

## Abstract

**Basic Attention Token (BAT) presents a compelling investment option because of the rigor in which its team has considered the market opportunity, the sound technical specifications of its protocol, and the team's ability to execute their business model.**

## Analysis



According to emarketer source 1, global digital ad spending will rise by 17.6% to \$333.85 billion in 2019. According to the BAT white paper source 2, users are losing up to \$23 in mobile data charges per month, slower page loads, and 21% less battery life. Over 600 million devices mobile and desktop use some form of ad-block. Publishers are facing decreasing revenue, users feel increasingly violated (privacy, annoyance, cost, etc.), and advertisers' ability to gauge effectiveness is decreasing. This presents a tremendously lucrative opportunity for a better solution.

A cryptocurrency/ blockchain based option strongly makes sense in this case because it eliminates middle parties (Agencies, trading desks, demand side platforms, desktop and mobile network exchanges, yield optimization, rich media vendors, etc.) enabling a more efficient and cost-effective relationship between publishers, advertisers, and users. An ERC20 token, BAT enjoys the security and infrastructure of being built on top of Ethereum. As with its base layer protocol, an increase in the ecosystem and network effects involving developers, users, and investors is an exponential factor initially in determining a project's success.

According to coinmarketcap source 3, BAT has impressively been able to reach the top 28th position in terms of market capitalization at \$320.160 millions of dollars at the time of this writing ( November 1st, 2019). This factor proves a team's ability to generally expand their biosphere and network, which becomes a self-feeding cycle ultimately increasing the chances of continued proliferation. The team's ability to work well together as well as individually is among the primary causes for success or failure. BAT boasts an especially strong academic and technical lineup of team members.

As we can see in the white paper source 2, the CEO and co-founder of BAT, Brendan Eich, created JavaScript, which is very impressive when we consider how widely used this computer language is, and also co-founded Mozilla Firefox, a popular web browser generally accepted to have high ethical standards. In the white paper we can see the market model of BAT as  $X_a - X_u - X_b = X_p$ , where  $X_a$  is the buy-in of the advertiser,  $X_u$  is the user's profit share,  $X_b$  is Brave placement share, and  $X_p$  is the publisher's pay-out. The power and benefit of a CEO's selling skills and charisma is often underestimated (just look at Jack Ma, Elon Musk, and Mark Cuban). We can gauge at Brendan's charm and speaking skills from his presentations ( youtube, source 5). Other key members of the team also have admirable histories such as Scott Locklin, a Senior Engineer at BAT, who co-founded Kerf Software, and Marshall T. Rose, another Senior Engineer, who co-creator of Simple Network Management Protocol (SNMP).

From a technical standpoint the team has had an impressive record of producing useful and usable web applications. The most important is Brave browser, which stands as a key milestone in their technical protocol. As we can see in cloudwards source 4, Brave has some very positive reviews, "It's secure, fast and even has a novel way of rewarding you for using it". It has more than 100 million downloads, and on October 25, 2019 btcmanager source 10, announced that Brave v0.70 is extending Brave ads to 20 new countries, including Argentina, Austria, and Brazil.

The primary barriers to success are other browsers such as Safari and Google Chrome and middle parties in the advertising industry ( Agencies, trading desks, demand side platforms, desktop and mobile network exchanges, yield optimization, rich media vendors, etc.) who would seek to slow down and stifle the BAT project using their market influence and political lobbying. Further risks to the BAT project are those of the larger geopolitical and macroeconomic environment for cryptocurrencies. China ( and other countries ) could ban the use of the BAT cryptocurrency. On a large scale, the G20 could get together and decide that cryptocurrencies pose an existential threat to their financial supremacy and thus decide to shut down this and other such projects. Furthermore, in this fast moving blockchain ecosystem, another better cryptocurrency that competes with BAT gains market share (Facebook's Libra).

Nevertheless, Basic Attention Token (BAT) presents a compelling investment option because of the team's excellent understanding of the market opportunity (the \$300+ billion advertising industry) and their superior peer-to-peer business model to disrupt it . The BAT team displays incredibly robust technical accomplishments, such as their Brave browser and its built-in wallet and privacy features. Not only has BAT achieved an impressive top 28th spot in coinmarketcap at \$320.160 millions in market cap, which speaks to their team's ability to create strong network effects, but their CEO (and team) has a very credible background (creator of both JavaScript and co-founder of Mozilla Firefox). Added this with their CEO's great charisma and selling skills, Basic Attention Token ( BAT ) is poised for tremendous success.

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## Abstract

Tezos presents a compelling investment option because of its team's robust technical protocol, the macroeconomic and market opportunity for their project, and their team's ability to execute their business model.

