Zilliqa Project Analysis

The following is an objective review of the Zilliqa project. The review is based on certain criteria, which we think are important for a project to succeed. We measure a successful Project by short- and long-term ROI estimation. The following is not financial advice.

Intro

Zilliqa is a new blockchain platform that is designed to *scale securely* in an open, permission-less distributed network. The idea of the Zilliqa blockchain was conceived in the Computer Science Lab at the University of Singapore, based on a paper written by Lui Loo, the cofounder of Kyber Network.

To date, 2142 Dapps (Decentralized apps) are being built on top of the Ethereum Blockchain, aiming to attract millions of users. The current Ethereum Blockchain max transaction rate is approximately 15 transactions per second, which is obviously not enough to handle the expected transaction volume, even if only a few Dapps succeed. This situation is making Dapp developers seek off/on chain solutions.

Zilliqa launched its second testnet and it's about to launch its mainnet by Jan 2019. Their current transaction volume is 3,000 transactions/sec with 1,000 (4 shards) nodes in the network. With Zilliqa, as the number of nodes in the network rises, so does the number of transactions per second. With a network size of 10,000 nodes, Zilliqa will enable a throughput which matches that of VISA and MasterCard with much *lower f*ees for the merchants (expected throughput is approximately 8,000 transactions/sec).

The project is aiming to serve as an alternative, scalable and secure solution for Dapps to be built on.

Criteria	Score
Team	9
Stage of the project	9
Project potential	9.5
Community	8
Token use	9.5
ICO Terms	9
White-paper	9
Technology	9.5
Final Result	9.09

Let's get going with our evaluation!

Team

Core Team

Xinshu Dong : CEO

A scientist and practitioner in building secure systems, ranging from blockchains to web browsers and applications. He was the technical lead for several national cybersecurity projects in Singapore and holds a PhD from the National University of Singapore.

Prateek Saxena: Chief Scientific Advisor

An Assistant Professor at the National University of Singapore. Together with his PhDs, his lab is actively publishing many blockchain oriented papers. Projects like Dexecure, TrueBit, Smart Pool, Kyber Network and now Zilliqa are based on these papers. He has received several premier awards, including the Top 10 Innovators under 35 (MIT TR35 Asia) in 2017.

Christel Quek: Head of Marketing

Co-Founder of BOLT, a live TV & gaming service (over 3M users in Kenya, Southeast Asia, and Latin America). Previously the head of content at Twitter. Was selected by the Guardian as one of the ten digital strategists to watch in 2013, and by Business Insider as one of the top advertisers to follow on Twitter in 2017.

Advisory Board

Alexander Lipton

Founded StrongHold Labs, he is also a Science Fellow at MIT Media Lab and Visiting Professor of Financial Engineering at EPFL. He has had prior experience in management positions at Bank of America, Merrill Lynch, Credit Suisse and other major financial organizations. Has a PhD from the Moscow State University.

Loi Luu

A researcher working on cryptocurrencies, smart contract security and distributed consensus algorithms. He is also a regular invited speaker at Bitcoin and Ethereum workshops such as Devcon. He founded Kyber Network, a decentralized crypto currency exchange. Kyber Network recently raised 60M USD, and is now valued at approximately 200M USD @ coinmarketcap.

[Stuart Prior](#)

Stuart Prior is a Fintech veteran with 20+ years in Corporate and Investment Banking. Stuart specializes in leading corporate banking initiatives for the adoption of blockchain technology and Crypto Finance. Throughout his career he has focused on the development of banking technology applications including Ultra High Frequency / Low Latency trading and the development of large scale data management platforms. Over the years he has worked with many of the largest banks in the world, including Credit Suisse and Deutsche Bank.

Zilliqa Blockchain- Technical Aspects

Zilliqa project prides itself on being "The world's first high-throughput public blockchain platform". High-Throughput Computing or HTC is a way of utilizing computing power by breaking its load into many small loosely-coupled tasks and distributing the workload across a grid of many different computers.

