# Diversity in Blockchain's Initial Review of Facebook's Project Libra

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**Susan Joseph**, Co-Founder and Executive Director

**Anna Ashurov,** Co-Founder and Director

**Michelle Gitlitz**, Co-Founder and Director

**Shawnna Hoffman**, Co-Founder and Director

**Joshua Ashley Klayman**, Co-Founder and Director

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# DIVERSITY IN BLOCKCHAIN'S INITIAL REVIEW OF FACEBOOK'S PROJECT LIBRA

**Authors' Note**

Diversity in Blockchain appreciates the opportunity to comment on Project Libra. Information on Project Libra in this paper is drawn exclusively from materials published about it by its participants as well as from public statements made by those speaking for it, in either case, available as of the date of this paper.

**Who is Diversity in Blockchain, Inc.?**

Diversity in Blockchain, Inc. www.diversityinblockchain.com (DiB) is a not-for profit organization committed to creating equal, open and inclusive opportunities in the blockchain industry. Our mission is to empower everyone from all walks of life to engage with blockchain technology in order to ensure equal participation and distribution. We believe that true innovation includes everyone. Through education, discussion, and engagement we can build a support network as revolutionary as the blockchain itself.

**Why does Diversity and Inclusion in Blockchain Matter?**

Blockchain is a foundational technology that provides a highly flexible set of tools that allow businesses, governments and others to re-examine their commercial relationships, bringing opportunities for greatly enhanced efficiency in a broad variety of settings. Inherent in this technology is an ability for diverse parties to cooperate in an environment in which trust is brought about through the use of computer-based consensus mechanisms.[1]

Because blockchain technology allows for a new way of value transfer across the internet and has created an entirely new value technology industry, now is the perfect time to incorporate all voices to shape from the outset this emerging sector of the global economy. DiB seeks to promote inclusive and positive behavior and avoid skewed results, imbalances, and outright discrimination that has previously occurred in technology and finance as these new systems are developed and used. We believe that diversity is to be promoted in the development of this technology because the widest perspectives will foster the most valuable and resilient innovations.

The lack of diversity and inclusion in both the technology and financial services industries are serious and well-known issues. They are even more so with an emerging technology[2] that combines the two industries. It is common knowledge that inclusive entities perform better.[3] With such a foundational technology that can reach the banked, underbanked and unbanked, it is necessary to have everyone at the table creating and using blockchain technology.

DiB recognizes that, due to blockchain technology's ability to serve as a trusted single source of data with a transparent and tamper-proof ledger, its reach is global and potentially extensive. Blockchain technology has increasingly been

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[1] https://medium.com/@SusanJoseph1786/rating-innovation-an-innovators-take-3814344a852d
[2] https://medium.com/@corintxt/i-tried-to-gauge-what-percentage-of-cryptocurrency-developers-are-female-the-answer-not-enough-58e1d242f7b8
[3] https://www.mckinsey.com/business-functions/organization/our-insights/delivering-through-diversity

embraced and promoted by governments and market participants. Blockchain technology is starting to be incorporated by many industries including banking, technology, healthcare, supply chain and logistics, media and copyrights and more. Various social good groups use blockchain technology such as the World Food Program "Building Blocks," Heifer International, Bounties, and BanQu.

For an in-depth description of blockchain technology and related opportunities, please see Section 1 of the Appendix below.

**What is Project Libra?[4]**

Facebook is leading an initial private group of 28 entities -- including some of the world's most well-known brands -- to introduce a permissioned blockchain called the Libra blockchain, a cryptocurrency called Libra, and an independent governing association called the Libra Association "to enable a simple global currency and financial infrastructure that empowers billions of people."

"Facebook teams played a key role in the creation of the Libra Association and the Libra Blockchain, working with the other Founding Members. While final decision-making authority rests with the association, Facebook is expected to maintain a leadership role through 2019. Facebook created Calibra, a regulated subsidiary, to ensure separation between social and financial data and to build and operate services on its behalf on top of the Libra network."[5]

Functionally, Libra is a stablecoin backed by "a reserve of assets designed to give it intrinsic value" and the Libra Coin is issued by the Libra Association. Calibra is the wallet that is used to transact with the Libra Coin. Initial investors

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[4] https://libra.org/en-US/white-paper/

[5] https://libra.org/en-US/white-paper/

as members of the Libra Association Council each hold one vote and act as a transaction validator (also known as operating a node) on the Libra permissioned blockchain.

The anticipated number of validator nodes is around 100. Additionally, the Association has said that one of its goals is to "develop and promote an open identity standard."

Project Libra proposes to offer a global cryptocurrency available to all and specifically says "The Libra currency is designed to help those with global needs, aiming to expand how money works for more people around the world." The whitepaper points to the fact that "1.7 billion adults globally remain outside of the financial system with no access to a traditional bank" and believes among other things that "we all have a responsibility to help advance financial inclusion, support ethical actors, and continuously uphold the integrity of the ecosystem."[6] DiB agrees that these are worthy goals. It is clear that other countries (i.e. China's WeChat https://tearsheet.co/future-of-investing/wechat-shows-messaging-is-the-future-of-financial-services-platforms/ ) are embarking to serve the world population's financial needs through various forms of non-blockchain technology. DiB welcomes blockchain innovation and the opportunities for wide scale adoption of blockchain technology to reach a global population and foster inclusion.

Beyond its stated goals, however, Project Libra presents an opportunity to promote -- and meaningfully move the needle on -- diversity and inclusion on a global scale, including in the technology and financial services workforces

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[6] https://libra.org/en-US/white-paper/

themselves. Commitment to diversity -- not just with respect to users of Libra and Calibra -- but also with respect to management, employees and marketplace partners from the most junior to the most senior, must be planned and hardwired in at the Project Libra architecture stage and nurtured as Project Libra moves along. By contrast, given Project Libra's scale, failure to focus consciously from the outset on achieving diversity and inclusion metrics and performance goals could perpetuate and increase, perhaps exponentially, the income and workforce participation disparity that exists today in the technology and financial services industries as they move toward adoption of blockchain technology.

The Libra Association:[7]

The Libra Association is a Swiss foundation[8] that governs the Libra Blockchain and the Libra Reserve. The Association will be governed by the Libra Association Council which is made up "of one representative per validator node". The Libra Association will set up the Libra Reserve and will serve as the entity through which the Libra Reserve will be managed. The Libra Reserve will consist of a basket of "low volatility assets such as bank deposits and short-term government securities in currencies from stable and reputable central banks"[9] which back the Libra Coin. The Libra Coin is also known as a type of stablecoin. The Libra Association is the only party who can issue or burn the Libra Coin. The Libra Association also will: (i) work to recruit Founding Members, (ii) fundraise to jumpstart the ecosystem, (iii) create the design and implementation of incentive programs to propel Libra adoption, and (iv) establish the social impact grant-making program.

