

# Questionnaire - Jibrel AG

## 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?**

Jibrel Network is being built on the Ethereum blockchain. The Alpha version was initially tested on Ropsten on May 2017.

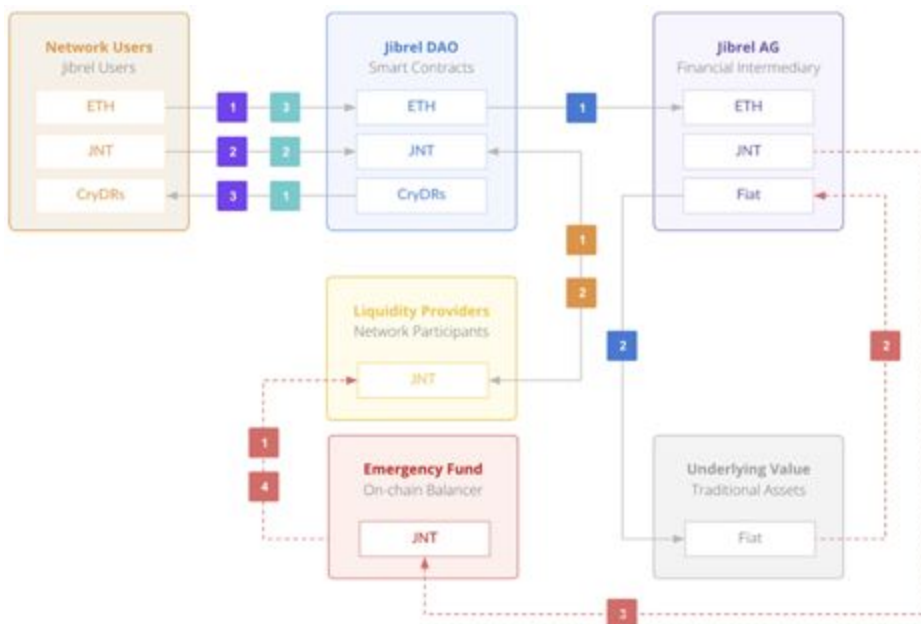
ii. **How does the stablecoin work?**

Jcash (Jibrel's stablecoins) work the same way all CryptoDepository Receipts work (except the custodian is a bank since they are licensed to hold cash), where the stablecoin is an on-chain digital representation of the underlying asset. More importantly, each CryDR is embedded with the relevant Smart Regulations (allowing them to become self-regulating).

Jibrel's Stable Coins are fully permissioned to remain compliant with Swiss Anti-money Laundry (AML) and Know Your Customer (KYC) regulation. For this reason, Jibrel's stable coins are only accessible via Jcash Smart Contracts. But are freely transferable among whitelisted addresses. All asset-backed tokens (including

the stablecoins) are backed up with licensed custodians in the relevant jurisdictions. Accordingly, the Jcash solution is FIAT collateralized

Please refer to the below diagram and subsequent steps/ explanation for a walk-through of JNT flow (*Jcash* are FIAT CryDRs):



#### **User Converting ETH to CryDRs (in this case Jcash)**

1. User sends ETH to Jcash Smart Contract
2. Smart Contract Deducts 50 JNT from Wallet (Automated)
3. JNT is distributed to Locked Wallets containing JNT provided by Liquidity Providers (distributed based on share of JNT pledged)
4. User is sent CryDRs as per User Selection (e.g. JUSD, JKRW, JGBP, etc.)

#### **User Converting CryDRs to ETH**

1. User sends CryDRs to Jcash Smart Contract
2. Smart Contract Deducts 50 JNT from Wallet (Automated)
3. JNT is distributed to Locked Wallets containing JNT provided by Liquidity Providers (distributed based on share of JNT pledged)
4. User is sent ETH value equivalent

#### **Liquidity Provider Pledging JNT**

1. Liquidity Provider locks JNT (minimum 1MN) in Smart Contract

2. Liquidity Provider receives share of JNT fees based on contribution of solvency (  $[\text{Amount of JNT Pledged} / \text{Total JNT Pledged}] \times [\text{Fees}]$  ) (Automated)

**Jibrel AG Liquidation**

Decentralized Exchanges

1A. Jibrel AG Converts ETH to JNT (Automated)

Centralized Exchanges

1B. Jibrel AG Converts ETH to Fiat (Manual)

**Emergency Fund Bail-out**

In the event that the amount provided by Liquidity Providers is insufficient:

1. Emergency Fund added to liquidity provider list (Automated)
2. Emergency Fund provides as much JNT as needed (Automated)

In the event that the amount within the Emergency Fund is insufficient:

1. Jibrel AG converts Fiat to ETH and deposits in Emergency Wallet (Manual)
2. Smart Contracts convert ETH to JNT using Decentralized Exchanges (Automated)

From a regulatory point of view, the issuance of CryDRs is done using licensed financial institutions that are authorized to act as custodians for the underlying assets:



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

Jcash is the first type of CryDR launched by Jibrel, and is required in the subsequent launch the different types of CryDR. To conduct a blockchain based debt or real estate transaction, there needs to be a

programmable digitized FIAT solution so that payment is also done on-chain. Jcash will serve as the payment medium for all CryDRs.

