

Questionnaire - PWC Fiapay

Questionnaire

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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?**

Our original application (completed in early 2017) relied on a centralized architecture. However, as we shifted our focus to creating a digital asset, we chose Stellar as the underlying network.

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

We issue a fully-collateralized Stellar asset, backed by the five constituent currencies of the Special Drawing Right (XDR). XDR is a unit of exchange of the International Monetary Fund (IMF) and has been in use since the late 1960's, primarily in settlements among central banks and the IMF. XDR is a basket (in fixed

proportions) of five major global currencies (USD, EUR, JPY, GBP, and CNY). More information on XDR can be found here:

<https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/14/51/Special-DrawingRight-SDR>.

Our goal is, therefore, to replicate XDR, so that for every unit of XDR issued by us, we would hold the exact amount of the underlying fiat currency. The rate of XDR relative to all other currencies is disseminated by the IMF on a daily basis at noon GMT, as well as, continuously, by Bloomberg, Reuters, and other similar services.

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

We cater to the crypto-community's need for a safe harbour in times of volatility. We argue that XDR is more stable than the USD- or other single-currency-linked instruments, due to the portfolio effect of the XDR, and due to the fact, that not all users of our asset are intrinsically linked to USD (or to any other single fiat currency, for that matter). We are currently investigating other use cases for XDR, outside of the original crypto arena. Specifically, we are studying whether the XDR asset issued by us could be used in the international commodity trade as a simple, real-time, and low-volatility settlement unit.

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

Our view of a viable currency hinges on the notion, that in an expanding economy the currency will be necessarily inflationary (to what extent is up to the relevant central bank to determine). This leads us to conclude that any deflationary currency (including any limited-issue currency) will not succeed as a real-world substitute for the current fiat paradigm. Therefore, stability for us is always relative to the fiat currencies in use today. While the Swiss Franc or the Singapore Dollar could be viewed as relatively more stable (or, at the very least, less inflationary) than the US Dollar or Euro, the limited size of their native economies (Switzerland and Singapore) does not allow to expand the supply of their Copyright © 2018 Hoxton Tech Limited Provided for exclusive use by PwC 3-Oct-18 2 proxies, whether distributed or centralized, to serve the entire world. The mechanism of XDR, however, is capable of achieving just that, scaling globally, while maintaining a low-volatility profile.

v. What is your revenue model?

We intend to make money on conversion of other currencies (crypto-and fiat) into our asset, through our web portal and by being a market-maker on exchanges where our asset will be listed. Another potential revenue stream is in providing premium services to future commercial clients (currently we only permit individuals to use our asset).

b. Launch & marketing

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

Our priority is to convince our users that the collateral underlying our asset is secure, both from the credit risk, and the operational risk perspectives.

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

We are working on a mechanism to provide frequent audits to our user base. The challenge is to make such a mechanism cost-efficient.

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

Our current priorities are:

1. listing our asset on crypto-exchange(s)
2. forging direct partnerships with niche commercial users

c. Economics

i. What is your coin stable with respect to?

We are fully pegged to a basket of five most frequently used fiat currencies in the world, in a fixed proportion mandated by the IMF.

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 a 100%-collateralized currency, our asset has no inherent volatility. The only sources of risk to the peg are:

1. Trade slippage, where we are unable to execute at a price we have quoted
2. Imperfect replication, where, for example, we would have to replicate the onshore Yuan (CNY) with the offshore one (CNH), due to the currency controls in China. The second question likely applies to the algorithmic stablecoins only.

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

This does not apply to us directly.

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

Over the last two years we have significantly improved our trading algorithm and at this point can quote reasonably narrow spreads to our customers. We depend, however, on multiple third-party brokers to receive competitive quotes for the traditional (fiat) and cryptocurrencies, and therefore may suffer in efficiency if some of them refuse to work with us on regulatory grounds, for example.

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

Our quotations are intended to be in line with those provided by Bloomberg or the IMF. Even in the absence of direct quotes from us (on weekends or bank holidays, for example), our users should have no problem estimating the value of our asset by observing the market conditions for our five underlying currencies (see XDR explanation above).

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

We are not challenging any existing monetary theory.

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

Our supply is perfectly scalable with demand, in a sense that we stand to provide as many XDR's as our customers are willing to pay for in other freely tradeable assets.

viii. 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?

The exchange-rate peg is maintained in-house, and at the moment we do not use derivatives or third-party credit enhancements (such as guarantees, for example).

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

Our black-swan event is a failure of one of our custodians. This is an operational-and-credit-risk matter, handled by careful selection of counterparties and the ongoing monitoring of their credit risk.

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

d. Tech

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

Currently, we rely entirely on the underlying Stellar protocol to maintain the integrity of our issued asset. This may change in the future.

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?**

Various third-party tests put Stellar at approximately 10,000 transactions per second, system-wide, with the possibility to scale up in the future. We are happy with this capacity for the time being, but the easiest way for us to scale up would be to utilize our own centralized engine (developed before our Stellar collaboration).

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)**

As we are using an external protocol (Stellar), any endemic limitations/quirks of it would apply to us in equal measure. One limitation we will need to work around of is the transparency of the two-key system (there is only one public key for every private key on Stellar), which cannot, in its direct form, provide the necessary level of privacy expected of traditional banks and other financial services. We are working on mitigating this shortcoming (feature, not a bug, though).

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

We maintain a database of registered customers, and their basic details (required for KYC and AML purposes). We do not store financial data in a centralized database. We do not intend to make our system government-proof, as we inherently rely on being able to serve as a bridge between crypto and fiat.

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?**

We rely on three major types of external parties:

1. Providers of market data
2. Brokers and custodians for both crypto and fiat
3. External KYC and AML providers.

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

Stellar relies on a system of pseudonymous accounts, not dissimilar to the blockchain, with a significant limitation discussed in Paragraph d.iii above. Generally, all transactions for any account are visible to the world. To maintain privacy there are simple workarounds available, but we are not prepared to discuss them yet, and we do not plan to build an entirely anonymous system, for reasons explained in d.iii.

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

Not sure if this is in reference to KYC or any other matter; happy to address when clarified.

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

The underlying currency basket composition of XDR is rebased every five years by the IMF (sometimes, the basket is left unchanged in the rebasement year). The next anticipated year of such an adjustment is 2020. We will adjust the composition of our collateral fully in line with any such future IMF decision.

ix. Can we make this automated?

No, unless we treat the IMF as an “oracle”-type source of rebasement data.

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

Would not apply to us, most likely.

e. Regulation

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

The regulation is nascent at best and will evolve alongside the technology adoption. We are currently based in the UK and are relying primarily on the exercise of reason and restraint by the regulator(s). Given the nature of our business, we are prepared, in extremis, to shop around for a suitable jurisdiction, but as we are dependent on a traditional banking system, we must be very cautious in that pursuit.

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

We feel that this is a natural regulatory evolution and any attempt to pre-empt the mass adoption of the underlying technology is a waste of time and resources.

f. Testing

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

Unlike our algorithmic brethren, we have an advantage of having a 40+ year history of XDR at our disposal. Furthermore, we don't feel a need for any complex simulation going forward, as this work is primarily done for us by the economists at the International Monetary Fund, run econometric measurements and suggest the composition of XDR to the Board of IMF.

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