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[7] https://libra.org/en-US/white-paper/#the-libra-association
[8] https://www.froriep.com/upload/prj/publication/Key-features-of-Swiss-Foundations-Julie-Wynne-Froriep-STEP_June2017.pdf
[9] https://libra.org/en-US/about-currency-reserve/#the_reserve

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<u>The Libra Reserve:</u>[10]

"The reserve is the key mechanism for achieving value preservation. By fully backing each coin with a set of stable and liquid assets...and by working with a competitive group of exchanges and other liquidity providers, users can have confidence that they will be able to sell any Libra coin at or close to the value of the reserve at any time. This gives the coin intrinsic value on day one and helps protect against the speculative swings of other cryptocurrencies. The mechanics of the reserve and the various actors in the system are described later in this [whitepaper] section, but, at the outset, it is important to highlight why the reserve was created in the first place — to support stability and value preservation."

<u>Libra Coin Issuance:</u>[11]

"The association is the only party able to create (mint) and destroy (burn) Libra. Coins are only minted when authorized resellers have purchased those coins from the association with fiat assets to fully back the new coins. Coins are only burned when the authorized resellers sell Libra coin to the association in exchange for the underlying assets. Since authorized resellers will always be able to sell Libra coins to the reserve at a price equal to the value of the basket, the Libra Reserve acts as a "buyer of last resort." These activities of the association are governed and constrained by a Reserve Management Policy that can only be changed by a supermajority of the association members."

For a detailed explanation of stablecoins and how the Libra Reserve will operate, please see Section 2 Libra Reserve and Stablecoins in the Appendix below.

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[10] https://libra.org/en-US/about-currency-reserve/#the_reserve
[11] https://libra.org/en-US/white-paper/#introduction

<u>The Calibra Wallet</u>[12]

The Calibra wallet (the "Wallet") will be provided through a subsidiary of Facebook. We do not have information yet as to how this will work. In general, a wallet is software that can store a user's private and public keys and allow a user to transact on a blockchain. Custodial wallets will contain data such as know-your-customer/anti-money laundering factors. In addition, they can contain different proprietary analytics. We imagine that ease of access to the Wallet, the user experience, and integration of the Wallet into the network will matter to adoption and circulation of the Libra cryptocurrency.

For additional information on wallets, data capture, and trustworthiness, please see Section 3 Calibra and Wallets in the Appendix below.

Governance appears in several aspects of the Libra Project. The Libra Association is a Consortium. As a Swiss foundation[13], the Libra Association is subject to Swiss law, and is the party that oversees the Reserve and the Libra Blockchain. As stated above, the Libra Association provides Validators for transactions on the Libra Blockchain. Validators engage in a form of governance of the Libra blockchain to approve transactions through a form of consensus that uses proof-of-stake to verify the transactions on the Libra blockchain network.

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[12] https://www.calibra.com/

[13] https://www.froriep.com/upload/prj/publication/Key-features-of-Swiss-Foundations-Julie-Wynne-Froriep-STEP_June2017.pdf

**What are the Pros and Cons of Consortium Arrangements?**

Pros: A consortium can augment a single company's voice and market-making ability. It can enable all participants in the group easy market access and greater potential adoption of consortium based blockchain based solutions by virtue of the consortium membership in place as a ready, and likely interested audience. A consortium can share the costs of R&D and members can learn from each other. In general, consortia are also often in a position to set industry standards.

Cons: A large consortium may exclude smaller participants by the simple cost or market reach metric required to join that group. That large group may then be able to effectively dictate market terms. The consortium may be able to stifle innovation by maintaining the status quo disproportionately favorable to large market players or define and set new standards that are especially favorable to the organizations within the consortium, potentially leaving the rest of the world at a disadvantage. Governance of private players in a private consortium is not transparent. Members of the consortium and jurisdiction of the consortium matter to and inform how the consortium is governed. Potential Antitrust issues exist.

For a detailed look at the characteristics of a Swiss foundation, please see Section 4 of the Appendix below.

**The Staking/Consensus Mechanism of the Libra Blockchain**

Members of the Libra Association are those who are able to stake. Those staking determine who has a vote in the Association.[14] The stakers create the rules for the Libra blockchain. Non-diverse staking groups may have non-diverse operating rules either purposefully or as a result of unconscious bias. To date the question exists as to whether decentralized staking within blockchain/distributed

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[14] https://libra.org/en-US/white-paper/#the-libra-blockchain

ledgers has been sufficiently tested on a large scale to be a system that works and is trustworthy.

## Analysis: Diversity in Blockchain Themes and Questions to Consider

### 1. Create Full Diversity and Inclusion for the Voices of the Banked, Underbanked & Unbanked

- How is diversity and inclusion built into the Libra Association (consortium) for the banked, underbanked, and unbanked?
- How does oversight work with the consortium itself? Who is advising and participating? How transparent is the governance?
- Are the unbanked the only ones to be served? For instance, with whom will the unbanked transact? How does this serve the unbanked if the same know-your-customer/anti-money laundering restrictions that preclude inclusion today exist for the Libra network and Wallet?
- The Libra Association notes there are 1.7 billion unbanked adults in the world.[15] Of the 1.7 billion, almost half are concentrated in seven countries including China, India, and Pakistan. Most unbanked adults are women.[16] How does the Libra Association intend to serve this population?
- In the US, the unbanked are 7% of our population and the underbanked are 20%[17] How does the Libra Association intend to serve this population?
- Are the incentives to distribute the Libra token set to quickly create a functioning market economy regardless of whether it is the unbanked and underbanked who adopt it? Is diversity and inclusion structurally incorporated into the goal of quick adoption?
- The general population is close to 50/50 on gender.[18] Will the Libra Association composition reflect the general population composition?
- How many of the unbanked and underbanked are already served on social media by Facebook?

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[15] https://techcrunch.com/2019/06/19/calibra-india-launch-whatsapp-pay/
[16] https://globalfindex.worldbank.org/
[17] https://globalfindex.worldbank.org/
[18] https://data.worldbank.org/indicator/sp.pop.totl.fe.zs

- How many of the banked are already served on social media by Facebook?

## 2. Understand Who the Beneficiaries of Project Libra are

Association members:

- What benefit does each party receive from Project Libra?
- Does the Libra Association earn interest from the reserves and fees to transact on the system?
- Do the wallets that are used to transact on the network charge an access fee?
- What types of incentives do the founding members create and receive from the Libra Association to propel adoption?
- Should wallet companies be members of the Libra Association? Is this an inherent conflict?
- Who other than the founding members can influence the policy for Libra Reserve?
- All nodes/members do not contribute monetarily. Will all 100 member nodes directly or indirectly receive interest and fees?
- Will the Libra Association become a market maker for the Libra Coin?
- Will any of the groups associated with this project (i.e. Facebook and others) be able to create a transactable global identity such that KYC / AML is standardized and trustworthy? Or will that identity standard act as an exclusionary barrier or one that is controlled by the few?
- Does the limit of 100 nodes create a power imbalance such that a small group of people manage a high percentage of the world's transactions? Could the 100 nodes eventually push competitors out and deter innovation?

