

June 30, 2018

Loopring Post-ICO Rating

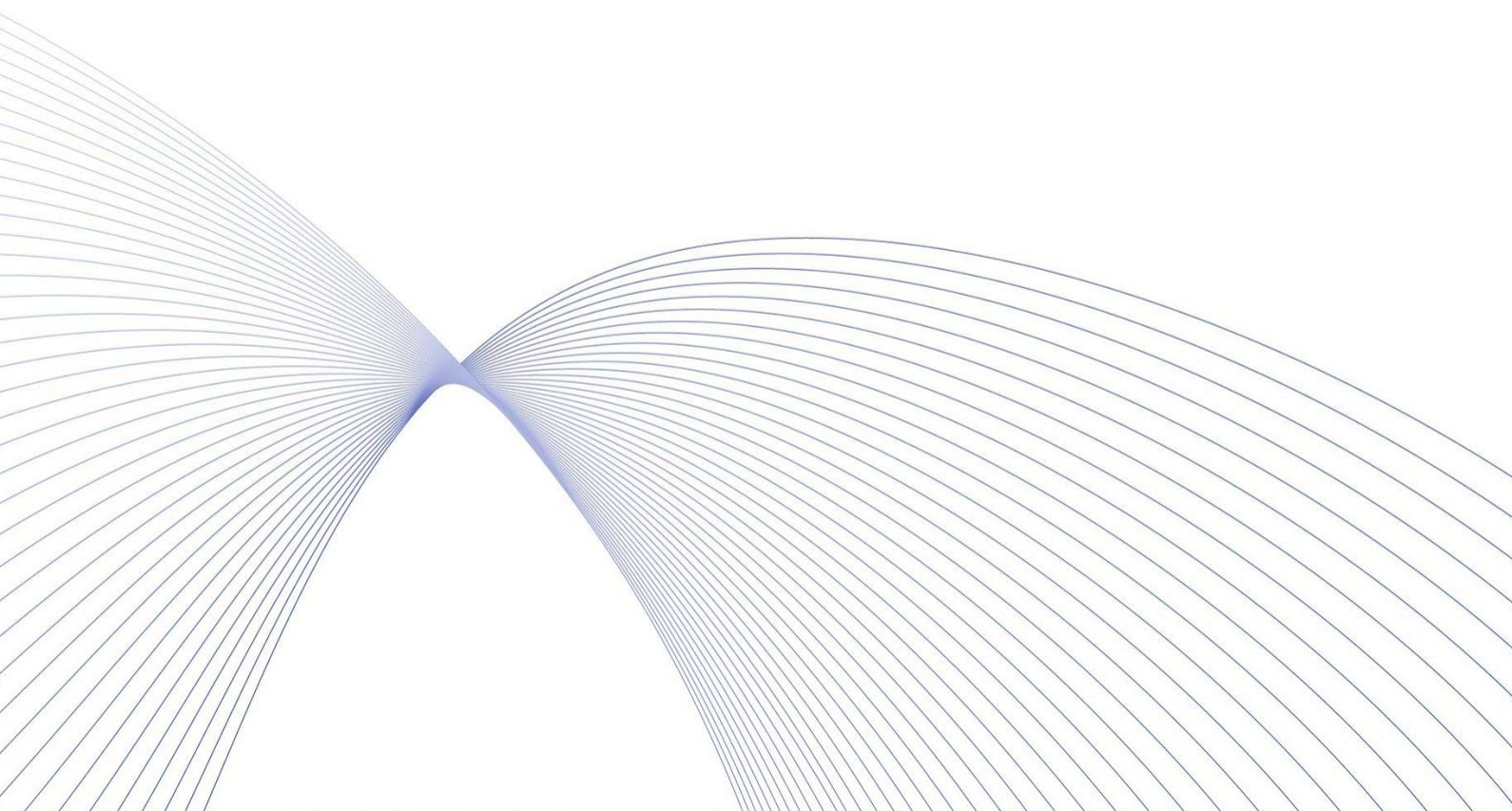


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1. Rating report

Based on the analysis performed, we have assigned a "Stable +" rating for the Loopring project. ICorating has not rated Loopring project before the ICO.

The following are the general strengths of the Loopring project:

- Ambitious and perspective idea
- Healthy vesting conditions
- Strong team
- Good competitive position

Apart from the above, the following are highlights of the project's performance during the first 10 months after the ICO date:

- Team strengthening (more than 10 new team members)
- Smart contract code is already publicly available
- Release of wallet and public testnet v 1.2 (on Ethereum mainnet)
- Evidence of team's work on GitHub
- Good token performance compared to the market and competitors

Key project risks at this stage include:

Competition

The project has strong competitors based on their progress and market position, however, Loopring has several competitive advantages in terms of performance and security in comparison with its rivals. Considering such strengths, such as an experienced development team, good overload resistance, stability, and extensive tools, the project can become a worthy competitor.

Roadmap is not comprehensive

The project's roadmap does not have business development milestones and does not directly cover in detail the period after the trading wallet release in April, 2018. At the same time, vesting for the team will continue for almost two years (current 2018, upcoming 2019 and half of 2020). As for the report date, the roadmap is presented as a single artistic format of the business plan, without any specific milestone, which could be used in a future project's on-time development evaluation.

Absence of detailed information regarding the use of proceeds

Information regarding the use of funds collected during the ICO is not available for public review yet and cannot be verified. Nevertheless, the team intends to release an expense report for public review after the calendar year-end. If that happens, the risk may go down.

