



Metronome

CRYPTOCURRENCY RESEARCH REPORT

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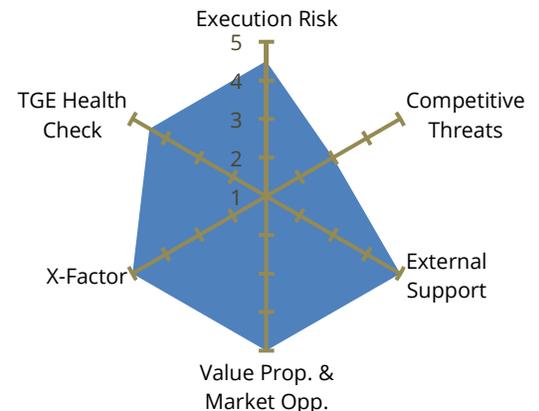
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Viability Rating*	4.45/5.00
Product Maturity	Beta
Expected Raise	N/A ETH
MTN in Raise	80.00%

Metronome (MTN) is a brand-new cryptocurrency whose chief aim is to become a long-term viable cross-blockchain solution. Metronome seeks to accomplish this by utilizing a “descending price auction.” Metronome will be self-governed by autonomous smart contracts, meaning there is little to no chance for human error, corruption, or centralization. This approach to decentralization means the founders will have no special privileges or control after the launch.

Unlike many other currencies, the supply will not be permanently fixed. However, the mintage rate of new MTN will decline gradually until hitting a 2% rate about 45 years after the initial distribution. Finally, and perhaps most importantly, Metronome is not tied down to any one blockchain. It will be the first cryptocurrency that will be able to import or export across any blockchain, ensuring its long-term viability as the technology of the space evolves, grows, and learns.

Strategic Coin Viability Matrix



Key Takeaways

- Envisioned by one of the earliest Bitcoin Core developers, Metronome seeks to address several known issues with existing cryptocurrencies.
- Unlike Bitcoin, it will be fast enough to enable retail transactions. Unlike Ethereum, it will not have scaling issues.
- MTN's cross-chain capabilities provide “institutional-class endurance.”
- Metronome's unique issuance model is less deflationary than many other cryptocurrencies. It is likely to experience upward pricing pressure on the demand side.
- MTN's estimated initial distribution date: February 2018.

Market Opportunity

Blockchain and cryptocurrency have existed since the creation of Bitcoin in January of 2009. Unlike earlier financial technologies, they have simultaneously provided decentralization, reliability and flexibility, while acting as an alternative to the traditional banking system. Yet, all is not perfect in this new world. Bitcoin and all the other major cryptocurrencies face challenges associated with governance, supply and technology fit.

Every token's distribution and technology use are governed by its own set of rules. The ability to manage technology changes like forking can ensure that disputes do not harm a token's long-term value. While the space has grown exponentially, token founders have retained significant influence over technology decisions. Another problem is that innovation can be inhibited by centralized governance models. As Jeff Garzik, Metronome's co-founder told Strategic Coin:

"The way Bitcoin consensus currently works is basically anyone can veto a change. You can't make a change to Bitcoin, but if you throw enough mud, and confusion and chaos et cetera into the mix, you can veto or block a change."

Even without governance inhibiting innovation, as the technology continues to evolve and improve, many blockchains are left behind, unable to upgrade quickly enough to remain relevant. Without the accumulated technical debt of the last eight years, Metronome's founders believe their cryptocurrency will be able to adapt to unforeseen changes and technical challenges.

Cryptocurrencies usually address one or two issues, such as scalability and supply constraints. If the token provides value, there is a possibility of widespread user adoption. However, until now most cryptocurrencies have been yoked to a particular blockchain, meaning another technology could possibly come along and usurp it. Once the contracts are developed on the corresponding blockchain this will allow the blockchain to accept MTN. hopes to breakout of this blockchain evolutionary cycle by being able to enter and exit any blockchain that best meets its needs throughout the years.

Cryptocurrency Use Case

Metronome seeks to be a viable long-term supplement to Bitcoin, Litecoin, and other popular cryptocurrencies. One of its primary use cases will be for transactions that require a quick settlement time. Currently, confirmation times and transaction fees make Bitcoin an unlikely solution for everyday use and mainstream adoption. Depending on network conditions, purchasing a \$5 item from a local retailer could take approximately 20 minutes, online transactions would require a payment processor like GoCoin, or have a transaction fee of \$10.00. MTN, seeks to be a store of value during transactions. MTN can reach mainstream adoption by providing a rapid and inexpensive transaction process, allowing for a range of purchases from real estate to e-commerce.