Libra Users:

- Will the founding members and wallet providers be able to create advertising or target users based on data generated on the network?
- Will Facebook benefit from its new subsidiary Calibra, the wallet that will hold the Libra Coin, by being able to create advertising revenues targeted to the unbanked, underbanked and banked?
- How are the users of the Libra Coin benefitting?

- Is the Libra Coin more similar to currency? Can it be used as deposits? Is it a security? Is it a gift card? How is it insured under any of these characterizations to protect the user?
- Will payments turn into loans or micro-loans? How will loans be regulated?
- What disclosures are needed to understand the true cost of Libra (fees, control of data, loss of interest, etc.)

### 3. <u>Understand the Governance of Project Libra</u>

- How do you prevent undue influence within the Libra Association and throughout the entire Libra Project (the Libra Association, the Libra Coin the Libra Blockchain Network and Calibra, the Wallet) as it affects the greater world? For example, Andreesen Horowitz includes Marc Andreesen, who sits on the board of Facebook. Mark Zuckerberg sits on the Board of Breakthrough Initiatives. Peter Theil is the Founder of PayPal and on the Board of Facebook. Ben Horowitz is a founder of Andreesen Horowitz and on the Board of Lyft. Simply looking at a small sample of individuals, there appears to be "cross-pollination" on Facebook's Board and there are multiple close relationships across the Libra Association members.
- People who are on similar boards from similar backgrounds tend to think similarly which limits diversity of thought. Resiliency may be compromised.
- The Association's Members may vote similarly and have influence indirectly or directly. For example, if a Member votes in the manner contrary to a position advocated by Facebook / Calibra, what if Facebook retaliates? What if the threat of Facebook retaliation changes behavior?
- Each of the Libra Association companies have investors or shareholders to answer to. How are they going to put the best interest of the Libra Association above their own already-existing fiduciary obligations?
- Whereas our financial system is set up to be governed representatively by public servants who can be voted out of office, similarly can the Libra Association members be voted out of office by the people who use Libra?
- How does Libra Association's governance fit into antitrust regimes in the various jurisdictions in which they expect to operate? How do the expected activities of the Libra project fit into the antitrust regimes?
- How does the Libra Association intend to be open about identity standards? Should they be the ones to establish global identity standards?

**4. Understand what Happens to the Interest Income from Libra Reserve, the Stability of a "Stablecoin", and the Cost to Transact**

- Money is defined as "store of value", "medium of exchange" and "unit of account". What is the Libra Association's definition of money? What is its intended use of interest from Libra Reserve's investments? Will there be interest from the float?
- Interest income from the investments of the Libra Reserve will fund the operations of the Libra Association for grants to nonprofits and dividends to the initial investors. Why is there no interest income being paid to those who hold and use Libra? How does this really help the unbanked and underbanked or is this the price they are expected to pay to transact?[19]
- Libra is intended to be a stablecoin; therefore, assuming Libra Coin is backed by a currency basket which experiences FX risk, if a user purchases the equivalent of $500 of Libra Coin, how does the Libra Association guarantee the user receives $500? Low volatility does not mean no volatility.
- In terms of the cost to transact, with companies such as Western Union charging upwards of 10% fees, what will Libra charge to transact? Will there be a fee to use Calibra, or will Facebook make Calibra free in exchange for a user's data and privacy?
- Will all wallets be equally easily accessed, or will the founding members be creating a system where their wallets will be easier to use and integrated on the back end?
- The banked have a choice to protect their data, but will the unbanked and underbanked have to trade their data and privacy to transact?

**5. Understand What it Means to use a Swiss Foundation to Create Money**

- What are the consequences of using a Swiss foundation to create money? What are the tax implications, voting, rescission rights, code maintenance, upgrades, forks, etc.?

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[19] https://www.marketwatch.com/story/facebooks-libra-coin-could-become-a-big-pain-in-the-wallet-for-consumers-2019-06-19

- Who will have input to the charter/governance documents for the public good's use? Shouldn't the public be able to meaningfully participate?
- If it is a public good, should the public be receiving the dividends or interest?
- What is the Government's role in regulating the public good?
- Is access to banking a public good?

## 6. Understand the Potential and Risks of Establishing a Global Data Pool

- Is the Association creating a global data pool for any government to surveil and tax? It is possible this may create the largest concentrated pool of data on cryptocurrency users in the world.
- What measures can Project Libra take to prevent any government from surveilling on the activities of the individuals using Libra and then taxing them?
- Ginni Rometty, IBM's Chairman, President and CEO, said: "Cybercrime is the greatest threat to every company in the world." We've recently seen breaches such as Cambridge Analytica and Equifax. What precautions will Project Libra take to protect what might become the most sought-after data in the world?
- What type of due diligence and auditing will Project Libra take to ensure that the exchanges using Libra are protecting customer's data?

## 7. Who Resolves a Human Error, Technical Malfunction, or Global Meltdown in the Libra Network? How are Users of Libra Protected?

- As this cryptocurrency may grow to be systemically important to the global financial system, who is liable for mistakes?
- Who decides whether there is inclusion and exclusion to the Libra network?
- Who decides who can enter and who can exit the network?
- Are these founding companies or their boards now making themselves more vulnerable to being manipulated and subject to ransom by being part of the Libra Association?
- What happens to the value of the underlying currencies if the Libra Association collapses?
- What rules and independence surround the custodians of the Libra Reserve?



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- Are the current association member companies solvent and independent?
- Who has fiduciary obligations to whom?
- What happens if the member companies become insolvent or highly leveraged?
- What happens if the technology fails? If a cloud service fails? What implications exist if transactions just halt across the globe?

## 8. <u>What is the Susceptibility to Fraud and Malpractice? Cautionary Tales</u>

- Is a private consortium not specializing in technology an appropriate group to be coding and maintaining a large, potentially with systemic risk, financial network that could functionally control global monetary policy? Should other parties be involved to balance the distribution of power?
- How is the open source nature of the Libra blockchain being administered? For example, most technology / open source technology groups are uniquely resourced and equipped to be run by technology companies and foundations such as the Linux Foundation.
- Where are the checks, balances, testing and licensing of the Libra blockchain network and who administers these standards and audits?
- How will the Libra decentralized system and its related apps upgrade and coordinate in real time to prevent systemic failure?
- Merely allowing open source of code does not create coordination, transparency, meritocracy, early and often release encouragement, community growth, and keeping the network integrity maintained. How would all of these functions be created, supported, and audited? Who will be building and maintaining the Libra Network?
- In an open-source environment, code matters. A system that has checks and balances down to the code level to confirm non-bias is important. Who is verifying that this occurs and how is it being verified?

