

Polkadot: tips for investors

This is a short version.

For the full version, please contact us: business@palmina-invest.com

The report is intended for professional investors, sophisticated investors and eligible parties.

We have been asked to summarise for investors the pros and cons of participating in the placement. Here are our tips given our understanding of the current progress of the project, the current crypto market and the position of traditional investors who may not be crypto savvy.

1. **What?** Polkadot is a multi-chain technology that consists of a relay chain coordinating consensus and parachains gathering and processing transactions. The technology allows for separate blockchains to be linked with their own consensus such as Ethereum. The multichain technology is an important step towards the unification of the blockchain in order to create a user-friendly Internet of Value. The multi-chain protocol powered with smart contracts will allow not only swaps of assets but also exchange of data between different protocols. After security and scalability, blockchain interoperability is the next big thing to achieve to boost mass adoption of the blockchain technology.

Polkadot has been under development since November 2017 when the first commit appeared. The first testnet was launched in spring 2018 (proof-of-concept 1, or PoC1), and then upgraded to PoC2 (Krumme Lanke testnet). The project now provides developers with access to the Krumme Lanke Testnet,

allowing them to create accounts, propose governance referendums, build parachains and launch validators. The third testnet, BBQ Birch, has already been launched. The community of 31 validators now supports the PoC. The project used Rust and LLVM to create a programming language (EDSL) codenamed Fleetwood, to build smart contracts. In December 2018, the project announced the release of the 1.0 beta of the third-generation blockchain technology stack, Substrate, and Alexander test net with the audit-ready governance GRANDPA algorithm, cryptography and some governance features.

2. **When?** The Polkadot roadmap includes the launch of Inter-Chain Message Passing in 1Q19 with the following upgrade of the testnet, finalising the “nominated proof-of-stake” scheme and building parachain consensus into Substrate. The Polkadot 1.0 network will be ready for launch in 3Q19, according to a recent update.
3. **Who?** Polkadot has a strong team headed by Ethereum co-founder and ex-CTO Dr. Gavin Wood. The project is funded via the Web3 Foundation, which controls 30% of DOT tokens and commissions Parity Technologies to build the Polkadot network. Polkadot intends 1,000 validators to run the network in future. The team of developers comprises about 100 people.
4. **Peers.** There are several cross-chain protocols, including Polkadot, Cosmos, Wanchain, Komodo and Interledger. Cross-chain protocols aim to standardise the order of how value is transferred from one blockchain to another. Wanchain allows cross-chain transfers only for Ethereum-based blockchains. Interledger and Komodo allow atomic-swap-type cross-chain communications, which allows a trustless escrow. The Cosmos protocol is a network of blockchains connected via a hub. Its infrastructure includes the Tendermint blockchain engine, and the hub managing communication between all the zones or blockchains. Compare with Cosmos, Polkadot is a more

complex protocol as it allows data transfer. Another alternative to cross-chain protocols is sharding technology being developed by Ethereum that could compete with Polkadot's parachains. Polkadot will allow developers to use different protocols, while Ethereum's network will maintain a unified protocol.

5. **Token.** According to trustnodes.com, Polkadot has raised 406,947 ETH and sold 4,935,593 DOT tokens. Given the average ETH price of \$300/ETH at that time, the DOT price estimate is c.\$25 (min and max prices linked to ETH as 0.0933-7.243 ETH/DOT). Another estimate of the raised funds is \$144mn at a price of \$29/DOT. We estimate the ICO fundraising amount at \$122mn at an average Ethereum price of \$300/ETH. At the current ETH price of \$110/ETH, some of the raised funds have probably devalued. Polkadot plans to allocate tokens in 3Q19 when the Mainnet is to be launched. Polkadot is funded by the Web3 Foundation, which will set the plan and timeline for the sale of the 20% stake of tokens to be distributed. It plans to sell 5% in the current round with another 15% to be sold in mid-2019. The valuation for the current round is \$130/DOT compared with the estimated average of \$25/DOT (around \$247mn network valuation) in October 2017.
6. **Value drivers.** DOT tokens are designed to serve three purposes: governance, operation and bonding. The network is based on proof-of-stake protocol with several participants, including validators securing the relay chain, collators collecting transactions from parachain users, fishermen monitoring the behaviour of participants, and nominators selecting good validators. DOT holders are relay chain participants, who decide on protocol upgrades and fixes. Operating performance depends on good actors who are rewarded while bad actors

lose their stakes. Bonding tokens help to add new parachains and remove outdated parachains.

The valuation of the network, associated with transaction-based cash flow generation and validation-related bonding/staking fees, depends on mass adoption of the protocol. This can be measured in terms of the community of developers and potential users, the number of parachains and the ultimate number of transactions. The potential value of the Polkadot blockchain will also depend on the inflation model, which has not been set yet. Ethereum, as the most adopted platform for new blockchain project launches (88% of all ICOs in 4Q18), may offer a code library, reducing the cost of a blockchain launch. There are several pros and cons driving the value of Polkadot.

Pros

- Strong experienced team led by Dr Wood
- Advanced research and technological solution, more complex than peer' projects
- Support from Ethereum, Zcash and potential cooperation with largest platforms to drive transactions volumes in future
- Execution in line with expectations

Cons

- The overall valuation of the blockchain sector has declined by 50-90% in January 2019 compared to October 2017.
- Major delays in the development of Ethereum and other projects, as well as regulatory uncertainty add pressure to blockchain project values.
- Competition from other projects (Cosmos, sharding technology) for Polkadot might be essential, driven by the timing and complexity of the offered solutions.

- Competition from Ethereum after it launches sharding.
- Risk of delay of Mainnet launch and slow adoption of the network.
- The supply model for DOT tokens has not yet been announced. The total number of tokens is likely not to be capped at 10,000,000 DOTs issued. Inflation will be introduced to support the proof-of-stake mechanism, potentially in 2019-2020.
- According to [Polkadot whitepaper](#) (p.21), Polkadot tokens are “neither intended no designed to be used as a currency. They would make a bad currency: most will remain illiquid in the staking system and those that are liquid will face substantial fees for transfer of ownership”.

This analytical report was produced by partner of PALMINA Invest - Hypothesis Research Ltd.

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