## Analysis



Tezos uses many sophisticated technical features that grant it advantages over other cryptocurrencies, such as delegated proof-of-stake ( dpos ), on-chain governance, its own language Michelson, and mathematical formal verification for added security to its smart contracts. These factors give it a relatively unique set of tools to build successful decentralized applications. It is still too early to tell just how important and useful decentralized applications will be, however as we consider a Web 3 future and a decentralized world, the applications could reach a market size in the trillions of dollars. How specifically the team is able to maneuver through these initial steps, will exponentially be a driving factor for their ability to gain market share in the decentralized economy.

Tezos has already impressively been able to reach the top 22th spot as we can see in prices.org source 6, at a market capitalization of \$572.602 millions, which speaks to their ability to gain market adoption and create network effects. The team has as co-founders, Arthur and Kathleen Briteman, and an impressive roster of lead developers and engineers. As we can see in crunchbase source 7, Kathleen (CEO), used to work as a senior strategy associate for R3, a blockchain consortium of more than seventy financial firms. She worked for Accenture, Bridgewater Associates, and Wall Street Journal, holding a degree from Cornell University. Arthur (CTO), worked as a quantitative analyst at Goldman Sachs and Morgan Stanley. The project counts with a wider net of organizations, such as the Tezos Foundation, Tezos Korea, and Tezos Southeast Asia, which have themselves a list of highly accomplished members.

One of these people, Manny Mauny (tezosfoundation source 8), is the Chief Scientific Officer at Nomadic Labs, on leave from Inra ( the French National Institute for Computer Science and Applied Mathematics ) where he was the CEO. Michel also created Ocaml, the functional programming language that is the father of Michelson. Another notable member is Marylene Micheloud, the first Swiss woman to receive a Master's degree in Computer Science. She is the co-president at Valais Academic Association, an educational system in Switzerland that covers primary school to University of Applied Sciences. The broader Tezos team has complimentary high quality backgrounds in the financial, technology, and educational sectors, which increase the projects diversity and chances of success. They already have key technologies working that proves their abilities to execute.

They currently have systems online (tezos source 9) such as Galleon Wallet (software wallet for macOS/ Windows/Linux) and the Tezos Baking Slack, where “bakers” (users) can sign in and publish blocks to the blockchain, thus ensuring their proof-of-stake consensus mechanism by ensuring all transactions on block. Their dpos forms a powerful network effect to lure new users and investors to buy, hold, and stake tokens, which both wastes less energy than proof-of-work and less costly to roll back changes in case of a (51 or 34%) attack. Users also have a very powerful incentive to participate and stake in order to gain more tokens, wealth, and voting rights. They provide developers with tools to join their programming ecosystem, such as Tezos - IntelliJ, a Michelson plugin for IntelliJ, Michelson emacs mode, a Michelson plugin for Emacs, and Granary, a Tezos Development Toolkit. This project integrates a relatively strong and unique set of principles in their broader technical protocol.

It allows an open-source platform that is self-governing via on-chain polling, meaning that all users and stakeholders get the chance to participate in the blockchains evolution and progress. Those factors give the protocol a smoother ‘self-amending’ property over time that eliminates the need for a hard fork (a large potential risk to the investment). The project also features tools for creating smart contracts and decentralized applications that can not be taken down by third parties, a censorship resistant factor that lures in more users and developers. These smart contracts and dapps are held secure by formal verification, a mathematical proof of the programs’ properties. These security and self-governing distribution increase the chances of attracting users, developers, and investors, which helps this project’s chances of success.

However, risks and challenges for this project are other blockchain protocols such as Ethereum and Eos, which could gain a critical level of market share in which users and programmers are enticed or forced to use those instead. Macroeconomic and geopolitical risks exist. A nation or groups of nations could decide that Tezos poses an existential risk to their financial and economic supremacy, and thus make the purchase and selling (from and to fiat) of XTZ (or teezies- their native cryptocurrency) illegal. This would present a detrimental price and market effect on this project. Breakdowns and in-fighting in the C-level executives (and other key team members) could also pose a risk to smooth operations. Finally, formal verification makes it harder and slower for developers to program their applications, posing delays at every software development cycle.

Nonetheless, the Tezos project presents a compelling investment opportunity thanks to its robust technical protocol, which incorporates key features such as delegate-proof-of-take (dpos), on-chain governance, and formal verification. They have already achieved an impressively high network effect by reaching the top 22th place in terms of market capitalization at \$572.602 millions. They boast an impressive roster in their broader Tezos team (high quality backgrounds in finance, technology, and education), which adds to their diversity and resilience. They have been able to prove their abilities to execute technically with already functioning systems online such as the Galleon Wallet and the Tezos Baking Slack. Their open-source on-chain governance model makes it less likely to experience a hard fork. Furthermore, they are already operating a futuristic dpos consensus protocol, which wastes less energy and is more secure regarding 51 or 34% attacks, and it lures more users because they can stake to gain more tokens, wealth, and voting rights. Overall, when compared with other blockchain projects, Tezos present a strong and persuasive option for investment.

Thank you,

-Johan Gutierrez

## References

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