Zilliqa utilizes HTC and uses network sharding – "dividing the mining network into smaller consensus groups called shards, each capable of processing transactions in parallel", supposedly Zilliqa's blockchain will process more transactions per second as more mining nodes join the network. This may sound intuitive, but in reality, the greater the number of nodes the greater the processing time.

In order to understand the framework of Zilliqa, one must first understand the general idea of consensus. A consensus in Blockchain is the mechanism in charge of approving new information being appended to the blockchain across all the decentralized nodes, the most common consensus protocol is Proof of work (POW), which is usually referred to as mining.

In high level, the Zilliqa framework is built of two main components:

Shards

An independent group of nodes which are responsible for validating a portion of the transactions. In order to do so, each shard will need to decide on its own consensus. This will be done by another consensus approach named Byzantine Fault Tolerance Algorithm or PBFT protocol. At a high level, for each shard, a leader is selected. This leader will validate a constant amount of transactions and create a new block. Then the block will be validated by the other nodes of the shard. If the vast majority of the nodes in a shard accept the block, it will be addressed to the DS Committee in order for the block to be accepted in the general consensus of the Zilliqa blockchain.
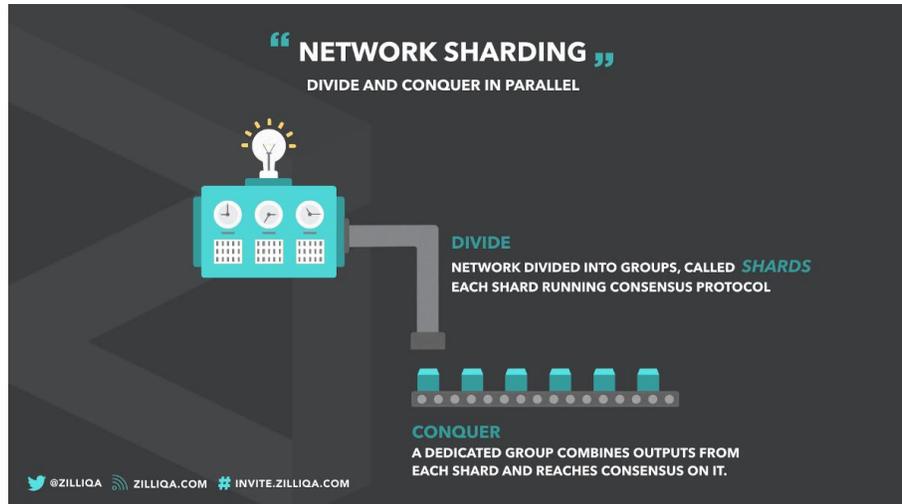
DS Committee

This is a group of nodes that manage the activity of Zilliqa's framework. We can divide their role into two main parts: Building the general consensus (the Zilliqa general blockchain) and maintenance of the Zilliqa framework.

Building the general consensus

As we mentioned before, each shard is only aware of the transactions that were assigned to it. After some shard has finished creating a new block it is sent to the DS Committee. The DS Committee needs to decide whether to add this block to the general blockchain. This done by executing another process of the PBFT consensus protocol.