Based on the analysis performed, and risks identified, we have assigned a "Stable +" rating for the Loopring project.

2. Project & ICO information

Loopring is an open protocol for building decentralized exchanges. Loopring operates as a public set of smart contracts responsible for trades and settlements, with an off-chain group of actors aggregating and communicating orders. The protocol is free, extensible, and serves as a standardized building block for decentralized applications (dApps) that incorporate exchange functionality.

Loopring's ICO had a hardcap of 120,000 ETH, or USD 45,000,000, from August 1, 2017 till August, 16, 2017. The team actually collected 120,054 ETH due to significant volatility of USD/ETH rates during that time frame. The Loopring ICO collected 100% of the hardcap.

The total number of investors in Loopring is 50,000+.

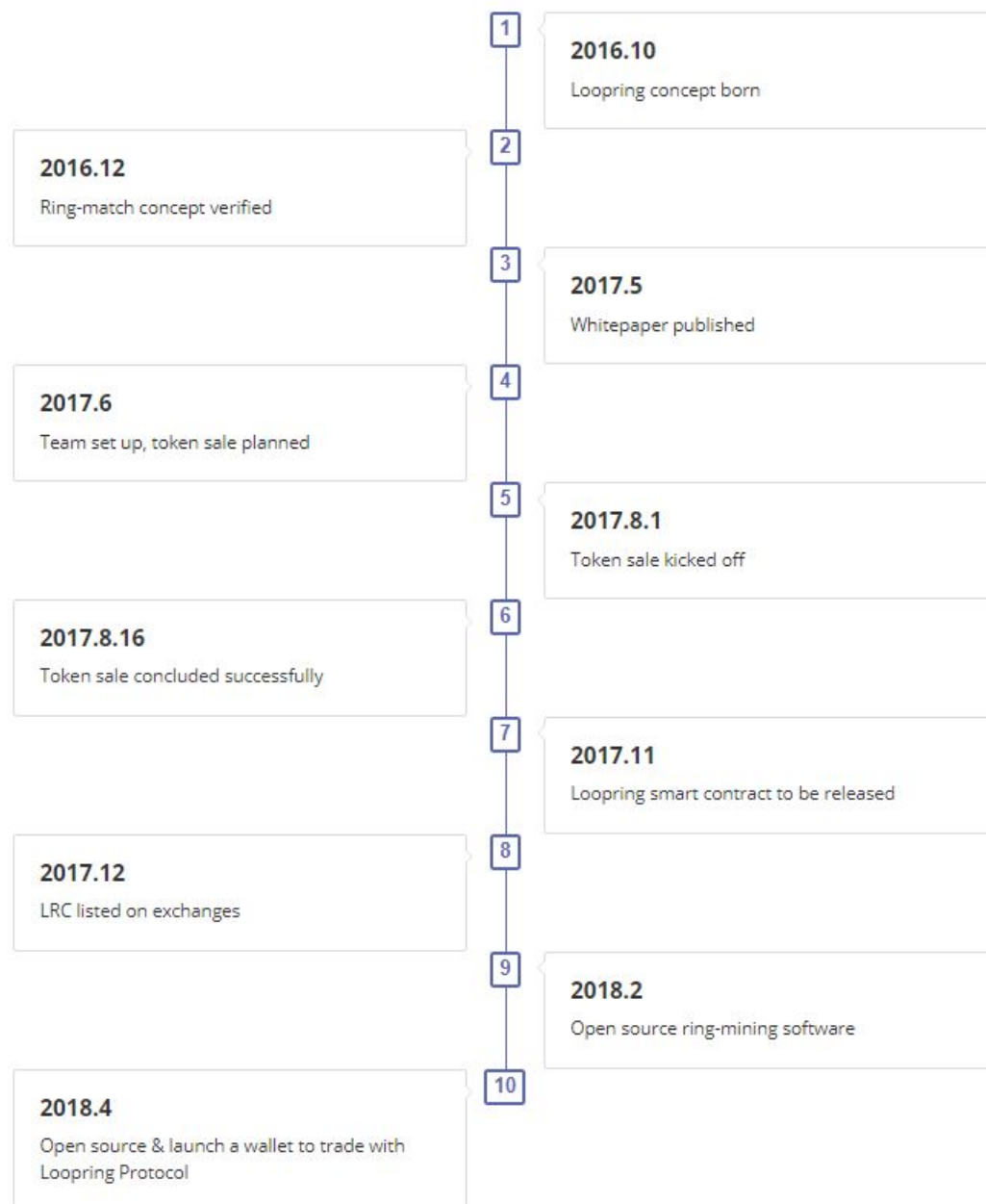
The VC Investors participating in the ICO included FBG Capital (provided the media and promotion support), [YBF Ventures](#) (as they decided to run the incubator), GBIC and China Growth Capital (both GBIC & China Growth Capital participated on token sale), etc.

The Loopring smart contract has been audited by Argus Audits, more information can be found [here](#).

3. Project and product analysis

Roadmap and product

The original Roadmap of the project is preserved on the [ICObench website](#):



Loopring does not disclose its current roadmap on the project's website, however, we have traced the project's development after the ICO. Also, the last milestone presented on the

Roadmap is was dated April, 2018. The project's plans for development in 2018 were presented on December, 31, 2017 on [Medium](#).

