

Basis PWC Questionnaire

Questionnaire

a. General

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

Initially, we will launch Basis on Ethereum. That said, we are closely monitoring the progress on various blockchain projects. In the long run, we plan to be on our own independent blockchain.

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

Our protocol is designed to adjust the supply of Basis tokens in response to changes in demand. The system will monitor Basis market conditions using an oracle, and the supply of Basis tokens will be adjusted in order to keep the price in line with the peg (e.g. \$1). For example, if the oracle input shows that more Basis needs to be minted because the price of Basis is above \$1, minting will occur to decrease the price of Basis to \$1. If, because the price of Basis is below \$1, the oracle input implies bond tokens (a second type of token) need to be created, bond tokens will be auctioned and paid for in Basis. The Basis collected in these auctions will be destroyed, with the goal of reducing total supply and increasing the price of Basis to \$1.

iii. **What is your revenue model?**

When demand for Basis increases and supply needs to be increased because Basis price is above \$1, Basis will be created. The new Basis will first be used to redeem outstanding bond tokens. When no bonds are

outstanding, they will be distributed to holders of share tokens, a third class of token. Holders of share tokens will thus earn revenue from growth in Basis demand.

b. Launch & marketing

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

The stability of Basis will be underpinned by healthy demand for bond tokens; successful bond auctions are necessary to contract supply in times of decreasing demand. So long as there are market participants who are willing to purchase bonds above a floor price set by the protocol, bonds can be sold and Basis supply decreased. Investors will be incentivized to participate in bond auctions by the yield they can earn.

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

In the beginning while demand is nascent, Basis will be asset-backed to guarantee stability. When Basis demand is sufficiently robust, the system will rely on the monetary policy alone to maintain stability. We believe this approach will provide confidence for early users and maximize the likelihood of long-term success for Basis. We'll be releasing the precise mechanics of how this bootstrapping will work as we approach launch.

c. Economics

i. **What is your coin stable with respect to?**

See our FAQ, [“Can Basis only stabilize against US dollars?”](#)

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?**

We've spent the last few months working on a stability analysis that explores this question. We plan to make our work public soon.

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

To analyze Basis price stability, it is necessary to define the fair value for a bond token. When bond prices are high, the system will have ample capacity to respond to negative demand shocks; when bond prices are low, the system will have less contractionary capacity. Our stability analysis defines a relative-value methodology to price bonds based on the current state of the system (the length of the bond queue and the age of bonds in the queue), expectations of future demand, and overall demand for investment assets as approximated by a required Sharpe ratio. We use this pricing model to analyze the conditions under which the price of Basis will remain close to the peg

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

1. Our stability mechanism is designed to be supported by the incentives of profit-seeking market participants. When supply needs to decrease to maintain the peg, participants will be able to act on their profit motive to purchase bonds for <1 Basis, and earn 1 Basis per bond if their bonds are redeemed.
2. Supply changes and bond auctions will take place on chain and therefore will be fully observable to all market participants.

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

Yes. With a fixed-supply currency like Bitcoin, a change in demand induces a change in price (e.g. if demand doubles then price must increase). With Basis, however, supply is expanded when demand increases and contracted when demand decreases, in order to keep the value of Basis stable.

- vi. **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?**

Bond token investors provide the capital to maintain our peg when Basis supply must contract. They will be compensated in the form of a yield on their investment, the difference between the bond payout (1 Basis) and the price they paid for a bond. When bond prices are lower (either due to a long bond queue or lower expectations of future demand), bond investors will stand to earn a higher yield on their investments. Higher yields are designed to compensate bond investors for risk as market conditions fluctuate.

- vii. **An eventuality plan in case of a “black swan” event.¹ The 1% case will happen eventually.**

See our FAQ, [“Could a crisis of confidence cause a death spiral in the system.”](#)

d. Tech

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

At launch we'll be implemented on top of Ethereum, utilizing the consensus mechanisms underlying the Ethereum blockchain. However, we are actively monitoring other blockchains and, in the long run, we expect to move to our own independent chain.

- 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?**

For Basis to be used as a universal medium of exchange, transaction throughput must no doubt increase beyond the limits of today's blockchains. We're closely following the many promising projects tackling this challenge. In the long run, we plan to migrate Basis to its own blockchain, and the ability to avoid transaction throughput bottlenecks will heavily inform this decision.

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

Our company (Intangible Labs entities) will drive development and maintenance of the Basis ecosystem in the short term, particularly while demand is nascent and Basis is asset backed.

- iv. **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?**

To maintain the price of Basis relative to its peg, our protocol must accurately measure the need for Basis supply adjustments. We will discuss the mechanics of this in an update to our whitepaper.

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

Basis tokens, bond tokens, and share tokens will be implemented as ERC-20 tokens.

- vi. **Can we make this automated?**

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

Bond auctions and distributions of Basis tokens to bond tokens and share tokens will take place on chain using smart contracts; no centralized network operators are required when the monetary policy adjusts supply in response to changes in demand.

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

e. 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**
2. **Econometric models**
3. **Agent-based Modelling / Computer simulations**
4. **Other (Please describe)**

We have been working on a written analysis of the stability of the system. It uses many of the simulation models mentioned above, each important to better understand the system. We plan to publish this analysis soon.