Institutional Value Proposition

One of Metronome's most attractive selling point is how it will appeal to large institutions. One of the major barriers preventing institutions from entering the crypto market space is the industry's volatility. Once Metronome is developed and implemented it could potentially be even seen as a "reserve cryptocurrency" (akin to how the US dollar is a reserve currency), as Matthew Roszak Co-founder and chairman of Bloq stated:

"We believe that individuals will be empowered by a currency designed with self-governance as a first-order variable. Further, institutions can more confidently enter the cryptocurrency category, as Metronome will enable them to innovate and develop reimagined financial products."

This ties in with the overarching theme of many institutions waiting on the sidelines of the cryptocurrency scene. A swath of products are being developed to appeal to institutional clients such as CME Group's regulated futures exchange, LedgerX's regulator approved futures exchange and recently Coinbase CEO Brian Armstrong officially revealed Coinbase Custody. Institutional clients include but are not limited to: family offices, sovereign wealth funds, pension funds, traditional hedge funds, and endowments. Armstrong emphasized the finance market currently has over \$10 billion in institutional money waiting to enter. Even if we take the base number of \$10 billion it roughly equates to approximately 3% of the entire cryptocurrency market capitalization according to CoinMarketCap.

In the coming few months we'll start seeing a paradigm shift as institutions start adopting cryptocurrencies as a store of value and as a legitimate source of financial value.

Comparable Tokens

Metronome can be compared against a new breed of tokens or to the more widely used cryptocurrencies.

Comparable Emerging Tokens

Token	Symbol	Sector	TGE Status	Hard Cap	Total Raise	Product Maturity*
Aion	AION	Cross-Blockchain	Active	\$35,000,000	\$8,075,700	Beta
Aragon	ANT	Self-Governance	Complete	Hidden Cap	\$24,750,000	Beta
ARK	ARK	Cross-Blockchain	Complete	N/A	\$998,000	MVP
Chainlink	LINK	Self-Governance	Complete	\$32,000,000	\$32,000,000	Specs, No Product
Cosmos	ATOM	Cross-Blockchain	Complete	N/A	\$16,765,030	Specs, No Product
Decred	DCR	Atomic Cross chain	Complete	N/A	\$415,000	MVP
Hshare	HSR	Self-Governance	Complete	N/A	\$52,890,000	1.0 Product
Internet of Coins	HYBRID	Cross-Blockchain	Complete	\$7,000,000	\$3,000,000	Specs, No Product
Polkadot	DOT	Cross-Blockchain	Complete	N/A	\$145,171,723	Specs, No Product
Stash	STP	Self-Governance	Active	\$36,000,000	\$400,514	Specs, No Product
Wancoin	WAN	Cross-Blockchain	Complete	\$36,000,000	\$35,990,000	MVP

*Tokens mature from ideas to specifications to a prototype or minimal viable product. Once the Minimal Viable Product (MVP) is tested, the next step is to do an initial rollout, which is often called a beta. A 1.0 product is expected to be enterprise-ready with a robust feature set.

Comparison of Major Cryptocurrencies' Attributes

Source: Metronome Owner's Manual

	BTC ²⁵	LTC ²⁶	ETH ²⁷	XRP ²⁸	ZEC ²⁹	MTN
Reliability	BTC is famous for its contentious forks and deflationary nature. Token supply and issuance is stable, but finite.	Like BTC, LTC's issuance and token supply is subject to a hard cap, which may threaten chain stability	ETH's issuance and token supply model is in flux. It has forked in the past.	XRP has a stable supply. It is fully governed by Ripple Inc.	Similar to BTC, ZEC is subject to a hard cap which may call into question the security of the chain in the future.	MTN issuance and supply will remain predictable as defined by its contracts. There is no uncertainty about supply or issuance.
Self-Governance	BTC is self governed, but has many groups looking to exert undue influence.	LTC is self governed, but customary deference to its icons.	Changes to ETH need community support, but much reliance upon a small team.	XRP is not self governing. Ripple Inc retains sole power of governance over XRP.	The Zcash Foundation is natural locus of voluntary governance.	MTN is entirely self governed through autonomous contracts.
Portability	no	no	no	no	no	yes
Immutability	strong	strong	Mutable; Will change with PoS	weak	strong	strong
Issuance Model	50 BTC per 10 minutes. Decreases by ½ every 4 years.	50 LTC per 2.5 minutes. Decreases by ½ every 4 years.	5 ETH per 15 seconds.	Issued once, by Ripple Inc	12.5 per 2.5 minutes. Decreases by ½ every 4 years.	Daily MTN auction sales at greater of (I) 2,880 MTN per day, or (II) an annual rate equal to 2.0000% of the then-outstanding supply per year
Supply limit	21 million	84 million	unknown	100 billion	21 million	See Issuance Model above
Settlement time	10 minutes	2.5 minutes	15 seconds	5 seconds	2.5 minutes	15 seconds
Mass Pay feature	yes	yes	no	no	yes	yes
Subscription feature	no	no	no	no	no	yes

