTC), as well as crowdfunding through cryptocurrencies (2).



In other global markets, "whales" (crypto acronym for online wallets with large holdings) illegal operations (3), are becoming a concern in many countries.

In the global unregulated blockchain platforms operating with dubious cryptocurrencies, billions of dollars are usually ill-gotten through ransomware and hacks.

The US is also moving into taking measures and steps to crack down on illegal cryptocurrency and blockchain platforms, although Bitcoin mining has seen an increase in activity in the south of the US (such as Texas and Georgia) (5).

China has, since 2021, completely banned all cryptocurrency mining, and soon thereafter it also banned and outlawed all cryptocurrencies.

Capital markets industry adaptation and acquiring of new technology

Capital markets and banking industry led by fortune 500 and leader in the industry companies, are spearheading the introduction and adaptation onto the industry of the blockchain/Distributed Ledger Technology (DLT) and best practice digital coin/cryptocurrencies.

JP Morgan Chase, for example, starting in 2019, introduced a digital coin called JPM Coin, of fiat currency (fiat currency - a government-mandated currency that is not backed by a commodity such as gold).

JP Morgan Chase can use virtual JPM Coin in lieu of US dollars, therefore streamlining the transaction based processes

and real time payment operations between its institutional clients – all resulting in reduction of real time payment settlement timeframe and increased transparency.

JPM Coin is one of the enterprise-grade blockchain technology based tools introduced in the market, by JP Morgan Chase, the others being Interbank Information Network® (IIN), Dromaius (a digital securities platform), and Quorum® (an open-source Ethereum network based blockchain application, for running IIN).

JPM Coin can serve as a prototype, and eventually it is expected, that in the future, to represent other major currencies besides US dollar.

The other blockchain based tool, IIN, is a scalable, peer-to-peer virtual financial network, and its main purpose is to establish a common denominator with other network participants, streamline information sharing, and expedite international payment operations.

So far, more than 300 banks and financial institutions on the global markets, have shown real interest in joining IIN, such as in Latin America, Asia, Europe, the Middle East and Africa markets.

"Another major market competitiveness of blockchain-based companies..., is the business model of integrating blockchain technology...with major advances in the artificial intelligence technology..."

In addition, Credit Swiss, JP Morgan Chase and Deutsche Bank, are collaborating to building advanced distributed ledger solutions, with standards that meet and exceed generally accepted banking industry requirements.

Banco Santander and Goldman Sachs are entering the area of private blockchain investments. Goldman Sachs also, was first to co-lead and issue in April 2021, the first public digital 2-year bond of 100-Million Euros for the European Investment bank (EIB), on Ethereum public blockchain network, under the French Central Bank currency (CBDC).

Furthermore, Thomson Reuters, for example, has developed and deployed BlockOne IQ and BlockOne ID tool kits, to help create a blockchain ecosystem through healthy partnerships with other companies and key industry organizations, together aiming at building solid blockchain applications.