The actual progress of Loopring can be tracked on our [official website](#) and [blog](#) that publish regular weekly updates. Thus, the key results from the beginning of 2018 are as follows:

- December, 23, 2017 - protocol 1.0.0 final deployment on Ethereum mainnet; announcement of the beta1 version of Loopr wallet, available at <https://loopring.io>, is feature-complete and functional; announcement of the start of UX/UI for beta2 design;
- January, 6, 2018 – deployment of [Loopring-Token-on-Qtum \(LRQ\)](#) and the Loopring Protocol v1.0.0 on top of the Qtum mainnet;
- February, 2, 2018 – announcement that the UI/UX design for Loopr2 has been completed; V1.1 protocol is about half way to completion;
- March, 18, 2018 - protocol v1.2 has been deployed on Ethereum mainnet;
- May, 3, 2018 – web-based wallet (Loopr) beta-3 and DEX to trade is released: <https://loopring.io/#/>.

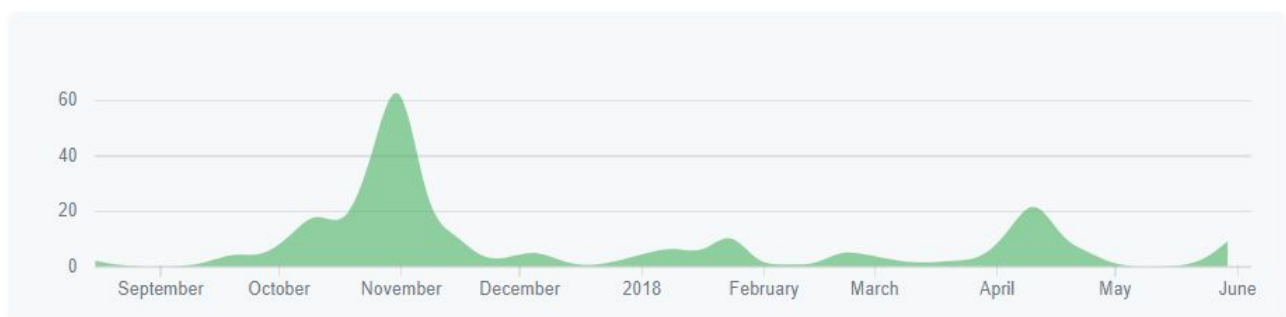
Overall, the team is on track with the project's development, even being slightly ahead of schedule.

The project's code is publicly available at [GitHub](#). For the period from tokens' sale conclusion, and the date close, to the date of the report, contributions to master on GitHub were as follows:

Aug 20, 2017 – Jun 9, 2018

Contributions: Commits ▼

Contributions to version2, excluding merge commits



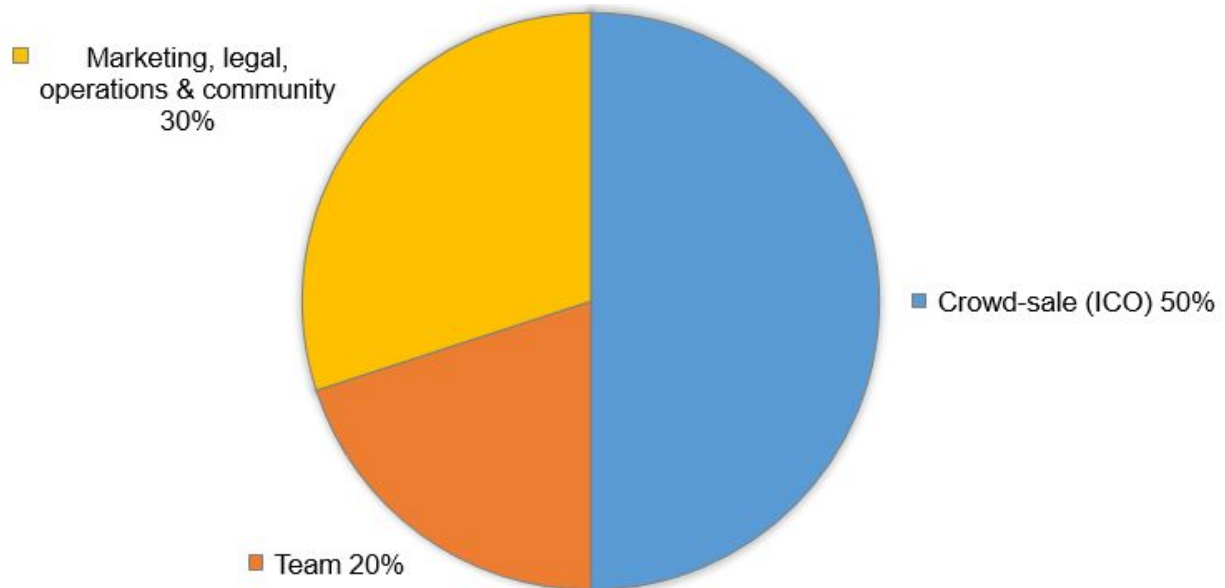
There was a significant spike in November 2017, and another less significant one at the end of April, 2018 which were obviously related to the smart contract release, bug fixes, and the launch of Loopring's web wallet & DEX.

The team regularly contributes to publicly available code on GitHub.

