

Questionnaire - Aurora Labs



Questionnaire

Note: you can decline to answer certain questions (like marketing / go to market) which may be trade secrets and we will put in "declined to answer due to current trade secret".

a. General

i. **Which blockchain / DLT are you building on top of?**

Ethereum (currently)

ii. **How does the stablecoin work?**

Boreal is backed by revenues from the decentralized exchange, IDEX, and debt.

1. Exchange Revenues - Traders on IDEX can utilize the Boreal as payment for trading fees. Any time the price of the Boreal dips below its target value, traders are incentivized to purchase the boreal in order to reduce their overall trading costs.
2. Debt - Additionally, the Boreal will be loaned out to users of the platform. Debtors can only repay their loan, both principal and interest, in the Boreal. This demand from loan repayment will create additional upward pressure on the price.

iii. What is the purpose of your coin? What does it aim to achieve, and which problems does it solve?

Denationalization of currency: central bank currencies have seen varying degrees of success in achieving the goals of their monetary policy (most often balancing national unemployment with inflation). The most corrupted systems have created hyperinflation and great economic hardship for their citizens. The most successful concentrate power in the hands of a few, with unconditional support for financial institutions leading to moral hazard, bailouts, and socialized losses. A private currency that is separated from the interests of national governments can focus solely on stability.

1. Stable base currency for decentralized exchange: Decentralized exchanges such as IDEX cannot interface directly with the existing banking system. A stablecoin like the Boreal will enable us to offer a stable base currency pair for all markets.
2. More accessible stable currency: Billions of individuals lack access to a stable monetary product, but have access to the internet and the means to use cryptocurrency.

iv. When we say something is stable what do you think it means? And when it comes to monetary policy specifically?

Stability makes no sense in a vacuum, it requires a reference point. Stability means little to no volatility or fluctuations when compared to that reference point. In terms of monetary policy, stability means that goods and services are priced the same over long periods of time.

v. What is your revenue model?

The primary revenue source is interest from loans. Boreals also have a symbiotic relationship with IDEX and will help increase volume due to the introduction of stable base currency pairs.

b. Launch & marketing

i. What does the market need to be confident in the stability of your token?

Stability over a long period of time. We believe that all stable coins will be met with skepticism, as generally governments are seen as better fit for producing currencies than private institutions. However, over time as the currency operates successfully, consumers will begin to see the viability of alternatives.

ii. How are you bootstrapping to that level of confidence?

Guaranteed redemption on IDEX. As long as the exchange is in operations, users will have a "retailer" at which to spend the currency. We eventually plan to recruit other DAPPs to the Boreal economy, sharing revenue from the banking operations proportionally with others based on their contribution to the "Boreal GDP".

iii. What are your go-to-market strategies?

--

c. Economics

i. What is your coin stable with respect to?

At launch the Boreal will be stable with respect to USD. We believe this is the most practical peg to begin with as it is one most consumers and businesses are familiar with. Over time we will transition this to a new measure of stability, likely a representative basket of goods. One potential concern with this transition is the availability of real-time pricing data, as currently inflation is only measurable with a considerable lag. Additional research will help us understand how best to address this and the oracle problem.

ii. How much volatility can this peg withstand? Is that the same for upwards and downwards pressure? How wide is the band of behavior it can support?

As long as IDEX continues to bring in revenue and other DAPPs support the Boreal, the Boreal is always expected to resolve back to its target value.

iii. How easy is it to analyze the band of behavior from which it can recover?

On-chain activity will help neutral third parties determine the rate at which Boreals will be taken out of circulation. By analyzing the revenues on IDEX and other partner DAPPs, as well as the rate of loan repayment, one can determine how quickly the existing supply will be reduced (assuming no new issuance).

iv. How expensive is it to maintain the peg/stability mechanism?

1. How transparently can traders observe the true market conditions?

Both the circulating supply and rate of redemption and loan repayment will be publicly visible on the blockchain. Each loan will be managed via a smart contract, and users can track the health of each of those in terms of repayment. This will allow traders to have an accurate view of the true market conditions at all times.

v. Which monetary theory (theoretical) assumptions do you think are not true and how does your protocol account for that?

--

vi. Does your stablecoin supply scale in response to demand? If so, how?