Framework maintenance

The DS Committee is also responsible for some general utilities of the framework. For example, when a new transaction is being broadcasted to the Zilliqa network, the DS Committee decides which shard will receive this transaction. Another role of the DS Committee is to assign a new node in the network to its suitable shard.
Zilliqa also utilizes the Proof Of Work consensus approach in their framework. POW is used solely for the purpose of establishing mining identities both for the DS Committee and for the shards.
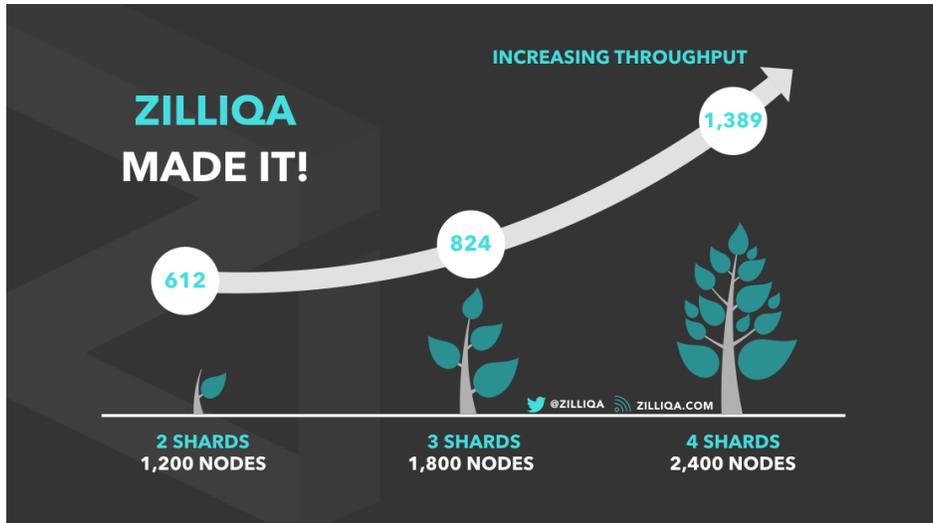
Competition

Zilliqa, like many other new blockchain technology companies that have surfaced recently, claims to solve Ethereum's scalability issues. Each company has stated that their blockchain will allow for more transactions per second. These new blockchains are nicknamed "Ethereum Killers" and include EOS, NEO (also known as "Chinese Ethereum") and Cardano to name a few.

The Ethereum blockchain does have a scalability problem, it's simply not scalable enough right now for mass use, only recently a silly virtual game called "Crypto Kitties" built on top of the Ethereum blockchain slowed the network down drastically.

Vitalik Buterin the co-founder of Ethereum Speaking on November 25,2017 at BeyondBlock Taipei 2017 said that the "The Ethereum killer is Ethereum", and he might be right, but either way Zilliqa is certainly not alone in this arms race to build the most scalable blockchain, that may one day host the future decentralized apps that will replace companies like Uber and Airbnb.

The good news is that we are still at a very young stage of blockchain technology and Zilliqa is one of few companies that might make the cut and reach massive use one day. In a recent blog post Xinshu Dong Zilliqa's CEO claimed that "Zilliqa has achieved approximately 2,500 transactions/second in our internal testnet. This is more than 250 times faster than the existing Bitcoin and Ethereum networks." That is very impressive and the potential is huge if we can assume that Zilliqa could one day achieve such a high transaction rate within a main scalable blockchain network.

Roadmap

Dec, 2017: Releasing **public testnet** v1.0

source code will also be available (public miners can join and test, feedback & bug fixes)

Feb, 2018: Releasing **public testnet v1.5** (+Smart Contract Support)

Mar, **2018**: Releasing public **testnet v2.0**

Q2, **2018**: Launching **Ziliqa** public **mainnet**

Q3, **2018**: Releasing **dApps**

ZIL token use - the fuel of the blockchain

ZILs are the driving force behind the Zilliqa Blockchain, as ETH is for the Ethereum Blockchain.

ZILs are consumed by paying fees to the network nodes. One must hold ZILs in his wallet in order to transfer ZILs or other future tokens to be created on top of the Zilliqa blockchain (Made equivalent to ERC-20 tokens on the Ethereum blockchain, serving hundreds of ICOs each month).

Before Zilliqa main-net goes live, Interim ERC-20 tokens will be generated and allocated to various parties, including contributors of the ICO.

These interim ERC-20 tokens will be issued to the initial holders and be transferable within 2 weeks after the completion of the ICO. They are expected to be migrated to the Zilliqa main-net as ZIL tokens in 2018.

Token Sale

- **Total Hard cap:** 48,889 ETH

- **Token allocation (21B ZILs):** 30% public and private sale, 40% mining rewards, 30% company, team, agencies.