Business and finance

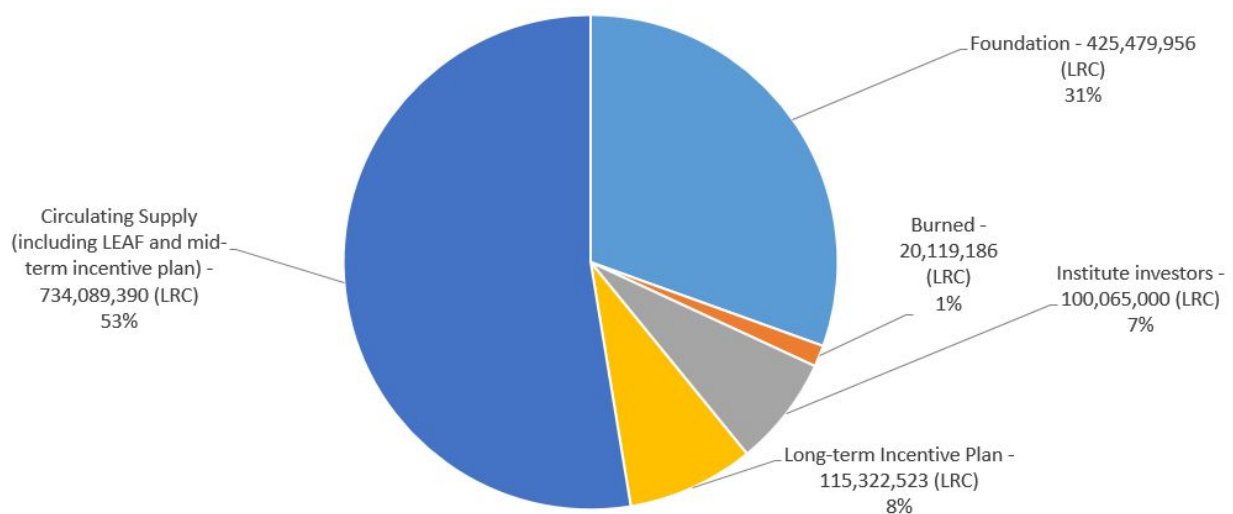
LRC token supply is limited to [1 374 956 262](#) LRC tokens.

The following information was available before the token distribution event regarding LRQ token distribution:



All of the tokens above in the team group have a vesting period of 3 years.

As of the report date, the following information is available regarding tokens' distribution on the [webstorage](#) of the project:



- The Loopring foundation (including 20% team + 10.5% long-term reward program releases after 2~3 years) is determined to reward a considerable portion of LRC tokens

to developers, partners, and community contributors; the circulating supply will increase over time;

- [LEAF \(Loopring Ecosystem Advancement Fund\)](#) was set up to support the development of the Loopring ecosystem. Currently, 16.8% of the total supply was put into LEAF, and an additional 3.2% will be put in the next four years. The source of this additional input – refund to the investors;
- Burned LRC are burned by either the foundation, or some users (Nobody can transfer these LRC out to another address).

We have conducted an independent smart contract's review, and at <http://docs.loopring.org/English/token/> there is a line indicating that the burned tokens are at 1.4%. These are the tokens that were sent to the zero address which does not make them burned, because in totalSupply they are still considered. Meanwhile, the smart contract does not have a 'Burn' function (or any similar function), and this could be considered as incorrect data, because these tokens are not burned, but simply sent incorrectly to the zero address. At the same time, such code behavior is also acceptable.

According to the information received from the team regarding the use of proceeds, more than a half of the raised amount was refunded to all the Chinese investors. A small amount for marketing and operation costs were cashed out (detailed information has not been summed up yet). An approximate expense report will be disclosed after a full calendar year will have passed.

4. Market dynamics and regulation

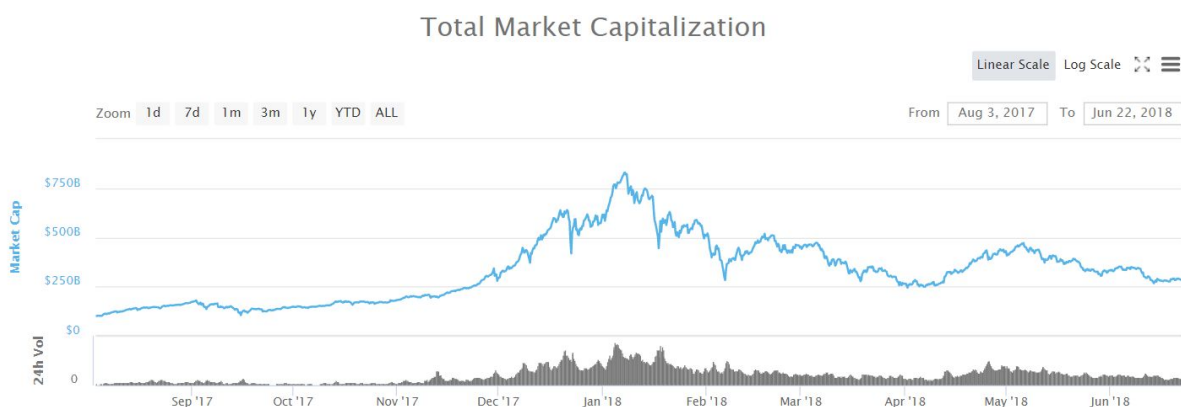
The market niche of decentralized currency exchanges, in general, bears medium to low regulation risks.

SEC regulations may have restrictions on exchanges operating in the USA / for USA citizens, potentially limiting the use of protocols since certain ERC20 tokens can be considered securities.

The Loopring Foundation is registered in the British Virgin Islands (BVI). The BVI are considered as one of the top blockchain and ICO-friendly countries in the world. There are no ICO, or blockchain-specific, rules or guidelines which have yet been issued by the government or regulators, and the current position of BVI seems to be consistent with the position in the United Kingdom and across pan-EU law.