Jcash is a compliant crypto-fiat solution that can be used as the stable outcome of an Ethereum smart contract. Ethereum smart contracts have the potential to revolutionize the world of business, but the reality is that businesses don't want to accept volatile ETH, but would be open to accepting a digital format of FIAT (*that is directly backed*)

Crypto-economy applications include Jcash's as a hedging tool as well as an off-on ramp from crypto to FIAT (since phase 2 of Jcash will allow users to withdraw the underlying FIAT using SEPA/IBAN transfers). The hedging tool is simply locking the value in a stablecoin on-chain (similar to what other stablecoins are offering).

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

Currencies should allow holders to transfer value, store value and use them as a unit of measure. The final characteristic of "unit of measure" becomes impossible if the value fluctuation is amplified (like what we see in crypto). When the Turkish Lira moved by double digits, it was headline news, but cryptocurrencies are used to double digit moves in either direction. Context is necessary when explaining what "stable" means.

There are several reasons that contribute to the lack of stability, including low/unclear liquidity levels, unregulated markets (insider trading, etc.), huge concentration, unregulated centralized exchanges, BTC Futures (European) and the list goes on.

FIAT currencies have also been subject to volatility over the course of history, with several countries suffering from hyper-inflation. Additionally, FIAT currencies can be heavily affected by political events as we recently saw with the Turkish Lira.

When it comes to monetary policy, countries have mainly played catch-up with re-active measures often experimented with (resulting in a mixed bag of outcomes). Most recently, we witnessed the quantitative easing program launched following the financial crisis. Mohammed A. El-Erian's "The Only Game In Town" is great at explaining how current monetary policies will lead to another far worse global crisis.

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

Jibrel Network is a B2B2C company that provides significant value to regulators, financial institutions and individuals.

The revenue model consists primarily of fees on transactions, tokenization of assets and crypto/fiat on/off ramps.

Jibrel also generates revenues through pilots and implementations of Jibrel tech with regulators, banks, non-banking financial institutions and commodity exchanges.

**b. Launch & marketing**

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

Transparency. By providing the 3<sup>rd</sup> party audit of the underlying assets, as well blockchain proof for the JNT held for proof of solvency, users can verify the authenticity. Having said so, adoption is the key to increase user and investor confidence.

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

By being transparent. Jibrel is launching a Proof-of-solvency transparency page, where users can see the amount of CryDRs in circulation. Since the launch of the ICO, the Jibrel team has been upfront about delays and issues faced andp will continue to share updates (whether positive or negative), because that will pay off in the long-term.

More importantly, we are working with regulators across the globe as Jibrel is a licensed financial intermediary; member of VQF which is a self-regulating organization officially recognized by FINMA. Jibrel are also part of the Sandbox program of the Central Bank of Jordan and the DIFC (Dubai International Financial Center) Fintech Hive.

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

With the industry still at a nascent stage, we are not actively seeking to acquire a large number of customers (yet), as the soft launch of Jcash allowed us to iterate and improve several areas related to customer experience, automation of interactions with 3<sup>rd</sup> parties, efficient KYC processes, etc.

At the moment, we are reaching all our clients using the regulators we are working with. It is easy to understand why banks have been hesitant when it comes to adopting digital assets, so going through a regulator's sandbox or license is the go-to-market strategy. With the regulator on-board, approaching banks becomes much easier.

In terms of strategy for the commercial roll-out, there is a comprehensive plan that includes an referral scheme, PR campaign, targeted digital advertising, social media, events, etc.

Finally, Jibrel is partnering with other firms that would use Jcash and other types of CryDRs as part of their business model.

**c. Economics**

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

CryDRs remain tethered to real world assets. The current Jcash smart contracts include JUSD, JGBP, JKRW and JEUR; each coin is stable or pegged to the value of the underlying asset.

**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?**

CryDRs can withstand any type of volatility as they are basically a digital representation of an underlying asset (unlike an ETF), CryDRs allow you to retrieve the underlying asset.

