Unit 5 Case Study: Filecoin, IPFS, and the ICO

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Like all case studies in the HBS course-pack, this week's case study on Filecoin should not necessarily be critiqued purely from the perspective of a company trying to make it in the business world, but rather from the perspective of a company trying to innovate in the blockchain space and explore emerging technology (Sin & Lim, 2018). Sin & Lim write about founders Juan Benet and Nicola Greco, who wanted to build something that wasn't influenced by the incentives of academia or profit-seeking enterprises in the private business world. They worked on both Filecoin and the Interplanetary File System (IPFS), two projects that work closely with one another. Both products add significant value to the blockchain world. Filecoin is the main focus of this paper, as it builds on top of the IPFS and tries to integrate with other platforms like AWS, Azure, or Ethereum in order to stay competitive.

1. How did Filecoin conduct its ICO?

The Filecoin token is specifically what was given out to investors who decided to participate in the ICO. What sets Filecoin apart from other crypto-companies that had ICOs is that Filecoin filed with CoinList, an SEC-compliant money services business. Filecoin was the first company to have an ICO on CoinList and used a level of caution that very few other crypto-companies took, since they expected beforehand that the SEC might come after organizations that didn't take their ICOs seriously.

Filecoin set aside a limited supply of tokens for institutional investors, about 10% of the total supply, during the ICO. These token sales were limited to institutional investors within the United States and neither U.S retail or international investors were allowed to participate in the ICO. These tokens were also released through a framework known as the Simple Agreement for

Future Tokens (SAFT), which promised that the tokens could be sold for a fixed price at a later date.

2. How is Filecoin's ICO similar to and different from equity IPOs and crowdfunding initiatives (i.e. Kickstarter, Indiegogo, GoFundMe)?

A traditional equity IPO is actually quite a complicated and expensive process for private companies or startups to prepare for and engage in. The SEC has strict guidelines and there are a number of agencies that need to get involved in order for the process to go through properly (Fernando, 2023). The major difference between equity IPOs and ICOs is that the SEC does not directly need to be involved with ICOs. Because of this one major difference, there is no standard way of carrying out an ICO. Blockchain-based assets are quite a bit different from traditional securities, so there just aren't as many regulatory guidelines on how companies like Filecoin aught to proceed. Filecoin doesn't exactly have a tangible product available and since there is quite a bit of research and development that will need to take place before Filecoin is viable, they definitely could have never thought of performing an IPO.

ICOs can act quite a bit more like crowdfunding initiatives than proper, regulated, equity IPOs, but they still have the flexibility to be just like IPOs with digital coins. While a company can try to follow SEC guidelines when performing their ICO, at the end of the day, blockchain startups are mostly doing it however they want, much like crowdfunding initiatives. Initiatives like Kickstarter, Indigo, of GoFundMe can hardly be considered investment platforms, since all the money you give is uninsured and it split between the company and crowdsourcing website intermediary. There really isn't a concept of investing on these platforms, as they are meant to

just raise money for an initiative of some kind. An ICO should be an investment, which puts it at odds with traditional crowdfunding initiatives.

Filecoin's ICO was actually SEC compliant and was treated as a security investment. ICOs can definitely better model steps from the traditional IPO process, but there needs to be regulatory oversight. Maybe this means its time for the IPO process to modernize?

3. What are the pros and cons of Filecoin conducting a fundraising through an ICO?

IPOs are a very rigid process that requires a company to be fairly mature and have deep pockets. Since your company would need to get in touch with a number of entities in order for the deal to go through, the risk of rejection or a failed IPO attempt is highly likely. This is where ICOs come in. Since Filecoin is not a ready product yet, the founders wanted to find a way to legally obtain funding for an ambitious product that was still in the works.

The biggest con right now for entering this space is the risk of enforcement from the SEC. The legal issues of employing this method are still not yet sorted out. While Filecoin took steps to make their token sales safe for investors, this blockchain space is still under-explored. There will be high pressure from both shareholders and stakeholders like miners for the product to functions. Having more people and entities involved with your project could lead to greater liabilities down the line.

