DeFi and the Future of Finance

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– While most of the buzz in the crypto space is about bitcoin reaching record highs, there is something important happening that is largely under the radar screen. It is called DeFi or Decentralized Finance, and we examine its structure, opportunities and risks in our recent paper, "DeFi and the Future of Finance."

Consider the state of our financial system. Around the world, 1.7 billion are unbanked. Small businesses, even those with a banking relationship, often must rely on high-cost financing, such as credit cards, because traditional banking excludes them. High costs also impact retailers who lose 3% on every credit card sales transaction. These total costs for small businesses are enormous by any metric. The result is less investment and decreased economic growth.

Decentralized finance, or DeFi, poses a challenge to the current system and offers a number of potential solutions to the problems inherent in the traditional financial infrastructure. While there are many fintech initiatives, we argue that the ones that embrace the current banking infrastructure are likely to be fleeting. We argue those initiatives that use decentralized methods - in particular blockchain technology - have the best chance to define the future of finance.

Decentralized finance is a peer to peer system that is not controlled by any centralized institution, like a bank. There is no bricks and mortar, no charge backs and no loan interviews. You deal with your peers algorithmically in a secure environment enabled with blockchain technology. Cutting out the centralized institutions greatly reduces costs making loans more affordable and increasing deposit rates. Transactions are instant and secure. Further, everyone is treated the same essentially democratizing finance and reducing the inequality of opportunity that plagues current systems.

Indeed, we have come full circle. The earliest form of goods exchange was peer to peer, also known as barter. Barter was highly inefficient because supply and demand had to be exactly matched between peers. To solve the matching problem, money was introduced as a medium of exchange and store of value. Initial types of money were not centralized. Agents accepted any number of items such as stones or shells in exchange for goods. Eventually, specie money emerged, a form in which
the currency had tangible value. Today, we have non-collateralized fiat currency controlled by central banks. Whereas the form of money has changed over time, the basic infrastructure of financial institutions has not changed.

If loan rates are high because of legacy costs, high-quality investment projects may be foregone. An entrepreneur’s high-quality idea may target a 20% rate of return precisely the type of project that accelerates economic growth. If the bank tells the entrepreneur to borrow money on her credit card at 24% per year, this profitable project may never be pursued.

These legacy problems perpetuate and/or exacerbate inequality. Most across the political spectrum agree there should be equality of opportunity; a project should be financed based on the quality of the idea and the soundness of the execution plan, and not by other factors. Importantly, inequality also limits growth when good ideas are not financed.

These implications are far-reaching and, by any calculus, this is a long list of serious problems that are endemic to our current system of centralized finance. While we are in the digital era, our financial infrastructure has failed to respond. Have you tried to send a wire transfer recently? The technology is no different from 20-years ago.

Defi offers solution to five key problems – centralized control, limited access, inefficiency, lack of interoperability, and opacity – that arise from the current system of centralized finance. Decentralized finance offers new opportunities. The technology is nascent but the upside is promising.

Our research focuses on the building blocks of decentralized finance. We introduce new concepts such as flash loans, flash swaps, automatic market makers, decentralized exchanges, and initial Defi offerings. We explore the emerging initiatives in this space and take deep dives on: Uniswap, MakerDAO, Compound, Aave, Yield protocol, dYdX, and Synthetix.

We are careful to balance the opportunities with the risks. Our research explores the major risk factors that Defi will face over the next few years. We conclude by looking to the future and attempt to identify the winners and losers.