## 9. <u>Could Libra Become Too Big to Fail and Who Would Bail Them Out?</u>

- How is the Libra Association going to address any systemic risk?
- How is the user protected in the event of the Libra's Association's failure? Is the user (unbanked, underbanked or currently banked) shouldering the brunt of the risk? Libra Coin has the potential to become the largest currency in the world, making Facebook the largest financial institution in the world by default.

- Does the Libra Network immediately become a systemic risk upon launch due to potential market and adoption size? If it is a financial institution, who regulates it? How are consumers protected?
- How can it be insured? By contrast, public cryptocurrencies which are individually controlled are not regarded as a systemic risk. [20] [21]
- Should financial literacy training be required to use Libra? Who should conduct the training?
- Are we asking the average user to engage in fx because Libra is a low-volatility unit and not a no-volatility unit of payment? How sophisticated a participant would you have to be to understand and engage in that process?
- If a stable payment conversion rate is issued, who loses and gains when the stablecoin fluctuates? Who will be able to hedge and arbitrage and who is incentivized to take on that activity? What happens to the underlying currencies regarding arbitrage?
- How do you preserve the ability of the unbanked and underbanked to easy access to Libra or to easily access other types of payment if participants do not want to use Libra?

## 10. **How True is the Data and Will It Be Co-Mingled?**

- Data Integrity: All networks today are currently struggling with data integrity. How is a much larger network going to ensure data integrity?
- How do you know that it is real data? What protections will be in place?
- How will data integrity and data assurance be guaranteed?[22] If the data is in any way false, who is liable and how is that enforced? Does that disproportionately disadvantage the unbanked and underbanked?
- Who will be able to examine the processes that make up that guarantee?
- How will policies affecting data integrity and data assurance be implemented?

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[20] https://www.crowdfundinsider.com/2018/03/130466-financial-stability-board-crypto-assets-do-not-pose-risks-to-global-financial-stability-at-this-time/

[21] http://cfmsurvey.org/surveys/bitcoin-and-city

[22] https://www.pwc.com/gx/en/services/audit-assurance/publications/halo-solution-for-cryptocurrency.html

- Data Commingling: Is there a risk of social ranking scoring within the payment system? Will this make it worse for the unbanked, underbanked, and banked?
- What if you are a group Facebook does not like? What if you post content that Facebook does not like? Will this prevent you from initiating a new Calibra wallet or opening an existing Calibra wallet?
- How would you prevent the introduction of an app to do this?
- What about discriminatory practices? Technological redlining?
- Once you have the data, how is it going to be encrypted? Who is going to have access to it? Will you encrypt payment spending history so it cannot be reported without consent?
- While financial institutions are required to incorporate robust privacy and data security frameworks, it is unclear how Facebook intends on interpreting and synthesizing existing legal protections for consumer financial transactions with its cryptocurrency.
- Even without sharing identifiable information, Calibra will give Facebook remarkable access to information globally about how much money people have, what they are buying, and what they are paying for with it, especially since Calibra is to be integrated with WhatsApp and Messenger services.
- Facebook will potentially share user account information and financial data with third parties if potential fraud or criminal activity is involved, for "legal compliance" and for "product performance," which likely includes vendors and payment processors to effectuate payments. But, could it also include advertisers to improve Wallet functionality?

**11. How will the Libra Association Allow for Examination of the Underlying Computer Code, Including Software Development Kits, to Stay on Track to its Proposal in the Whitepaper?**

# Recommendations

1. Create a quick-moving, global independent taskforce that encourages innovation and can address diversity, inclusion, identity, financial services, and emerging technology.

2. Create and require meaningful diversity in the Libra Association representatives of the populations to be served.

3. Consumer protection in the new world of FinTech comes when there is fair access to banking, data integrity is assured and insured, identity is treated fairly, when the system is protected if it melts down, when users are able to pay a fair price that does not impinge upon their privacy and data, and when consumers have equally easy access to wallets to engage in transactions. These principles should be incorporated.

4. Hold Project Libra accountable through its lifecycle. Understand the code and implications from it. Does the implementing line-by-line code track the white paper and ensuing agreements? Create a multi-disciplinary team who can spot issues after having the code audited and explained. Coding is not going to stop. Nor do we want it to. The technology companies are not going away, and we want to foster innovation.

5. Create incentives for positive digital systems to be created (i.e. create a new business form that is entity friendly to the blockchain/crypto business to encourage business to form and be regulated in the USA). The point of accountability matters and may be best administered and enforced in how the services are accessed (the technology stack) rather than at code creation. For example, please see FATF recommending the travel rule apply to crypto exchanges[23] and FinCen Guidance that developers are not subject to payment transmitter rules in many circumstances.[24]

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[23] https://static.coindesk.com/wp-content/uploads/2019/06/Embargo-Virtual-Asset-Guidance.pdf
[24] https://www.fincen.gov/sites/default/files/2019-05/FinCEN%20CVC%20Guidance%20FINAL.pdf-

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## Appendix:

## Section 1: Blockchain: Further Information

**Ledgers and Blockchain: An Introduction**

Today, all businesses transact on centralized ledgers. Each business has their own ledger version which must be reconciled with the counterparty or middleman ledger, or both, to complete a transaction. This is a centralized method of transacting where typically the third party or intermediary helps the counterparties create a transaction. This age-old centralized system is fraught with errors and is slow, thus creating the desire by many individuals and businesses to seek different technologies to replace the current error-prone and slow centralized system.

Blockchain is seen as one of the answers to this age-old problem. Blockchain is a transaction database. It is created through a distributed and decentralized ledger of transactions. It uses blocks that store information about each transaction such as date, time and dollar amount. Blocks are chained together thus creating a blockchain.

Blockchain switches from the centralized method of transacting to a more direct, peer to peer system of transacting. The decentralization and architecture of blockchain solves the problem of the digital double spend. All parties can access the ledger without the need for a third party to oversee it. Synchronization and integrity of the ledger is enabled through a form of decentralized computing secured by cryptography. In short, everyone has a copy of the ledger, and changes to the ledger ONLY occur once a majority has come to consensus about that transaction. These changes are additive (append only) and mistakes can be fixed by creating a new entry to the ledger. The result is a tamper-proof, censorship resistant set of transaction records. All participants do not need to

reconcile any of these records whether payment or smart contract code offerings. "You see what I see always" is the manner of operating.