In order to confirm that LRC is not a subject to SEC regulatory requirements, [analysis from Murphy & McGonigle](#), a USA law firm, was received, advertising that LRC is not a security token.

Blockchain's market capitalization from August, 2017 to January, 2018 had been smoothly growing and, as of June 22, 2018, market capitalization has decreased almost twofold since January 01, 2018 mainly driven by changes in Bitcoin price:



Loopring's capitalization has demonstrated similar dynamics with the only significant spike occurring after the start of the LTC tokens listing on the DragonEX exchange in late December, 2017. Furthermore, a general rise of altcoins in January 2018 as well has been observed. A major reason for a Loopring market capitalization rise in May may be the upcoming Consensus 2018:

Loopring Charts



The fact that Loopring demonstrates similar market dynamics (after January, 2018) may be evidence of the market makers' overall belief in the project.




5. Competitive landscape

Most of the world's cryptocurrency trading is done through centralized exchanges, such as Coinbase/GDax, Binance, Bittrex, etc. These exchanges manage a person's capital (and private keys) and facilitate trading. Decentralized Exchanges — also known as DEX's — are a new technology that facilitate cryptocurrency trading on a distributed ledger. These exchanges shift back control of funds and trades to the user, and they eliminate the single point of failure.

A decentralized exchange allows users to retain control over their private keys and leverage the untrustworthy nature of decentralized ledger technology to eliminate security flaws.

From the point of interoperability, the projects which solve similar objectives as Loopring are 0x protocol, and Kyber Network.

A comparative table of the competition is presented below:

	LOOPRING	0X PROTOCOL	KYBER NETWORK
Ticker	LRC	Zrx	KNC
ICO status	Ended	Ended	Ended
Token type	ERC-20	ERC-20	ERC-20
Capitalization as of ICO date (USD million) - Funds raised during ICO	~45	~24	~48.9
Current capitalization (USD million) - as of June, 22	~208.9	~401.8	~117.9
Capitalization change to date (times)	 4.64	 16.74	 2.41
Product/concept	Modular protocol for DEX buildings for several blockchains with zero risk	Protocol for a hybrid approach of off chain and on chain transactions, including exchange of assets	DEX

Special features	dApps smart contracts ring mining (orders are used instead of trading pair >>> sharp increase in liquidity and the potential for price leveling)	dApps smart contracts 2 main utility functions: Governance; Relaying fees	Smart contracts No fees Available in advance exact exchange rate; Cash transfers regardless of what type of currency the counterparty accepts; Currency exchange provision is provided.
Current development phase	Loopring Protocol Smart Contract on Ethereum is released	Alpha version is released	Mainnet is officially live
Expected release of final version	Ongoing development, approximately early 2020	Ongoing development, no dates specified	By early 2019, the project hopes to allow cross-chain trading

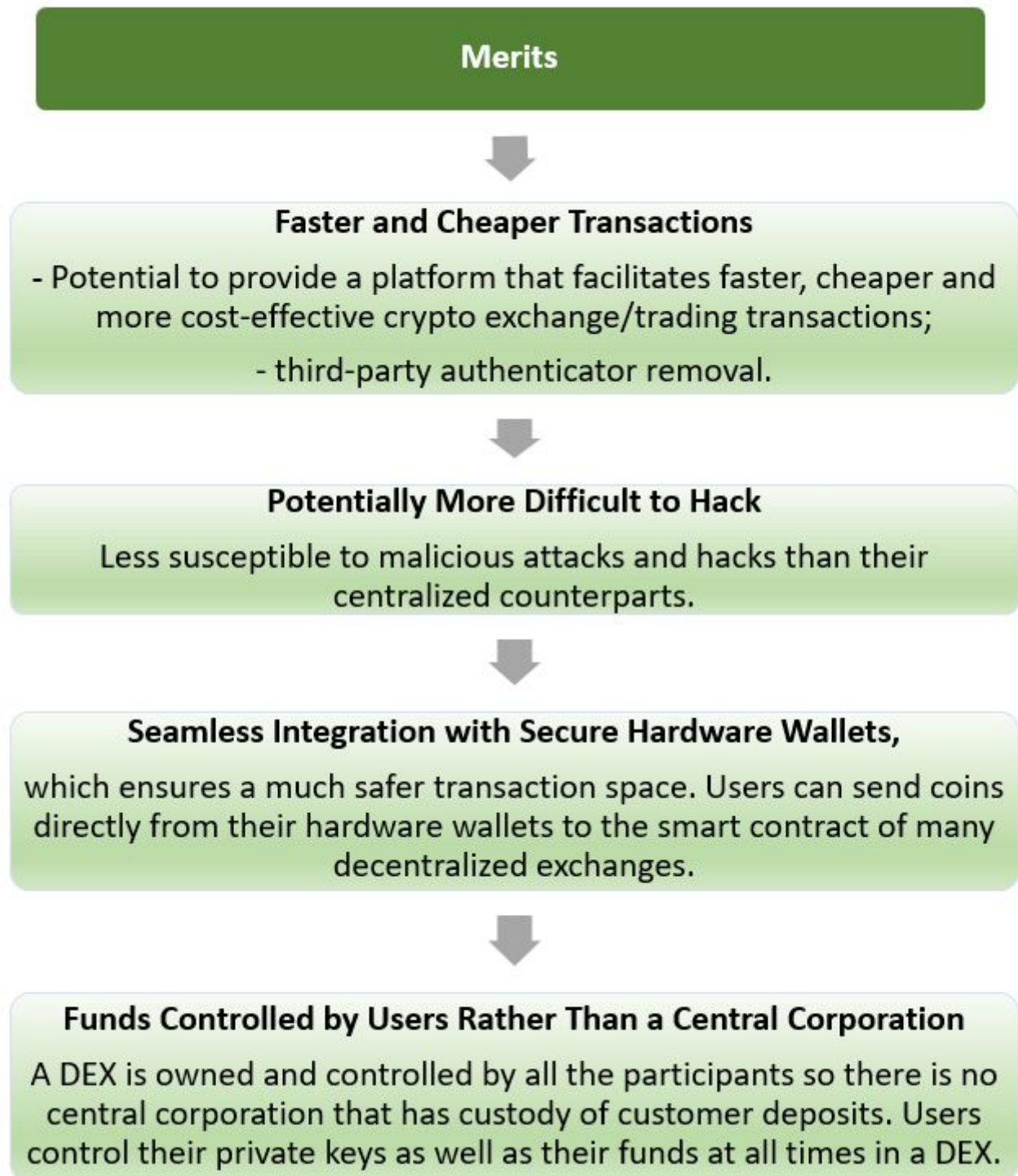
The ring matching technology is what makes Loopring stand out from the others. Instead of making trades one to one, Loopring groups the orders into rings, and they loop through the system until they are matched. This is much more efficient and faster than current token matching methods.

