

# Questionnaire - TOPL

## 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?**

We are building on top of our own native blockchain protocol. Our protocol is built from the Scorex 2.0 framework and written in Scala.

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

Our stablecoin, the Poly, works on the principle of a floating supply to compensate for changes in demand, meaning it that is uncollateralized. However, unlike stablecoins such as Basis or others modeled after Seigniorage Shares, the Poly involves neither an exogenous price feed nor a second (or third token) to absorb increasing supply.

Instead of a price feed, we measure the coin's velocity as well as the real value of all non-financial transactions over a period of time<sup>1</sup>. Using Fisher's Equation of Exchange, these two pieces of information lead us to our formula for adjusting monetary supply:  $T_{real}/Vdt = \Delta M$

By measuring  $T_{real}$ , the value of all non-financial transactions, along with  $V$ , the Poly's velocity, our system becomes capable of measuring and providing resistance to financial (asset) bubbles or crashes.

Having established our formula for determining changes in our monetary supply we now establish the mechanism for that adjustment. When  $\Delta M$  is positive, new Polys are simply distributed pro rata to existing Poly holders. When  $\Delta M$  is negative, the Poly supply is contracted through use of transaction fees. Since transaction fees on our blockchain are paid in Polys, we can temporarily lock up these fees as to decrease the supply. Additionally, the increased fees decrease money velocity by making certain transactions uneconomical and thereby preventing or at least delaying some

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

The Poly is not intended to maintain a peg to some fiat currency or single commodity asset; rather it is intended to serve as a well-behaved currency in its own right. The purpose of the Poly is to provide regions or communities who lack access to viable or stable fiat currencies with an alternative. Importantly, given the nature and motives of US (and Eurozone) monetary policy, we believe that it is important for this currency to not be tied or linked to something like the USD or Euro.

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

In many stablecoin conversations, people refer to stability as the maintenance of a near constant ratio between the price of two assets (the stablecoin and its intended peg). This definition of stability does not involve any traditional monetary policy considerations such as stability over time or to a basket of goods.

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

In the Top1 blockchain, revenue is separate from the Poly stablecoin system. The Top1 blockchain has a proof-of-stake token that allows its holders to collect fees on all transactions. Changes in supply are evenly distributed across all Poly holders, and therefore do not form any basis of revenue.

**b. Launch & marketing**

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

To be confident in the stability of the Poly, the market needs only to believe that in the coming rebase period the Poly will be used at no less than ~75% of its current level. There is no need for them to be confident in its price directly.

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

Decline to answer due to pending announcement.

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

Initially, we will launch the Poly inside small, closed economies in developing regions that do not have access to "good money", such as refugee camps. We believe that by focusing on markets where the demand for alternative currencies is highest, we can achieve greater levels of adoption while the system is still maturing and therefore would lack the trust necessary to gain adoption among those accustomed to the US dollar, Euro, or similar reserve currencies.

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<sup>1</sup>This is made possible by the fact that our blockchain assesses transaction fees based on the value of a transaction rather than its computational complexity. Moreover, calculating the velocity of a coin on a blockchain (especially a UTXO based system) is a trivial exercise to automate. Therefore, the information necessary to adjust our coin's supply is uniquely endogenous to the system.

c. Economics

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

The Poly is intended to be stable to itself over time.

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?**

The Poly is not supported by a peg and does not chase a price target.

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

Instead of its performance in a price band, the Poly must be analyzed in terms of what negative change in usage it can withstand. We are currently working on models for this.

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

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

There is no peg mechanism, therefore it doesn't need to be maintained through trading activity or a reserve.

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

We reject the idea of the neutrality of money and contend that monetary policy can have real and long-term economic impacts, specifically relating to inequality. We account for this by ensuring that inflation impacts all system participants equally, in contrast with traditional fiat and Seigniorage Share systems.

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

As the value of goods in our stablecoin's economy increases, new Polys are generated and distributed (pro rata). According to the equation,  $T_{real}/Vdt = \Delta M$ .

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?**

Since the Poly does not have an exchange rate peg, there is no capital that must be compensated. We believe this offers a significant advantage, as the Poly is one of the few stablecoins being launched without an accompanying ICO.

viii. **An eventuality plan in case of a "black swan" event.<sup>2,3</sup> The 1% case will happen eventually.**

A black swan event for the Poly would involve a collapse in the usage of the currency ( $T_{real} \rightarrow 0$ ). Fortunately, economic black swan events are far less likely and smaller (in terms of nominal percentages) than financial black swan events.<sup>4</sup>

Decline to answer further due to pending announcement.

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<sup>2</sup> [https://en.wikipedia.org/wiki/Black\\_swan\\_theory](https://en.wikipedia.org/wiki/Black_swan_theory)

<sup>4</sup> It is far more likely for the stock market to lose 50% of its value than for GDP to drop by 50%.

d. Tech

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

No

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?**

Currently, our blockchain can handle between 10 and 20 tps. Given that it is a proof-of-stake blockchain, scaling is easier than if our chain required mining. We believe that our current transaction throughput is sufficient to begin early piloting and deployment of the Poly.

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)**

The primary tradeoff that we have made was in aiming for self-referential stability, or the stability of the Poly to itself over time. While this choice better enables the Poly to be an independent currency, it makes it unlikely to be used in scenarios where analogs to traditional fiat currency might be preferred (such as crypto-trading).

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

There are no centralized components of our system as all required input information is endogenous to the protocol itself and alternations to the money supply are carried out by the blockchain's coinbase and transaction fees.

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?**

No

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

In its initial iteration, all transactions involving Polys will be public. Eventually, privacy preserving measures will likely be added.

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

We do not use formal verification. Our smart contracts are constructed using a more limited scripting language and therefore are less vulnerable to security concerns.

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

While we are still analyzing several possible rebase periods, we believe that the Poly rebase period will be on the order of days or weeks. Given that we are not attempting to maintain a strict price peg, our rebase period can be longer than many other stablecoins.

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

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

Yes, the entire Poly system is automated.

e. Regulation

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

To date, it appears as though the majority of relevant global regulation would specifically apply only to asset backed stablecoins. This is reasonable since it is not truly regulation of stablecoins, but rather regulation of the underlying assets. We believe this offers an advantage to non-asset backed stablecoins.

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

-The most important improvement that can be made to regulations is an adoption of a common framework inside the some of the largest economies. US state regulation and national regulation are often at odds with US federal regulation and EU-wide regulation, respectively. This lack of certainty as to which regulations may apply inside a jurisdiction with competing authorities is the biggest problem we face.

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**

Yes

**2. Econometric models**

Planned

**3. Agent-based Modelling / Computer simulations**

Planned

**4. Other (Please describe)**