**Bitcoin the Network and Bitcoin the Cryptocurrency**

One of the applications based on blockchain technology is bitcoin, the world's first cryptocurrency. Bitcoin was founded ten ("10") years ago by an unknown person or a group of people, called Satoshi Nakamoto. In the bitcoin whitepaper, Nakamoto came up with an idea of a digital payment system using digital currency called bitcoin. Nakamoto created the architecture for a decentralized, verified network that can be used for payment transmission between private parties without the use of intermediaries. Bitcoin transactions are recorded and transmitted via a decentralized public ledger, called Blockchain. Nodes (or "computers") are used to verify each transaction that is recorded in a transaction "chain" on the ledger.[25]

**Types of Blockchains with Cryptocurrencies and Smart Contracts**

Different types of public blockchains exist that emit cryptocurrencies. Examples of these types of cryptocurrencies include bitcoin and ether. The Bitcoin blockchain is geared to payment functions and the Ethereum blockchain is geared to contracting functions. Automated business processes embedded in these blockchains are computer protocols that are known as "Smart Contracts". Smart contracts are composed of computer code that carries out an if/then function in a determinative manner. Smart contracts may or may not be legal contracts depending on what the computer code represents.

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[25] https://nakamotoinstitute.org/bitcoin/

**Technical: Public Chains Emit Cryptocurrencies**

On a more technical level, blockchains are synchronized decentralized transaction databases that are maintained by a distributed network of computers which rely on cryptographic puzzles that contain economic incentives to secure the network. The networks emit cryptocurrencies as the economic incentives to solve the puzzle and verify a transaction. The reward in the form of a cryptocurrency is given to the winner, and the integrity of the network is maintained by those solving the puzzle, also known as miners.

The cryptocurrency is made up of a public key (generally that anyone can see) and a private key (that functionally acts as a safe deposit box). The cryptocurrency can be moved when the private and public keys are put together. Access to the private key is the only way for someone to access the asset.

**Private Blockchains and Distributed Ledger Technology**

Private Chains are similar to public blockchains, but generally do not use emitted cryptocurrencies to ensure the integrity of the system. Private Chains use different consensus mechanisms to ensure the integrity of the system. Private chains are made up of decentralized transaction databases and are often referred to as distributed ledgers. Private chains are membership organizations. The parties running the chain are all known "members" operating under some sort of joint agreement. Private chains can be built and used by consortia, joint ventures and other entities to form networks. Enterprise is interested in this form of blockchain. While private chains do not emit cryptocurrencies to secure their networks, cryptocurrencies and digital assets can be created by private chains through coin offerings. One type of cryptocurrency that can be created by a coin offering is a stablecoin which is a cryptocurrency backed by assets.

## Table 1. Blockchain Characteristics - A Comparison[26]

| Blockchain characteristic comparison | | | | |
|---|---|---|---|---|
| Characteristics | Bitcoin | Ethereum | Hyperledger | Libra (Proposed) |
| Restrictions | Permissionless | Permissionless | Permissioned | Permissioned |
| Restricted public access to data | Public | Public or Private | Private | Private |
| Consensus | Proof-of-Work | Proof-of-Work (in future, Proof-of-Stake) | Practical Byzantine Fault-Tolerance | Proof-of-Stake |
| Scalability | High node-scalability | High node-scalability | Low node-scalability | Unknown |
| Central regulation (governance) | Low: decentralized decision-making by community / miners | Medium: core developer group but Ethereum Improvement Proposal Process | Medium: open-governance model based on Linux model | High: Highly concentrated |
| Anonymity | Pseudonymity, no encryption of transaction data | Pseudonymity, no encryption of transaction data | Pseudonymity, yes encryption of transaction data | Unknown |
| Native Currency | Yes, bitcoin | Yes, ether | No | Stablecoin issued atop a decentralized network |
| Scripting | Limited possibility, stack-based scripting | High possibility, Turing-complete virtual machine high-level language support (Solidity) | High possibility, Turing-complete scripting of chaincode, high-level Go-language | Unknown, New Language proposed called MOVE |
| Compensation | Bitcoin Miners | Ethereum Miners | Can be consortia members or other private arrangement | Libra Reserve Founders |
| FIAT Assets Held in Reserve | None | None | None | Yes |

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[26] https://medium.com/blockchainspace/3-comparison-of-bitcoin-ethereum-and-hyperledger-fabric-cd48810e590c

DIVERSITY
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**A Technical View: What makes Blockchain Technology Different and Revolutionary and How can it be Useful?**

The technological utility and breakthrough of this technology is decentralized linear ordering of a decentralized synchronized ledger. The added benefit of this ledger is that transactions embedded within the ledger can be deterministically programmed. While different components of this technology have all been around for years, the way they have been put together to create blockchain computing architecture is new and can be thought of as revolutionary for tracking and proving transactions, items, creating assets, registries, identity and the like.

**Blockchain for Enterprise and for Social Good Applications**

Blockchain in Enterprise:

Due to its ability to serve as a trusted single source of data with transparent and tamper resistant history / ledger, blockchain technology has been widely explored across most industries, including banking, insurance, technology, healthcare, supply chain and logistics, media and copyrights and more. Enterprise is seeking across verticals to adopt this technology and in a large part has created consortia to explore, build and work on this technology.

The Banking system is a clear example of where blockchain may be applied for both origination and back office / operations. For example, blockchain in origination has been used for money transmission, traditional banking and lending. Blockchain in the back office has been used to improve efficiency and save costs, as well as to simplify and strengthen certain traditional banking processes, such as Know Your Customer (KYC) and Anti-Money Laundering (AML).

Blockchain in Social Good:

1. Permissioned Chain: World Food Programme "Building Blocks" program in refugee camps in Jordan is a private permissioned blockchain integrated with UNHCR biometric iris scan technology to authenticate and register beneficiary transactions allowing for direct pay of groceries. Financial Institutions are not used as intermediaries. The World Food Program has a record of every transaction. The result is reduced transaction fees, better ability to serve refugees and track monies distributed, better ability to respond to emergencies, and better privacy and security for the refugees.[27]

2. Public Chain: Heifer International's goal is to build a blockchain network for agricultural development. They are seeking to address land registries for farmers. Their first initiative was to create a poultry supply chain tracing application on the public Ethereum blockchain in 2016. Heifer International also accepts donations in bitcoin and ether.[28]

3. Public Chain: Bounties is a startup that uses a public blockchain. It is an ethereum-based project that provides technology to create projects for decentralized economies/marketplaces. Participants collaborate and are paid for projects in cryptocurrency in any subject matter area. One successful project was the beach clean-up Manila Bay project in the Philippines where locals worked alongside technologists to pick up trash and were paid in cryptocurrency bounties

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[27] https://innovation.wfp.org/project/building-blocks

[28] https://www.heifer.org/campaign/2018/blockchain-initiatives.html

in the form of ether (the cryptocurrency generated by the Ethereum public chain).[29]

4. Permissioned Chain: BanQu is a startup that records supply chain invoices on a private blockchain which then creates a record of transactions to support the creation of a digital identity which leads to becoming banked. It recently was funded by Anheuser-Busch in a series A funding.[30]