Given the underlying asset or a highly correlated asset of equal value is held by the Jibrel AG Fund, the Jibrel DAO can always have enough access to liquidity to meet its JNT obligations.

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

The ideal method of analyzing band of behavior for recovery or other movements, is to run simulations as part of pilots and live implementations (closed environment)

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

Unlike other stable coins where you are required to burn cash to maintain a peg (might not be sustainable), there is a 1 to 1 backing for each CryDR, which is scalability issue but resolves issues related to peg maintenance costs.

It goes well to remember that governments and central bank do NOT always act rationally when it comes to financial decisions, as they might have other motivations such as political or social impact of specific decisions.

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

100% transparency for on-chain and off-chain is critical to success.

During Q3/Q4 of 2018, Jibrel will launch the Proof-of-Solvency transparency page which can clearly show users the amount of JNT locked up for proof of solvency.

During Q1 of 2019, audit reports of liquidity providers will also be shared with traders allowing them to verify the underlying asset. More importantly, users will be able to retrieve the underlying asset.

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

At Jibrel, we are not trying to replace the US Dollar or create a new monetary system, as we believe the Central Bank will eventually issue their own digital FIAT currencies. However, understanding the pace Central Banks operate at, Jcash was launched to facilitate the roll-out of Jibrel Network's regulated products and act as a crypto-fiat solution.

It is important to acknowledge the risks in the growing role Central Banks are playing when it comes to monetary policy and general policy setting.

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

The trade-off between scalability and safety is clear when it comes to responding to increased demand. If you consider USDT's sporadic minting of new USDT to satisfy demand, you can see a situation where high scalability is achieved, but the safety of the system is put at risk.

JCash is currently limited by the amount of underlying assets liquidity providers are able to pledge. With Jibrel dedicating a portion of the funds raised to underlying assets, and a liquidity provider pledging 250 Million USD, Jibrel can comfortably roll-out CryDRs worth over 260 million USD, and anticipate a great increase in total assets as we open to commodities, real estate, equities, etc.

The Total Supply is 200,000,000 Jibrel Network Token (JNT), and that is used for Proof-of-Solvency for any CryDR in circulation. Jibrel are not considering adjusting the total supply now.

**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?**

Liquidity providers can earn JNT by locking a minimum of 1 Million JNT in a smart contract, allowing the liquidity provider to receive JNT fees based on the contribution of solvency (Amount of JNT pledged / Total JNT pledge) x Fees (this is done in an automated manner)

Additionally, the risk for liquidity providers is negligible as the underlying asset is held at a licensed custodian. The Jibrel DAO will automatically divest crypto received providing the backing needed for the CryDR purchased.

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

Please refer to answer a)

1. ii) where the emergency fund bail-out is explained and designed for the "Black Swam event".

**d. Tech**

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

With Jibrel running on Ethereum, the project follows Ethereum's consensus mechanism. The tech team have experimented with several different consensus mechanisms, but we will not rush in adopting new /unproven mechanisms (although POS is technically unproven).

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<sup>1</sup> [https://en.wikipedia.org/wiki/Black\\_swan\\_theory](https://en.wikipedia.org/wiki/Black_swan_theory)

**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?**

The scalability issues associated with Ethereum are industry wide issues, with lots of top-class engineers working on solutions (sharding and similar).

We currently run on the Ethereum blockchain, so Jibrel's throughput is determined by Ethereum's capacity and performance. We understand that 3<sup>rd</sup> party risks associated with scalability, smart contract safety and other elements, but Ethereum remains the world's most mature / strongest smart contract platform.

It is important to remember blockchains are new to the world of tech and finance, and rushing to fulfill demand with a shaky foundation can be risky. At Jibrel, we are working on infrastructure products (wallet, explorer, node) developing in-house capabilities for creating blockchain components.

In the future, we do aim to create our own blockchain that is designed specifically for financial services, but the team are now focused on building Ethereum products; the most advanced smart contract platform at the moment..

**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)**

Instant scalability and client acquisition were initially sacrificed for quality, safety, robustness and efficiency of the processes. Once those are achieved, acquiring clients will become a much more sustainable, profitable and successful exercise.

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

Compliance element is centralized, but that is because we need to comply with Swiss AMLA standards (right to freeze, right to seize, known counterparties, etc.)

Government shut down is not a fear we have at Jibrel. By working closely with our lawyers and adhering to all AMLA standards and capital market regulations, we are able to operate legally without having to worry about possible shut downs.

**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?**

Price feeds are required for each CryDR contract. These are programmed, cited and sourced by the Jibrel Network and are transparent to participants in advance of entry into each smart contract.