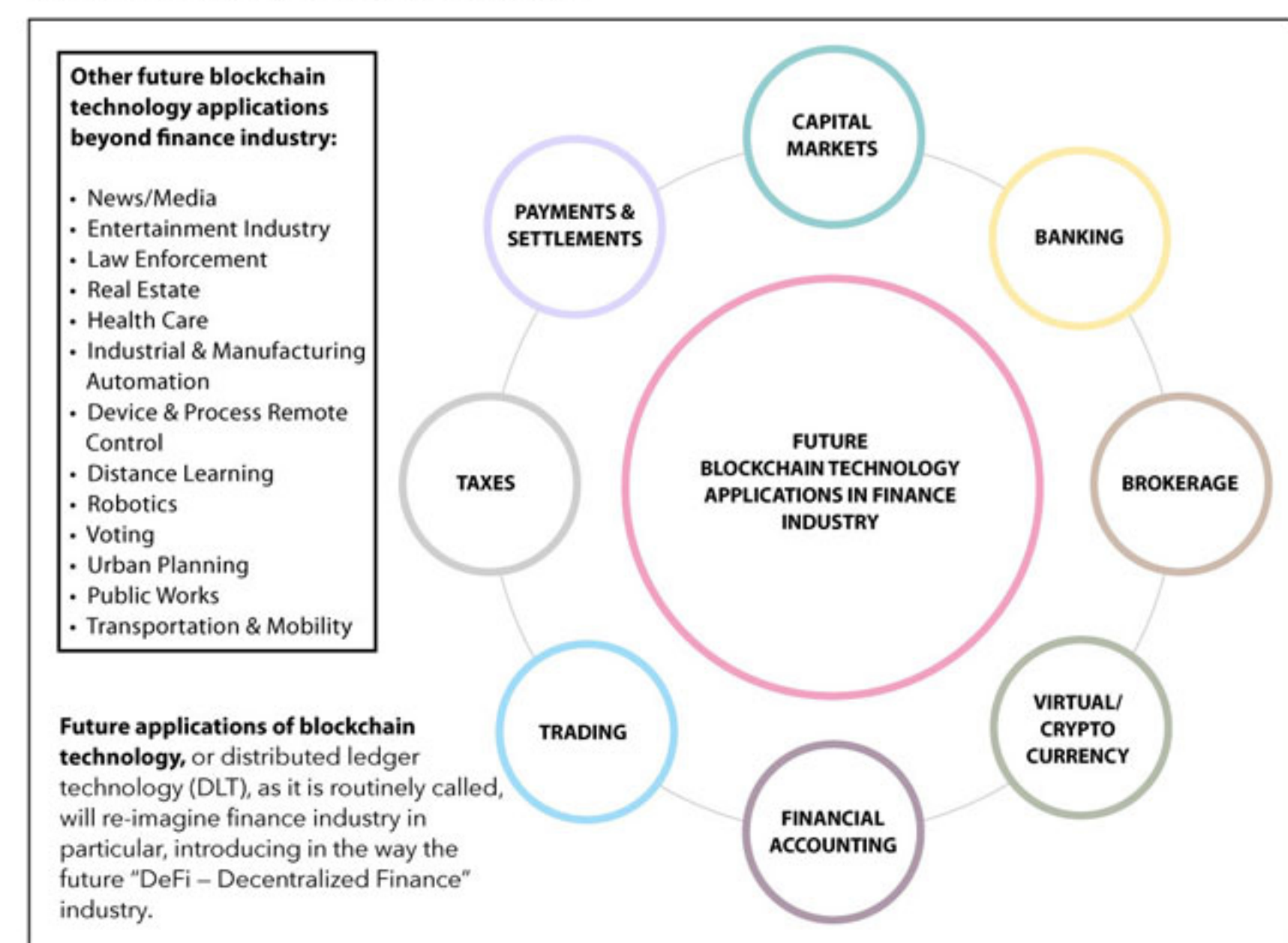
In Europe, Credit Swiss, has issued tokenized shares trading on the Taurus Digital Exchange (TDX), in the recreative sports company Alaia SA, using Ethereum blockchain network.

The new legislation in Switzerland, now allows for tokenized securities to trade on a blockchain platform, with the same legal protection as any conventional financial assets.

Deutsche Börse based in Frankfurt - Germany, an international exchange and technology company, completed in 2021, the acquisition of a majority stake in Crypto Finance – a products and services provider for crypto assets (based in Switzerland).

The new blockchain technology, is also acquired by financial services and insurance providers, such as Visa, American Express, MasterCard, New York Life, TransAmerica, and Mitsui Sumitomo Insurance Group (MSIG) (4).

Other major blockchain players beyond capital markets and banking industry (but that support capital markets and banking industry), are Microsoft (Cloud based Azure Blockchain Workbench), Amazon.com (AWS Blockchain Templates), IBM (Hyperledger Fabric – a permissioned based blockchain infrastructure, and BaaS: blockchain-as-a-service), and Oracle (Oracle's BaaS).



Evaluation of blockchain engineering and the future forecast: SWIFT vs DLT players and the DeFi

The ability and tradition of a well-regulated and reliable check-and-balance business model by the banks, would allow for a more prudent approach of a gradual deployment of blockchain technology and well-regulated cryptocurrencies, with a secure multi-level authentication and verification system (backed by the faith and credit of the US government, and/or independent private watchdog and certification bodies), of the liquidity deposits on cryptocurrency for market players.