- **Private sale (**44,000 ETH**):** Finished, oversubscribed.15% bonus (Max).

- **Public sale (**4445 ETH**):** Date to be announced. Max individual cap - 5 ETH.

- **Whitelist:** KYC via Bitcoin Suisse. The whitelist is closed.

Funding Status

The team initially intended to raise a total hard cap of 20M USD (Private sale- ~12M USD, public sale - ~8M USD). Unfortunately (or not ☺), the ETH/USD price had spiked since the end of ZIllilqa's private allocation, and the 44,000 ETH raised turned out to be more than 20M USD. The team announced that their public allocation was canceled as they had raised the money needed for future development.

Hearing the voice of their community, the team recently announced that it will raise their hard cap a bit (+4445 ETH) and reopened their public allocation period.

Conclusion

Pros

The team and advisory board

The team consists of highly respected PhDs from top universities in the world. The project is on behalf of Prateek Saxena's lab at the University of Singapore, which had published award winning papers in the field of cryptocurrencies and blockchain solutions.

Project potential

With the rising acceptance of blockchain technology, start-ups are not the only ones building their applications on top of the block-chain. Big companies with millions of active users (i.e. Kik, AIG, Unikrn, EnjinCoin and more) are also doing so. There is obviously a demand for a high throughput blockchain infrastructure and Zilliqa is on the right track to achieve that goal. The more Dapps that are developed on the Zilliqa blockchain will lead to a higher transaction volume and a greater consumption of the ZILs tokens. As there a finite number of tokens to ever be created (21B), one must assume that if the Zilliqa platform succeeds, the value of the token will rise.

Project Status

Testnet is live with 3,600 Nodes enabling 2,488 transactions/sec (approximately 10-15 times the max transactions/sec on ETH/BTC blockchains). The main-net is to be live on Q2 2018 and Dapps development will start on Q3 2018.

Token Mechanism

The hard cap is ~48,445 ETH (Equivalent to ~32M USD at the time of writing), if you follow all top 20 tokens by market cap @ coinmarketcap.com, most of them are projects based on their own blockchain (Not ERC-20 projects) valued from ~1.2B USD (Waves) to ~300B USD (Bitcoin). Their hard cap definitely leaves room for growth in the ZIL market cap price in the near future.

Cons

Competition

Zilliqa is competing with top smart contracts blockchains like Ethereum, EOS, and other upcoming projects. The Ethereum blockchain has been live and tested for around 3 years, the community behind Ethereum is huge and there is great development to come, with the aim of addressing issues like scalability, power consumption and more. Though, the ecosystem is expected to grow so there is likely room for blockchains to live alongside each other.

CryptoPotato ICO Evaluation – result

	1	2	3	4	5	6	7	8	9	10	
Team											9
Stage of the project											9
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Team & Advisory board 9/10	Project is led by highly respected PhD scientists and well-respected figures in the crypto ecosystem.
Stage of the project 9/10	Testnet is live and working as expected (2,488 transactions/sec with 3,600 Nodes). Main-net release- Q1 2019
Project potential 9.5/10	A smart contract scalable blockchain with a potential to facilitate high transaction volumes, via Dapps to be developed (ZIL token price correlates to the transaction volume)
Community and Media 8/10	~4,600 telegram members, ~2,078 Tweeter followers (fast community growth).
Token Use 9.5/10	ZILs tokens are the fuel for the blockchain, high correlation between token price and the success of the project.
ICO-Terms 9/10	Cap- ~32M USD, 30% of tokens distributed, 40% mining rewards, 30% company/ team/agencies. max bonus - 15%, max individual public sale cap - 5 ETH.
Whitepaper 9/10	Published a technical and a business whitepaper. Both have good detail.
Technology 9.5/10	Brilliant implementation of the network sharding protocol, which enables higher transaction rates with an increase in the number of nodes in the network.