How It Works

Metronome is made up of four smart contracts. The first handles all MTN and the ledger, and is used to settle all peer-to-peer transactions. It is generally thought of as a “distributed store of wealth.” The second contract is called the Auctions Contract through which users purchase MTN using ETH. The third contract, or Proceeds Contract, stores all ETH that is sent to the Auctions Contract (ACC). It is essentially the Metronome vault. Every 24 hours 0.25% of its content is sent to the fourth contract, or the Autonomous Converter Contract. This is where ETH is converted to MTN, and vice versa. Simply put, it is the “buying and selling” contract.

The first and last contracts are touchpoints for the user experience. At the beginning is the ledger contract, which makes a record of the MTN or ETH that is deposited. At the back-end of the process, the ACC converts the token pair at the rate determined by the contract.

Perhaps the most compelling aspect of Metronome is its cross-blockchain portability. This means that users can move MTN at their own discretion from one blockchain to another. This is done when a user commits to a target blockchain, and removes their MTN from the blockchain of origin. Once this is done, they will receive a “proof of exit” merkle receipt, which they then provide to the Metronome contracts on their blockchain of choice.

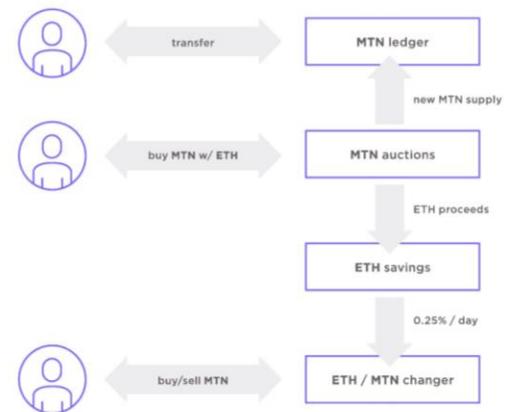
After this transfer is initiated, the supply of MTN on the first blockchain is reduced, and it is increased on the second blockchain. The autonomous Daily Supply Lot is then adjusted to reflect the new distribution of MTN across both blockchains. By utilizing this innovative import/export technology, users can migrate their MTN to the most efficient blockchain at any given time, rapidly expediting blockchain tech’s growth process.

Metronome will also be completely decentralized in its governance. There will be no voting to determine if an upgrade will occur. Instead, users will have the ability to move their MTN to a new contract or blockchain.

The rest of the report details risks and opportunities associated with the both the TGE and the cryptocurrency’s overall viability.

Flow of Metronome Contracts on the Ethereum Blockchain

Source: Metronome Owner’s Manual



Token Generation Event

Metronome is having an initial distribution that will be held as a descending price auction. Participants decide the amount they will pay for MTN as the price descends from the set price ceiling after the initial distribution. There will be a daily transaction limit of 1,000 ETH in place for participants to compete in capturing what they believe is a fair market price per MTN. In theory descending price auctions encourage speedy fair market price discovery since all participants will pay what they consider is their maximum bid. This type of initial distribution will make it difficult for wealthier participants to take controlling positions within the platform, which is common in first-come, first-serve auction style.

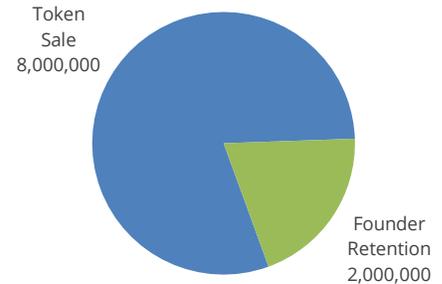
On its launch, the price ceiling will be set at 2 ETH per MTN, and will descend linearly to the potential price floor over the course of 7 days. Co-founder Jeff Garzik has said:

“As far as we can tell, based on internal simulations as well as academic research, is that that is the least likely to produce a pop. That gives you an efficient price discovery on day zero, at the initial auction.”