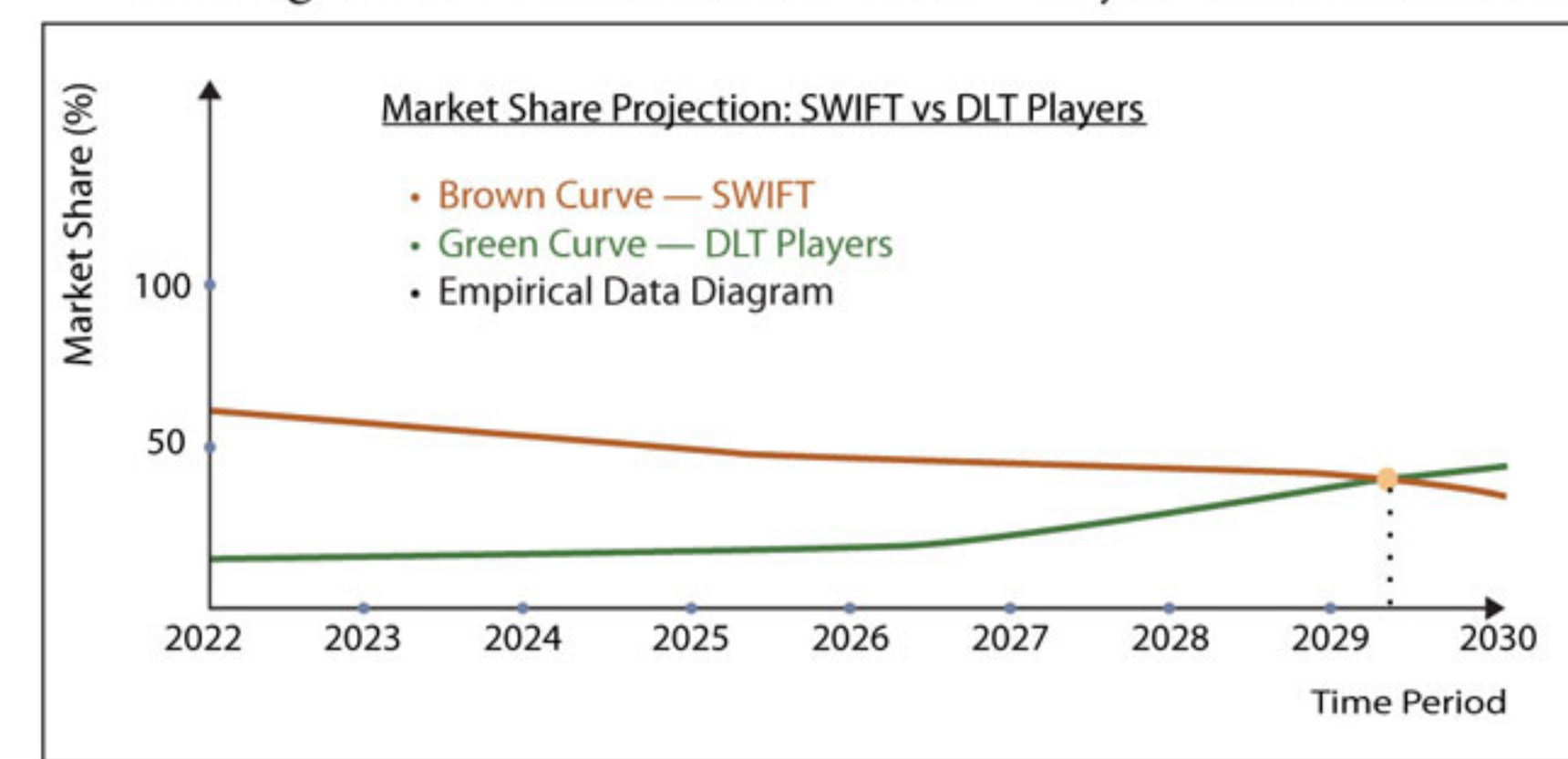
SWIFT (Society for Worldwide Interbank Financial Telecommunications), is a messaging system that makes possible bank-to-bank transfers throughout the globe. The organization is based in Belgium and has a majority share in the global payment transfer market.

Blockchain technology on the other hand, also allows *"Blockchain based companies..., have the advantage of speed..., in the money transfer operations, and providing better transparency on the way."*

for international transfers, but rather in a decentralized, independent and un-regulated environment for the time being. This leads to a re-imaged finance industry of the future, onto so-called Decentralized Finance (DeFi) (6).

One successful blockchain technology company that operates in the payment transfer market is the US based company called Ripple.

Having into consideration three major make-or-break



factors in the business model of the two systems, such as the speed of transfer, the transparency of data, and the vulnerability to cyberattacks, it can be observed that SWIFT may have to transform and re-invent its traditional centralized business model in order to survive and maintain its competitiveness in the global payment transfer and settlement market.

Otherwise, blockchain-based companies like Ripple, have the advantage of speed compared to SWIFT, in the money transfer operations, better cyberattack defense, and providing better transparency on the way.

Another major market competitiveness of blockchain-based companies like Ripple, compared to SWIFT, is the business model of integrating blockchain technology (i.e., digital asset XRP) with major advances in the artificial intelligence technology, such as single API (single Application Programing

¹ Mr. Qosej, Albanian born US entrepreneur, World Bank Scholar, Stony Brook University Alumni (M.Sc.), Authority and published Author in the Field, is the Founder (in 2003), President & CEO of Strategic E-Business Systems, Inc. (SEBSYS) – a New York based premier e-business and management consulting company, serving markets in the US, and globally. SEBSYS (sebsys.com) core business competencies are: a B2B and B2G provider of corporate e-commerce, e-business and digital enterprise technology deployments and transformation, UX/UI design engineering and web information architecture, artificial intelligence, blockchain technology for the banking and brokerage industry, and robotic solutions. Email: ask@sebsys.com

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