**Growth of the Cryptocurrency Markets**

The growth of the digital assets market, commonly referred to as the "cryptocurrency market," has been highly publicized both in the popular and trade media. On October 31, 2008, the mysterious Satoshi Nakamoto published his creation of bitcoin, and with it, created the first public blockchain. Cryptocurrencies are a benefit to society as they can be used for capital raises as well as payment mechanisms. Digital tokens issued in capital raises are called Initial Coin Offerings ("ICOs") and entered the mainstream vernacular in 2016 and 2017, raising billions of dollars' worth of digital assets with goals of funding product development, building user networks and, at times, perpetrating scams or frauds. Many interesting projects have been built. The market has had its faults as well. Despite the arguable transparency of public blockchains, in many ways, the digital asset trading market has been characterized by volatility, relatively thin trading, and lack of liquidity and opacity of information. Many ICOs arguably were engaged in unregistered sales of securities to U.S. "Main Street" purchasers, or otherwise may have run afoul of a variety of laws both in the U.S. and abroad. The second half of 2018 marked a slowdown in the ICO market,

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[29] https://medium.com/bounties-network/bounties-for-the-oceans-incentives-to-change-the-world-8f3429fd01e9

[30] https://banqu.co/our-purpose/

which some refer to as "crypto winter," and prices for many so-called "digital currencies" and "alt-coins" fell dramatically.

As of the date hereof, the website [www.coinmarketcap.com](www.coinmarketcap.com) describes 2,279 cryptocurrencies, with an aggregate market cap of $328,355,270,948. **While $328 billion may sound significant, it is important to remember that, as of today, the market capitalization of Facebook alone is $545.61 billion.[31] This is without including any of the many initial participants in the Libra project, including Visa ($379.09 billion)[32], MasterCard ($270.16 billion)[33] and many others.**

## Section 2: Libra Reserve in Detail

Facebook's Libra Reserve located in Switzerland can be seen as similar in nature to the Federal Reserve System located in Washington D.C. "Authorized Resellers" are akin to the financial institutions that have access to the Federal Reserve. Thus, it could be argued that since the Libra users do not interact directly with the Association, it is up to the Exchanges to do all the AML / KYC work (just as Bank of America, not the Federal Reserve, is responsible on the front lines for AML / KYC). With the recent FATF announcement involving the travel rule, it appears the Libra Association takes on no AML / KYC risk, and instead the exchanges offering Libra would be responsible.[34]

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[31] [https://ycharts.com/companies/FB/market_cap](https://ycharts.com/companies/FB/market_cap)

[32] [https://finance.yahoo.com/quote/V?p=V&.tsrc=fin-srch](https://finance.yahoo.com/quote/V?p=V&.tsrc=fin-srch)

[33] [https://finance.yahoo.com/quote/MA/](https://finance.yahoo.com/quote/MA/)

[34] [https://static.coindesk.com/wp-content/uploads/2019/06/Embargo-Virtual-Asset-Guidance.pdf](https://static.coindesk.com/wp-content/uploads/2019/06/Embargo-Virtual-Asset-Guidance.pdf)

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**Chart 1: Schematic of the Investment Token from Founding Member to the Reserve (Activities Sourced from the Libra Reserve Whitepaper)[35]**
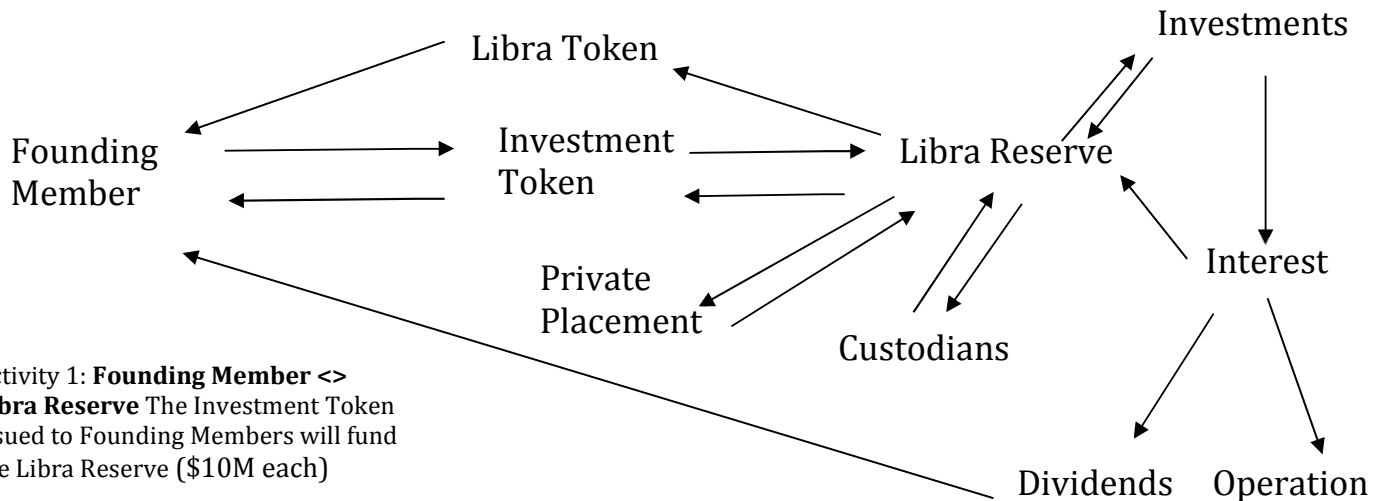


Activity 1: **Founding Member <> Libra Reserve** The Investment Token issued to Founding Members will fund the Libra Reserve ($10M each)

Activity 2: **Libra Reserve <> Founding Member** Libra Reserve will pay out incentives in Libra coin to Founding Members to encourage adoption by users, merchants, and developers.

Activity 3: **Private Placement <> Reserve** The funds for the coins that will be distributed as incentives will come from a private placement to investors.

Activity 4: **Libra Reserve <> Custodians** The reserve will be held by a geographically distributed network of custodians with investment-grade credit rating to limit counterparty risk. Safeguarding the reserve's assets, providing high auditability and transparency, avoiding the risks of a centralized reserve, and achieving operational efficiency are the key parameters in custody selection and design.

Activity 5: **Libra Reserve <> Investments** The reserve will be invested in low-risk assets that will yield interest over time.

Activity 6: **Interest <> Operations** The revenue from this interest will first go to support the operating expenses of the association — to fund investments in the growth and development of the ecosystem, grants to nonprofit and multilateral organizations, engineering research, etc.

Activity 7: **Interest <> Dividends** After Operations are covered, the remaining returns will go to pay dividends to early investors in the Libra Investment Token for their initial contributions.