4. Why should investors be attracted to Filecoin?

Filecoin is essentially an incentives layer existing on top of the IPFS. It also makes use of an internal cryptocurrency called Filecoin token. The Filecoin token is meant to try and provide incentives for people to engage in a data marketplace of sorts, where there are bids from clients and asks from miners. The founders of Filecoin are trying to make their product as

integratabtle as possible with frameworks like Ethereum for smart contract development as well as the IPFS for file storage. The IPFS was also created by the team who are working on Filecoin, which should aid in investor confidence.

Sun at al. (2020) describe how the IPFS and blockchain technology can help provide non-repudiation and access control schemes for insurance data. The IPFS in this case allows for one to hold encrypted records as well as avoid single points of failure that are present in centralized systems. The IPFS provides a unique hash for a file in order to prevent duplication.

Filecoin's clever use of the IPFS means it is trying to ensure privacy for all users within the ecosystem. Since such a system is also likely to be widely adopted by other companies, it is heading in the direction of being highly interoperable with other protocols and companies. Filecoin's willingness to integrate with other platforms, like smart contracts from Ethereum or micro-services from various cloud-vendors ought to make it attractive to investors.

5. Why should investors be weary of Filecoin?

Consensus, a major layer in all blockchain products, is meant to provide integrity of transactions within p2p networks. Filecoin makes use of a novel set of consensus mechanisms, known as proof-of-spacetime and proof-of-replication (Filecoin, 2023). During the mining process, miners must prove they are storing the files they are agreeing to store. These consensus mechanisms allow for greater trust to exist between miners and clients.

Formal verification for novel consensus mechanisms is no easy tasks and consensus can still be thought of as the weak-point for Filecoin. While it is trying to make innovations and find more efficient ways to handle high-throughput transactions, I am sure, this is a problem other blockchain companies are also struggling with.

6. Why are regulators encouraging or opposing ICOs?

Sin & Lim describe how some regulators around the world are reacting to ICOs. The US, China, and Korea, are all taken aback by the potential for mischief and misconduct present

among ICOs. They have been rather critical of the practice and as stated earlier, the lack of regulatory clarity regarding how one should actually proceed with an ICO might be to blame. Investments need to be protected, after all, and some countries are right to be taking a moderate and experimental approach.

Switzerland, on the other hand, is actually quite friendly towards the idea of an ICO and has hosted 4 of the biggest 15 ICOs that took place in 2017. The Swiss government is deeply interested in fintech initiatives and is encouraging as much research as possible.

7. What have some regulators done in response to ICOs?

Since it is currently 2023, I should highlight some recent advancements from the SEC. De (2023) released a report on the status of the SEC vs. Ripple trial. Filecoin was ahead of the curve in terms of preparing for enforcement from the SEC, but Ripple was not. Ripple got hit with a charge of selling XRP to institutional investors without the license to sell securities during their ICO. Ripple followed a similar path as Filecoin in terms of choosing to run an ICO, but Ripple did not file with CoinList.

Other countries like Singapore and their Monetary Authority started to create guidelines on how they would regular ICOs in 2017 and the US's SEC has now actually won complaints against blockchain companies. Companies have to be much more careful now!

Conclusion

ICOs, while still a bit of a wild west, are not at all an unregulated now. They are a powerful means of potentially disintermediating the IPO process, but the entire point of the IPO was the get many financial services together to ensure that the now-public company would fulfill their obligations to investors. The new ICO process can seem a little bit chaotic and borderline anarchist, which makes it tough from the investors' perspective to participate, unfortunately. ICOs might be good for the companies that manage to raise capital, but there needs to be

insurance from the SEC or another regulatory agency that holds the issuing company accountable. Filecoin makes many interesting contributions to the blockchain space and their ICO was particularly forward thinking. They were one of the companies to foresee that the SEC would be interested in the space and unlike Ripple, they took precautions during their ICO.

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