Fear of missing out kicks in once there is price discovery, which creates a massive participant volume influx, bringing the auction to an end quickly.

The Metronome auction will last for seven days or until all MTN is sold. This was designed to allow potential buyers to plan their participation accordingly. Once the participant buys MTN, he or she will be immediately able to receive it, unlike most first-come, first-serve TGEs.

MTN After Initial Token Distribution



Offering Summary

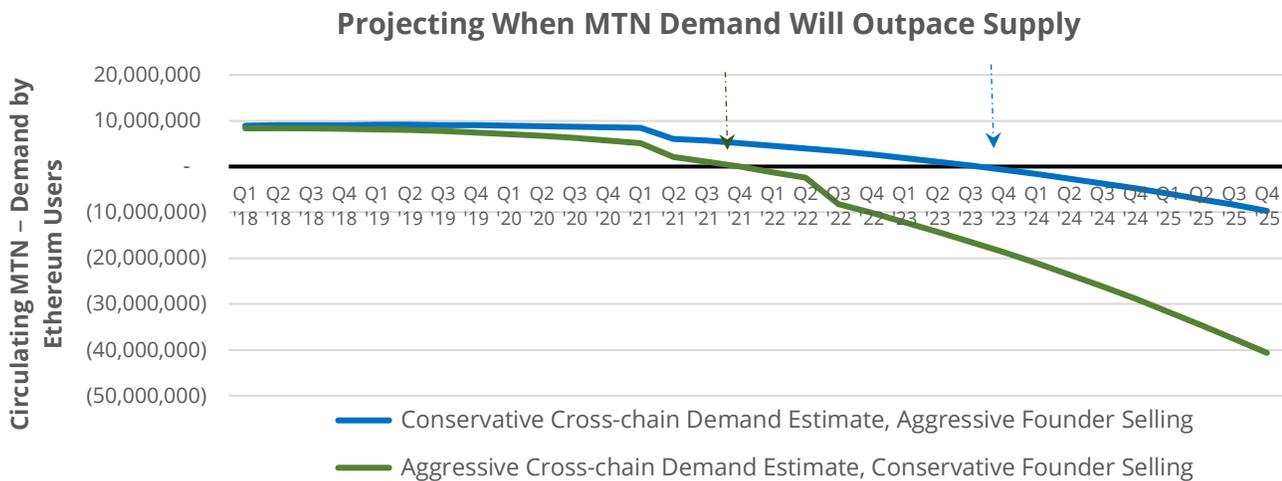
- Descending Price Auction
- Initial Distribution Date: February 2018
- Price Ceiling per MTN: 2 ETH
- Price Floor per MTN: 0.0000033 ETH
- Max Purchase (24hr): 1000 ETH

Assessing Supply and Demand

One of the defining differences between Metronome and other cryptocurrencies is the predictability of its supply. In fact, the MTN issuance model starts by adding over 10% a year to the total MTN outstanding, declining gradually for about 45 years, at which time increases are fixed at 2% a year. As Garzik told Strategic Coin, this is by design:

“Bitcoin has an inflation rate that halves every 4 years ... just keeps declining ad infinitum until it’s basically dust you know tiny, tiny, bits of money. So, it is the hope that people take this on faith, that the transaction fees will be enough to sustain the currency during that time when the new money supply is no longer introduced ... a constant floor of 2%, and that’s exactly right, it is what economists and central banks think is what’s efficient and necessary to keep the economy stimulated.”

Although Metronome does not have Bitcoin’s deflationary characteristics, it would be wrong to assume that increased MTN supply will automatically have an inflationary effect. As always, supply and demand will determine price action. Strategic Coin modeled two scenarios to determine if and when MTN demand will be greater than supply.



Model Assumptions

- The need for Ethereum users to transact across different platforms will be extremely low. Conservative and aggressive scenarios were used to estimate future supply and demand.
- Up until 4Q 2020 it is assumed that only 1% of unique Ethereum addresses will be associated with active wallets. After that, a conservative estimate is that 3.8% will be in use by the end of 2025, with the aggressive estimate being 6.8%.
- It is assumed that initially 2.5% of active wallets will want to transact across blockchains. After that, a conservative estimate project demand to be 8.7%, with the aggressive estimate being 25.75%.
- The aggressive founder selling scenario assumes that their 2,000,000 MTN will be sold by the end of 2020. A conservative projection would be by the end of 2029.