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[35] https://libra.org/en-US/white-paper/#the-libra-blockchain

**Chart 2: Schematic of the Libra Token from the Reserve to End User (Activities Sourced from the Libra Reserve Whitepaper)[36]**
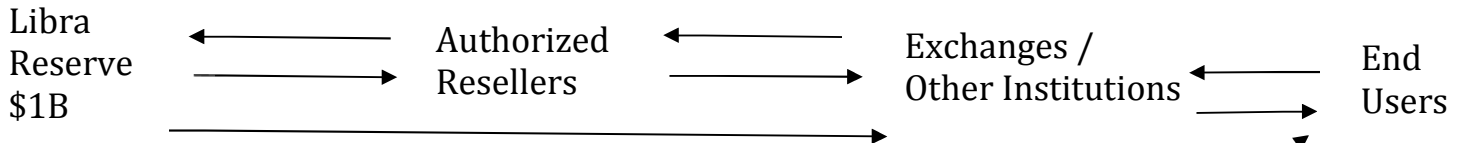
Activity 1: **Libra <> Reseller**
Transact Large Amounts of Fiat and Libra
In and Out of the Reserve

Activity 3: **Reseller <> Exchanges**
Integration Between Authorized Resellers
and Exchanges

Activity 5: **Exchanges <> End Users** End Users purchase
Libra through Exchanges.

Libra
Reserve
$1B

Authorized
Resellers

Exchanges /
Other Institutions

End
Users

Activity 2: **Libra <> Reseller**
Automatically mints new coins when demand
increases and destroys them when the demand

Activity 4: **Reseller <> Exchanges Authorized**
Resellers provide liquidity for users who wish to
convert from cash to Libra and back again.

Activity 6: **Reserve <> Exchange**s Association will encourage the listing on
multiple electronic exchanges around the world.  These exchanges offer web
portals and mobile apps for users to buy and sell Libra.

Authorized
Resellers
(Derivative)

Activity 7: **Authorized Resellers (Derivative)  <> End Users**
The association is also discussing ongoing relationships with principal cryptocurrency trading
firms and top banking firms as authorized resellers to allow people to exchange their local
currencies for Libra as easily as possible.

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[36] https://libra.org/en-US/white-paper/#the-libra-blockchain

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**Stablecoins**

A Stablecoin is a cryptocurrency that is designed to serve as a more stable digital currency relative to the price of fiat or some other asset or a basket of assets. Stablecoins can be pegged individually or in combination against currencies, assets or commodities (for example, gold), and therefore can be more stable than a typical cryptocurrency (as it has a fixed value relative to the underlying asset). Given the extreme volatility of the cryptocurrency markets and recent ups and downs of bitcoin and other digital assets, having a more stable asset to trade is an important feature of mass adoption in digital currencies. The idea of a stablecoin attempts to solve exactly this issue - how can one bring crypto to main street.

There are four main types of stablecoins: fiat-backed, commodity-backed, cryptocurrency-backed and seigniorage-style. A fiat-based stablecoin is the most common type of a stablecoin and is fully backed by fiat money. $1 of stablecoins is equivalent to $1 of fiat money. This structure is the simplest but is also the most centralized. It is reliant upon higher degrees of trust and greater oversight and regulation.

**Section 3: The Calibra Wallet and Facebook[37]**

Project Libra's moneymaker for Facebook is Calibra, the messenger/wallet, with private currency embedded in a Facebook app. The leader of this Wallet effort, David Marcus, comes from PayPal. Calibra could be in control of the payment stack which may provide less visibility for the regulators. Calibra may have access to social information through WhatsApp and Messenger. Calibra has the potential for concentrated power and may be able to exacerbate existing

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[37] www.calibra.com

discriminatory practices that can potentially box out people regardless of the context for reputation / credit score. For instance, what happens if Facebook suspends your account? Is your Wallet suspended as well?

Trust is what Facebook wants to recapture. How will Facebook be able to do this? Facebook's track record with data oversharing and privacy is a continuing bone of contention. Apps often use software development kits (SDKs) to integrate certain features and functions. The SDKs allow apps to understand user behavior which can be used to target advertising and the apps share the data with the maker of the SDK. As the article referenced below states:

"No smartphone is safe from Facebook's SDKs, as the social media giant has placed the analytics tool in thousands of apps."
https://medium.com/@cait.burchett/invasion-of-privacy-or-unintentional-oversharing-how-big-tech-companies-track-your-every-move-eeb85e40656e

### Section 4: Swiss Foundation Law[38] and Project Libra
Although some lawmakers and market participants have cautioned that U.S. regulatory scrutiny could cause Facebook to take Project Libra outside of the U.S., this arguably may be a red herring. While Facebook itself, and many of the initial Project Libra members, may continue to operate from, or be headquartered in the U.S., Project Libra already has been intentionally structured to be "located" outside of the U.S. Indeed, Project Libra contemplates a Swiss foundation structure. As such, the Swiss foundation is subject to Swiss law, which differs in many ways from U.S. law.

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[38] https://www.froriep.com/upload/prj/publication/Key-features-of-Swiss-Foundations-Julie-Wynne-Froriep-STEP_June2017.pdf

Among many other things, Swiss law differs from U.S. law concerning the legal classification of digital tokens. For instance, FINMA, the Swiss regulator, specifies three different types of digital assets, based on the characteristics of, and rights afforded by, the tokens themselves. This classification is very different from U.S. law's principle-based securities laws and the analysis by the SEC staff and others, of transactions involving such tokens. The famous (in the U.S.) Howey test, which asks whether there has been an (i) investment of money, (ii) in a common enterprise, (iii) with a reasonable expectation of profit, (iv) based solely or primarily on the managerial or entrepreneurial efforts of others -- and is used in the U.S. to determine whether an investment contract and, hence, a security, exists -- is irrelevant to Swiss law.

It is entirely possible that Project Libra could decide, given feedback from U.S. regulators and lawmakers, to exclude U.S. persons from access to the Libra and Calibra, but that would not mean that Project Libra itself would be stopped. As a Swiss foundation that, by definition, is not owned by Facebook, it may be able to limit its exposure to U.S. persons and U.S. laws. In the table on the next page are a few high-level observations on Swiss foundations.

Table 2: High-Level Observations about Swiss Foundations

| Selected Pros | Selected Cons |
|---|---|
| Swiss foundation is a familiar structure in the digital token sale context | In some ways resembles an irrevocable trust. In Switzerland, as in the U.S., new businesses do not typically structure themselves in ways similar to irrevocable trusts. Ability to achieve impact may be limited by dependence on contributions and donations. |
| Some initial flexibility may be drafted into the Swiss foundation's governance. | Foundation's purpose must be valid and non-commercial. The purpose is difficult to change, once established. |
| There are no owners, members or shareholders. | Founders cannot control the Swiss foundation, which is quasi-governmental. The board must act in accordance with the foundation's purpose and governing documents and applicable law. |
| There may be ability to minimize exposure to certain U.S. laws, if desired (e.g., by excluding U.S. persons). | Generally difficult to force a Swiss foundation to take certain actions. Difficult for founders to remove property from Swiss foundation, including during dissolution. Difficult for founders to refund donations (whether fiat or digital currency or other property) to contributors. |

# AUTHORS

## Susan Joseph, former B3i North American Representative, Blockchain Consultant

Susan Joseph is a Co-Founder and the Executive Director of Diversity in Blockchain, Inc. She has a JD/MBA and is a former General Counsel who consults in the blockchain industry specifically in the areas of consortia, insurance, identity, financial services, cryptocurrency, tokens, regulatory impact, real estate, supply chain, technology standards, and humanitarian concerns for enterprise and startups. She advises on projects to design and align token strategies and incentives regarding digital rights and is frequently consulted about regulatory and technological policy including the relationship between blockchain and artificial intelligence. Selected accomplishments include: former B3i North American Representative, Builder/Leader of Blockchain Working Group for a global insurer, and Core Member of World Economic Forum Consortia Project. Susan is a member of the Wall Street Blockchain Alliance legal working group and the Chamber of Digital Commerce. Previously, Susan was the first Executive Director of ID2020 and has consulted for IBM, positioning their blockchain identity practice. Susan advises many companies at their early stages and frequently travels around the world and guest lectures at universities and conferences alike.