The Loopring wallet and DEX are up and already functioning. Loopring's ecosystem is not as robust as 0x, but at least they have a MVP.

Loopring is developing their protocol not only for Ethereum, but also for NEO and Qtum. Therefore, to some extent Loopring is much more flexible than Kyber and 0x.

As for the market capitalization overview, if we compare changes in capitalization of 0x and Loopring, and they are quite similar in their specificities, we can assume that Loopring has not yet reached its maximum.

Technical overview



0x itself is not an exchange, but it is an open and non-rent seeking protocol that facilitates untrustworthy, low-friction exchanges of Ethereum-based assets. Basically, 0x offers a platform and a set of protocols to build user-facing DApps on an Ethereum network. 0x tokens (ZRX) are used to pay the Relayers (think, miners) who host and maintain public order books (ledger). ZRX tokens are also used for decentralized governance over 0x protocol's update mechanism which allows its underlying smart contracts to be replaced and improved over time. 0x resolves the problem of untrustworthy exchanging of arbitrary tokens using a

hybrid approach of off-chain and on-chain transactions. An exchange utilizing the 0x protocol will essentially take your exchange request and match it with other exchange requests until your order is filled, and then writes the transaction into the blockchain. This has the downside of transactions not being instantaneous.

Kyber is a decentralized exchange platform that enables [instant on-chain exchanges](#) of cryptocurrencies. It shares a lot of similarities with the 0x Protocol in terms of what it aims to achieve with the main distinction being that all of its activities are carried out on-chain. The project also attempts to minimize the high cost associated with maintaining the order book of a decentralized exchange on the blockchain.

One integral part of the Kyber Network ecosystem is the Dynamic Reserve Pool which is used to maintain liquidity. The network is designed as such in order to always have a number of entities in the pool so that centralization does not occur and the exchange rates are kept competitive.

Preventing centralization is a key aspect of the Kyber Network architecture. As a result, a number of safeguards have been put in place to prevent the occurrence of centralization within the network.

Loopring is not an exchange, nor is it an 0x. Loopring is an open, multilateral token exchange protocol for decentralized exchanges on the Ethereum blockchain. Loopring is intended to serve as a common building block with open standards, driving interoperability among decentralized applications (dApps) that incorporate exchange functionality. Trades are executed by a system of Ethereum smart contracts that are publicly accessible, free to use, and that any dApp can connect to.

This project is essentially a disassembled set of components that work in concert to perform all of the functions of an exchange in a decentralized environment. Loopring is primarily a back-end process that runs behind an exchange — the Loopring team [state explicitly](#) that the Loopring project is not intended to compete with other exchanges, but is instead designed to enhance them.

The aim is to create a modular protocol that can be used to accelerate the exchange decentralization process. Loopring's solution helps to eliminate counterparty risk, improves liquidity through an innovative order pooling mechanism, and reduces dependence on centralized third parties.

Consider the fact that Loopring holds 14 addresses among the top100 on Ethereum. With strengths, such as an experienced development team, good overload resistance, stability, and extensive tools, the project can become a worthy competitor to the 0x service. Among the negative points is the relative youth of the project which follows inadequate infrastructure development.

The developers at Loopring want to present to the world one of the most technologically advanced, secure and functional electronic platforms, capable of catching up with the top Altcoins. However, since the process is a slow one, only time will tell how successful it will be.

As an additional competitor from the point of interoperability, the following information will be on EverMarkets Exchange (EMX). We do not include this competitor in the core analysis as it is not listed yet and there is no information about market capitalization.

	EMX
Token type	ERC-20; utility token
Hardcap	USD 40.6 mln
Tokens for sale	20%
Valuation at ICO date (Hardcap/% of tokens for sale)	USD 203 mln
ICO status	Presale – ended, ICO dates – currently unknown

EMX is the first decentralized platform to trade traditional equities, bonds, and commodity futures on the blockchain with liquidity provisions. EMX will include both traditional and cryptocurrency futures on the platform. Futures on the EMX platform should function largely the same as they do on traditional futures exchanges, except for the auction-based matching model and the on-chain trade clearing and settlement process.