Oracles provide external data and trigger smart contract executions when pre-defined conditions meet.

For further security, a combination of different oracles may be used, where for example 3 out of 5 oracles could determine the outcome of an event.

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

All the participants' identities are anonymized. In principle, it is possible to still analyze all the transactions of an anonymous Id and guess whose transactions they could be.

The tech team are working on Jibrel zero-knowledge proof but at the moment, transaction data is pseudo-anonymous.

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

The team has engaged [New Alchemy](#) to conduct a full security audit, and have an internal audit function.

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

The process is already automated.

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

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

Jibrel uses its own smart contracts.

**e. Regulation**

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

Jibrel is a global firm that has spoken to 20+ regulators about stablecoins and asset-backed tokens.

It is fair to say that all regulators are intrigued by the concept, but fears from lack of education/understanding are just apparent. The best two approaches we have seen so far are the Swiss guidelines (provides you with a guidelines/principles of what is OK and what is NOT), as well as the Sandbox approach which followed by several countries including the UK, Singapore, Dubai, Jordan and others.

By addressing AML issues first, regulators are more inclined to listen and interact, as with unknown counterparties, it is impossible to convince regulators to come on board. (compliance element at Jibrel is centralized, and will eventually become the responsibility of the custodian or asset holder) .

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

Cross-border initiatives between regulators can be great, as remittance corridors for example, can only be done when more than 1 regulator is involved.

No regulations is definitely better than stringent / hasty regulations, as countries that have banned cryptocurrencies have fell victims to blackmarket OTC trading of crypto, often to escape capital protection.

**f. Testing**

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

At Jibrel we have conducted a wide range of simulation and tests including econometric models and computer simulations. Below is a walk-through of the Proof of Solvency simulation we conducted. More importantly, POCs and pilots with banks are the best tests (*we learn and benefit the most during those*) as you can test your theory as well as it's implementation.

Please note the below is an example of an old simulation we conducted. Since then, parameters have been adjusted so that JNT backs 75% of the value, and the liquidity providers supply the underlying asset.

**Test – JNT Replenishment, Deterioration and Buffer**

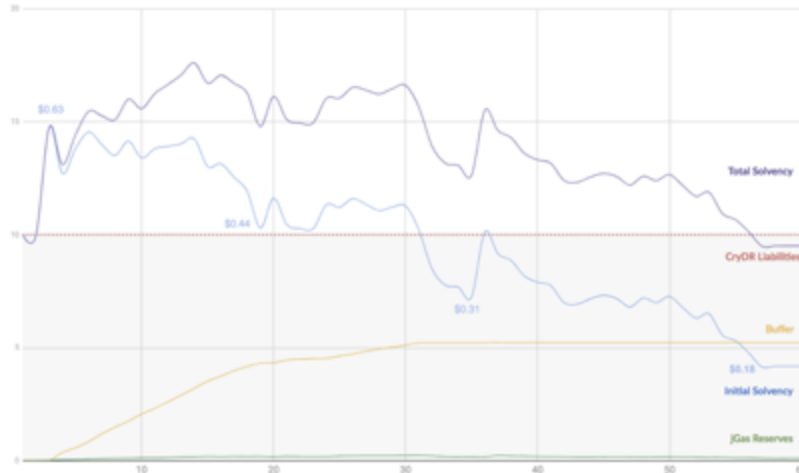
*Understanding the different parameters behind Proof of Solvency*

Below you will find a full walkthrough on Proof of Solvency, allowing network users, decentralized enthusiasts and talented developers to build their own mechanisms as well as provide insight into Jibrel's Proof of Solvency solution.

Please don't be intimidated by buzzwords / definitions. This is a straightforward mechanism and you should be able to follow along with a pencil and paper if you choose to.







*JNT prices may appear lower than actuals due to internal models forecasting price based on DAO liquidation*

### Initial Period

During the first 30 days of the period, the initial solvency had appreciated and allowed for a buffer to gradually be built. A buffer of \$1,425,726 is accumulated during / around this period and steadies going forward.

### Extreme Downturn

Following the initial price surge, the entire crypto-market continued to bleed, including JNT. The buffer reserves allowed the system to maintain solvency, even under extreme conditions.

### Insufficient Solvency

During the final 3 days of the period, the system became insolvent and CryDRs effectively became untethered. Implying the parameters set are insufficient to withstand extreme market conditions.

**Note:** price support generated by the Jibrel DAO converting the cash reserves into JNT is not modeled in. Only downward price pressure is considered in our models. In reality, the system would have stayed solvent, but only marginally.