Strategic Coin Viability Assessment

Strategic Coin analyzes six areas that can affect a token's medium-term viability. Based on a 1-5 scale, the higher the rating, the better it is for the token. Thus, a '5' rating would indicate a low level of Execution Risk. Below are some criteria the research and advisory team used and why they arrived at the ratings.

TGE Health: Token structure benefitting the buyer; well-developed white paper and marketing plan for the token

Value Proposition and Market Opportunity: Size of the market and value users' will realize

Execution Risk: Experience of team, product maturity, technology roadmap challenges

Competitive Threats: Other companies and technologies vying for users; technology's differentiation and difficulty of being replicated

External Support: Advisors, noteworthy investors, and key partnerships; social media statistics; GitHub activity if applicable; number of users and/or web traffic

X-Factor: Buzz in crypto and blockchain community; momentum

Token Generation Event (TGE) Health Check: 4.5

- The descending price auction method for MTN's initial distribution allows for fair market price discovery and encourages competition between participants.
- White paper includes an in-depth description of the cryptocurrency, along with theoretical and mathematical reasoning to back up their issuance model.

Value Proposition and Market Opportunity: 5

- Divisions and debates about the right way to upgrade blockchain technology have significantly divided the community at large. Metronome's innovations may solve the underlying cause of some of these arguments.
- Since Metronome is not locked into using anyone blockchain technology, it can improve its underlying codebase as new innovations emerge.

Execution Risk: 4.5

- Metronome is backed by a development and advisory team that has years of experience and proven success in the cryptocurrency space. The funders of Metronome are prominent within major news publications mainstream media and the crypto space such as Reuters, CNBC, and Coindesk.
- Due to the technical difficulty in its roadmap, the launch date has been pushed out to early February 2018.
- One of the few risks facing Metronome's launch is that supporters of other cryptocurrencies may spread misinformation in social media about MTN's technical merits.

Competitive Threats: 3

- Metronome faces competition in autonomous self-governance and cross-chain swaps. For example, Decred has focused on self-governance, implementing several blockchain-wide upgrades based on a user-majority vote. Furthermore, Litecoin has partnered with Decred to develop atomic cross-chain swaps that enable trades between blockchains without the need for a third-party exchange. These types of atomic swaps could negate the need for Metronome's import/export feature.
- Besides competition from new technologies, MTN still needs to compete against existing cryptocurrencies for user adoption.

External Support: 4.5

- Metronome is backed by several people who were involved with Bitcoin Core's development. Their experience in blockchain technology is top notch. Further, its advisory panel is made up of individuals such as Gustav Simonsson, former Ethereum Core Developer, and Vinny Lingham, CEO of the wildly successful Civic.

- Key partners include Jaxx, Smith + Crown, Perkins Coie, New Alchemy, and Delta Strategy Group.

X-Factor: 5

- Metronome will be an immediate solution to issues like recent “developer drama” surrounding Bitcoin and potential forks if it is implemented successfully.

SWOT Analysis

<p>Strengths</p> <ul style="list-style-type: none"> • A working product is ready for a February 2018 rollout. • Strong, experienced executive, technical and advisory team • New cryptocurrency structure is uninhibited by limitations of “legacy” alternatives. 	<p>Weaknesses</p> <ul style="list-style-type: none"> • No solid marketing outline in owner’s manual • Cryptocurrency’s social media critics may impede mass user adoption versus other popular alternatives.
<p>Opportunities</p> <ul style="list-style-type: none"> • Cross-chain capability will cater to institutional investor capacity. • Can upgrade with blockchain tech without the need for controversy associated with forks 	<p>Threats</p> <ul style="list-style-type: none"> • Strong competition from mature alternatives with large user bases

Team and Advisors

Name	Role
Jeff Garzik	CEO & Co-Founder
Matthew Roszak	Chairman & Co-Founder
Peter Vessenes	Chief Cryptographer
Steve Beauregard	Partnerships
Ryan Condron	Principal Engineer
Troy Benjegerdes	Principal Engineer
Jordan Kruger	Data Scientist
Gabriel Montes	Engineering Lead
Felix Enriquez	Software Engineer
Ignacio Anaya	Software Engineer
Jaclyn Kramer	Marketing
Dariusz Jakubowski	Community Advocate
Ted Parvu	Infrastructure
Matt Lam	Blockchain Strategist
Iwona Zdanowicz	Administrative
Gustav Simonsson	Advisor
Jim Newsome	Advisor
Don Tapscott	Advisor
Vinny Lingham	Advisor
Don Wilson	Advisor
William Mougayar	Advisor



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