As demand increases, users will be able to generate new supply in the form of new loans. Interest rate will be a function of both the individual risk and the overall general health of the system (if IDEX revenues are much larger than the existing supply, a single default can more easily be absorbed). If the "macro" conditions of the Boreal economy worsen, and the rate of redemption or loan repayment begins to fall, the interest rates on new loans will increase.

vii. Who provides the capital to maintain exchange rate peg? How are they compensated / Why do you think they would continue to lock up capital, given other investment opps?

In the event that the price drops below the target, traders on IDEX are incentivized to purchase the token in order to reduce their overall trading costs. Traders will be able to opt in to automatically purchase at the time of the trade, as well as pre-pay for future trades in the interest of getting more of a discount.

viii. An eventuality plan in case of a "black swan" event.^{1,2} The 1% case will happen eventually.

Our system is designed such that black swan events will be absorbed by our user base in the interest of reduced fees for trading or cheaper loan repayment.

d. Tech

i. Are any novel consensus mechanisms used, over and above the underlying blockchain?

None at the moment

ii. What transaction throughput can the blockchain currently handle and how does it plan to scale? Do its plans coincide with your plans for your estimated demand?

Ethereum scaling plans are well documented, though many years away from deployment. Our plans will require a much higher throughput than the current ~15 tx/s.

¹ https://en.wikipedia.org/wiki/Black_swan_theory

iii. **What tradeoffs does your protocol make and why did you make those tradeoffs? (supply/demand, temporarily peg breaking) (censorship resistance) (privacy tradeoffs) (accuracy of present market data and ease of manipulation of the data feed protocol uses (responsiveness of market and ease of manipulation)**

1. Temporarily breaking peg – In the event that the Boreal “GDP” drops or the loan default rate increases rapidly, it’s possible that the value of the currency will fall below the target value. In this case we do not plan to prop up the system by purchasing the stablecoins ourselves. Rather we plan to let the market correct over time as supply is reduced by traders purchasing/trading/burning the stablecoin through IDEX.
2. Centralized issuance – In the beginning, issuance will be centralized and controlled by Aurora Labs. This will allow us to fine tune the parameters for controlling supply over time before turning them over to an automated system.

iv. **Are there any centralized components of your system? Would any of these be easy for govts to shut down?**

Yes. The issuance of Boreal is centralized, and all loans will be regulatory compliant (KYC/AML at a minimum). The goal is not to create an asset that is censorship resistant, but rather a private currency with the goal of price stability rather than the management of national economic cycles.

v. **Does your protocol require information outside the blockchain such as a feed of price data? If so, how does this oracle work? Who manages it, what are the incentives for managing it, and what happens if the data they provide has a glitch?**

Oracles are necessary to determine the “redemption rate” on IDEX trade fees. In the beginning these oracles will be controlled by Aurora Labs, and over time transitioned to a more decentralized model. We are watching closely to see which approaches prove to be the most successful.

vi. **Which participants can see which transactions? What is the data and metadata available, and to whom? How does this impact privacy?**

Data availability and privacy will be a function of the operating blockchain. Assuming Ethereum implements ZK Snarks or other privacy solutions in the future, individual participants will not be visible. It’s an open question as to how we will publish higher level metadata in this environment to ensure that third parties can continue to monitor the health of the system.

vii. **Are you doing anything with formal verification? Smart contracts used?**

N/A

viii. **What is the rebase period? (Length of time between currency adjustments.)**

N/A

ix. **Can we make this automated?**

1. **Do we use a smart contract, or network rules of the blockchain operators?**

The end goal is a system of rules and AI that together will control and manage the monetary policy of the system.

e. Regulation

i. **What are your perceptions of local and global regulation in supporting stable coin, asset backed token economies?**

Regulation is still catching up with the existing crypto-currency market, however we believe in our case the requirements are relatively clear. Boreal issuance will be subject to MSB regulation, and those seeking loans will undergo KYC/AML processes.

ii. What could be done to improve regulation in terms of speed, quality, value for your company?

More specific guidance around cryptocurrency issuance would help solidify our understanding and expectations of what is required for compliance.

f. Testing

i. What kind of simulations have you done and what have they helped you learn? (simulating broad array of market conditions)

1. Mental models for simulations

Much of our work has focused around the incentive structures for IDEX traders. The goal is a system where individual actors are responsible for maintaining the peg, incentivized by the fact that doing so will provide them with an increase in income.

2. Econometric models

In Progress

3. Agent-based Modelling / Computer simulations

TBD

4. Other (Please describe)