EMX will be assigned as an oracle for all contracts on the EMX platform. This means EverMarkets backend systems will be the holders of the only trusted accounts able to supply settlement prices once contracts expire.

6. Analysis of the token's behaviour on the secondary market

According to Coinmarketcap, capitalization of the project, as of June 22, 2018, is estimated at USD 197 million. As of June 22, 2018, according to Coinmarketcap information, 30 markets are available for LRC tokens and top-10 markets for LRC tokens are as follows:

Loopring markets:

#	Source	Pair	Volume (24h)	Price	Volume (%)	Updated
1	OKEx	LRC/USDT	\$2 032 500	\$0,384807	26,85%	Recently
2	BitForex	LRC/USDT	\$1 638 180	\$0,382909	21,64%	Recently
3	OKEx	LRC/BTC	\$923 333	\$0,382970	12,20%	Recently
4	Binance	LRC/BTC	\$732 212	\$0,380807	9,67%	Recently
5	DragonEX	LRC/ETH	\$621 948	\$0,378745	8,21%	Recently
6	Gate.io	LRC/USDT	\$345 950	\$0,381709	4,57%	Recently
7	IDAX	LRC/BTC	\$334 240	\$0,380942	4,41%	Recently
8	IDAX	LRC/ETH	\$273 647	\$0,379380	3,61%	Recently
9	Binance	LRC/ETH	\$218 187	\$0,380789	2,88%	Recently
10	OKEx	LRC/ETH	\$149 140	\$0,382800	1,97%	Recently

A historical performance of LTC and its main competitors is shown below.

Loopring Charts



LRC token has reached its all-time-high (ATH) of approximately USD 2.09 (BTC 0.00014409) per token sometime after the start of LRC on Exchanges. After that, the token price decreased as the market downtrend took place in late May 2018, and reached USD 0.26 (7 times decrease to ATH), or BTC 0.00003386 (3 times decrease) by the end of March. Not long before Consensus 2018 in mid-May 2018, the token price grew again (USD 1.05, BTC 0.00011219), but did not reach its maximum. The current BTC price of LRC is more than 3 times higher as of the date of listing to exchanges.

0x Charts



Zrx has similar dynamics and has shown an overall uptrend in 2018 so far, reaching its ATH of BTC 0.00021130 in mid May 2018. One major reason for the growth of Zrx is the upcoming Consensus 2018. Zrx is currently trading 163% higher, in terms of BTC price, than at the beginning of the year, and 107% higher since the ICO. When comparing the current Zrx token price versus the price during ICO, one can notice that the returns since the ICO are more than 18 times in USD, and in BTC – more than 11 times.

Kyber Network Charts



The KNC token price reached its ATH on January 10, 2018 with a USD 5.82. The ATH in BTC was reached on September 25, 2018 with BTC 0.00065217 (USD 2.47) and then significantly spiked twice – in November and in March-April 2018. This may be related to the BTC rate drop by 50% during the first three months of 2018, indicating the worst first quarter of the year for

the benchmark cryptocurrency. This fact also influenced other currencies, as it can be obvious from the charts above. Towards the end of April, the price rose again which can be linked to the start of the token trading on Bithumb. Currently, KNC is trading 20% lower than at the beginning of the year, and 70% lower since the ICO date in terms of BTC price.

LRC has shown a good performance compared to its competitors since the ICO date. The current BTC price of LRC is more than 3 times higher than the price as of the date of exchange listings, whereas Kyber went down significantly compared to its ICO date. If we compare LTC with Zrx, the performance is not so strong, however, taking into account the fact that the Xtimes growth after the ICO for Loopring is much lower, yet, it can be an indicator that the price has not yet reached its maximum.

7. Estimated valuation

Disclaimer: all the information and analyses presented in this section of the report are for informational purposes only. This is not investment advice of any kind or any guarantee of future events. Several internally developed assumptions, on which the results depend significantly, have been used upon preparation of the below analysis. The analysis does not account for systematic cryptocurrency market risks, such as unpredictable volatility, BTC dominance, and speculative actions on the market.

Current market highlights for LRC are as follows:

Ticker	LRC
Price, USD	0.357055
Price, BTC	0.00005357
Market Cap, USD	206,875,000
Total supply	1,374,956,262 LRC
Circulating	572,074,043 LRC
Circ vs. Total	42%

Taking into account all the unique features of the project from a technological point of view, we will assess LRC only against interoperability competitors. Such material differences in Market capitalization may arise due to significant gaps in competitors' MCs.

DEX competitors

Capitalization-based approach

Based on the competitors' financial indicators, we have arrived at the following estimated and weighted average valuation of LRC based on market capitalization of 0x and Kyber Network:

Price, USD	0.30
Multiplicator of actual LRC price, times	0.85
Price, BTC	0.00004554

Market Cap, USD 173,638,947

As it can be seen above, USD and BTC prices, calculated based on market capitalization of competitors, are relatively close to real, current LRCs prices.

NVT-based approach

Based on the competitors' financial indicators, we have arrived at the following estimated and weighted average valuation of LRC based on NVT of 0x and Kyber Network:

Currency	NVT	NV in USD (30-day average)	On-chain tx volume in USD (30-day average)
Zrx	108.9	572,726,700	5,259,048
KNC	51.8	160,336,033	3,097,015
LRC	126.5	252,699,233	1,998,388

Assuming that the normal NVT range lies within a 20 to 100 interval, LRC, as well as 0x, may be slightly overpriced. If LRC's NVT is 100, market capitalization of LRC should be around USD 199,838, 800. Respective LRC prices, therefore, would be USD 0.35, or -3% to its current price of USD 0.36.