## Anna Ashurov, Senior Director of Strategy, Anheuser-Busch InBev

Anna Ashurov is a Co-Founder of Diversity in Blockchain and is also the Senior Director of Strategy at Anheuser-Busch InBev, where she is involved in commercial strategy, innovation and technological advancements in North America. Prior to ABInBev, Anna worked as a capital markets banker at Goldman Sachs ("GS") and served as a Business Unit Manager of the Capital Markets Division in 2017. Prior to GS, Anna worked in Restructuring Advisory at Barclays,

helping restructure and reorganize credits during the credit crisis where Barclays had exposure. Anna holds a Bachelor's Degree from Baruch College and a JD from Brooklyn Law School, where she serves as a member of the Board of Trustees. Anna is Treasurer and a Board Member of the Diversity in Blockchain non-profit organization focused on driving inclusion, education and leadership for diverse people in blockchain and emerging technologies. Anna is also a member of the legal committee for the Wall Street Blockchain Alliance, an advocacy group for Wall Street in the distributed ledger age. Lastly, Anna sits on the Board of Directors at Mazel Day School, a private day school in Brooklyn. Anna is married, has four children and resides in Brooklyn.

# Michelle Ann Gitlitz, Partner, Co-Chair of Blockchain and Digital Currencies Group, Blank Rome LLP

Michelle is a Co-Founder of Diversity in Blockchain. An experienced regulatory lawyer and litigator, Michelle's practice focuses on the legal and regulatory issues confronting companies and individuals who bring blockchain applications to market. Michelle's clients include emerging and established companies, broker-dealers, funds, and other participants in the Fintech space. Michelle guides her clients through the evolving regulatory and legal landscape that governs their business model. Her experience includes advising individuals and companies as they raise capital through coin/token issuances and security token offerings, form digital currency exchanges/platforms, establish new blockchains and nodes, establish digital currency mining operations, navigate through federal and state money transmission issues, and in connection with federal and state regulatory enforcement actions. Michelle was listed by the *National Law Journal* and *New York Law Journal* as a Trailblazer (2018) in Cryptocurrency, Blockchain and Fintech. Michelle also frequently collaborates with federal legislators on blockchain and digital currency issues. Michelle is a frequent writer and sought-after speaker on blockchain and cryptocurrency matters.

# Shawnna Hoffman, IBM Cognitive Legal Co-Leader

Ms. Hoffman is a Co-Founder of Diversity in Blockchain and is also the Global Co-Leader of the IBM Cognitive Legal Practice. She is a sought after Blockchain Subject Matter Expert and recently spoke at the United Nations at the Blockchain for Impact Summit on "Diversity in Blockchain". In September 2018, she was appointed as Chair of the U.S. Commodity Futures Trading Commission's (CFTC) Distributed Ledger Technology and Market Infrastructure Subcommittee for the 2018 - 2020 term. In March 2019, she testified in front of the CFTC on "The Current State of Blockchain Adoption". She has one published patent for Detecting Clusters and Relationships in Large Data Sets (20180096047) and one pending for Method and System for Pattern-based Home Network Configuration (END820160894). As her give back to her local community, Ms. Hoffman co-founded and serves on the Board of Directors of the Community Hope Center of Osceola County which has helped over 30,000 homeless individuals since its inception.

# Joshua Ashley Klayman, Founder & CEO, Klayman LLC & Inflection Point Blockchain Advisors, LLC

Joshua Ashley Klayman is a Co-Founder of Diversity in Blockchain. Josh is one of the best known Blockchain and Cryptocurrency lawyers in the world. Recognized by *Chambers and Partners* as one of only 3 "Band 1"-ranked U.S. Blockchain & Cryptocurrency lawyers for 2019, Josh is one of the original top 12 global lawyers ranked by *Chambers* in its inaugural 2018 list. She is Founder and CEO of Klayman LLC, a blockchain-focused law firm, and Inflection Point Blockchain Advisors, LLC. Previously, Josh co-founded and led a prestigious global law firm's Blockchain + Smart Contracts Group. She is a board member, and chairs the Legal Working Group, of the prominent Wall Street Blockchain Alliance. A recognized thought leader, Josh is a *Forbes* Contributor and a member of both Wharton's global Reg@Tech think tank and Collective Future. In 2019, *Modern Consensus* named her #89 of the "100 Most Influential People in Crypto." Josh collaborates with blockchain leaders worldwide, speaks frequently

with regulators and was appointed by Delaware's Secretary of State to Delaware's Blockchain Strategy Committee. Josh has five children and one grandchild, leading some to nickname her "Mother of Blockchains."

# Advisors

# Jason Brett, Founder, Value Technology Foundation

Jason Brett is the Founder and Executive Director of the Value Technology Foundation, a non-profit focused on the research and development of blockchain technology in Washington D.C. Mr. Brett has almost 20 years of experience in Financial Services, and over four years of experience with blockchain technology. He has presented to a wide range of U.S. government agencies and regulatory bodies. Mr. Brett's previous experience includes working at the Federal Deposit Insurance Corporation (FDIC) Division of Finance and Capital Markets at the start of the global financial crisis, where he conducted research on financial and accounting issues, using Bloomberg to determine. Jason's experience in the Blockchain ecosystem includes a role as the Director of Policy Operations for the Chamber of Digital Commerce, a non-profit trade association in D.C., and as Policy Ambassador for ConsenSys, a venture production studio in Brooklyn focused on Ethereum. Jason lives in Rosslyn, VA.

# Carlos Acevedo

Carlos Acevedo is a recognized teacher leader who has taught in schools both in the United States and Central America. He was featured in the Washington Post for his initial efforts to introduce cryptocurrency to high school students in the South Bronx. He is the founder of Crypto Community Project, a company dedicated to educating underserved communities in the practical use of cryptocurrencies and blockchain technology. He also produces content for Never Stop Marketing, exploring the effects of blockchain technology on marketing and advertising.

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