Trend-based approach

Based on a 3-month historical performance, the trendline for LRC is as follows:



The linear trendline predicts that, within 90 days, LRC's capitalization may reach approximately USD 220,000,000. Respective USD price would reach USD 0.38, or +6% of its current price.

Based on the above analysis, we believe that the valuation of Loopring, when compared with its main competitors and benchmarks, is reasonable. The market of LRC is in equilibrium.

8. Team and advisors

After the ICO, several new team members have joined the team:

Matthew Finestone

Position	BD Director
Total experience	5+ years
Relevant experience	Yes
Professional achievements	Digital Asset Finance Founder
LinkedIn	Yes
Connections	500+
Endorsements / Recommendations	Yes

Advisors

Hitters Xu

Position	Advisor
Total experience	10+ years
Relevant experience	Yes
Professional achievements	Founder of Nebulas
LinkedIn	Yes
Connections	500+
Endorsements / Recommendations	No

Hongfei Da

Position	Advisor
Total experience	10+ years
Relevant experience	Yes
Professional achievements	Founder of NEO and Ontology
LinkedIn	Yes
Connections	373
Endorsements / Recommendations	No

Yuhang Guo

Position	Advisor
Total experience	10+ years
Relevant experience	Yes
Professional achievements	Cofounder and co-CEO of Dianrong, Founder of Xinghe Capital, Council of China ABlockchain Application Research Center
LinkedIn	Yes
Connections	271
Endorsements / Recommendations	No

Terence Lam

Position	Advisor
Total experience	10+ years
Relevant experience	Yes
Professional achievements	Co-founder and CEO, Loopnest (Blockchain) Accelerator

LinkedIn	Yes
Connections	500+
Endorsements / Recommendations	Yes

Mingcheng Zhang

Position	Advisor
Total experience	5+ years
Relevant experience	Yes
Professional achievements	Redpoint Ventures Investment partner
LinkedIn	Yes
Connections	500+
Endorsements / Recommendations	No

Alex Cheng

Position	Advisor
Total experience	20+ years
Relevant experience	Yes
Professional achievements	Senior VP at Baidu, R&D Director at Google
LinkedIn	Yes
Connections	311
Endorsements / Recommendations	Yes

Yin Cao

Position	Advisor
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Total experience	5+ years
Relevant experience	Yes
Professional achievements	Founder, Energy Blockchain Lab
LinkedIn	Yes
Connections	500+
Endorsements / Recommendations	Yes

Xiaohu Guo

Position	Advisor
Total experience	10+ years
Relevant experience	Yes
Professional achievements	Associate Professor, University of Texas
LinkedIn	Yes
Connections	187
Endorsements / Recommendations	No

Huaxia Xia

Position	Advisor
Total experience	5+ years
Relevant experience	Yes
Professional achievements	Chief Scientist of Meituan Group

LinkedIn	Yes
Connections	500+
Endorsements / Recommendations	No

Not all team members and Advisors are presented in the table above, as most of them are Chinese citizens and it is quite complicated to verify the extent of their expertise and professionalism via LinkedIn.

Nevertheless, most of the remaining team members were found on the websites of the companies declared on the official site of the project, or are active in different communities.

Team members not mentioned above: Bella Long (PR director); Rubi Qin (App developer); Jinchen Hou (Community Manager).

Advisors not mentioned above: Xuefeng Li (CTO of Zhongan Technology), Yipeng Guo (President, Guangzhou Development Fund), Shuo Bai (ChinaLedger, China Financial Standardization Technical Committee supervisor).

9. Investment risk analysis

Based on our analysis, we have identified the following risks for the Loopring project:

RISK	DESCRIPTION	LEVEL
Competitive landscape	The project has strong competitors based on their progress and market position, however, we note that Loopring has several competitive advantages in terms of performance and security as compared to its rivals. Consider the fact that Loopring holds 14 addresses among top100 on Ethereum and such strengths as an experienced development team, good overload resistance, stability, and extensive tools, the project can become a worthy competitor.	Medium
Roadmap is not comprehensive	We note that current project's roadmap does not have business development milestones and does not cover in details the period after trading wallet release in April, 2018. At the same time vesting for the team will continue for 2 more years (current 2018, 2019 and half of 2020). As of the report date, the roadmap is presented as a single artistic format of the business plan, without any specific milestone, which could be used in future project's on-time development evaluation.	Medium
Absence of detailed information regarding use of proceeds	Information regarding use of funds collected during ICO is not available for public review yet and cannot be verified. Nevertheless, we note that the team intends to release an expense report for public review after the calendar year-end.	Medium
Development risks	The project's roadmap and the actual performance of the team after ICO date show that the planned development timeline is justified and achievable even in advance.	Low

Token price risks There are no fundamental factors that indicate that token price faces significant pressure, except susceptibility to market sentiment, and the increased usage of the network will cause an increase in the price of the token. As demand for the service grows, more revenue will flow to service providers and will partially offset this risk.

Low



The information contained in the document is for informational purposes only. The views expressed in this document are solely personal stance of the ICOrating Team, based on data from open access and information that developers provided to the team through Skype, email or other means of communication.

Our goal is to increase the transparency and reliability of the young ICO market and to minimize the risk of fraud.

We appreciate feedback with constructive comments, suggestions and ideas on how to make the analysis more comprehensive and informative.