

ASN

A blockchain-based Alternative Swift Network with Defi features

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ABSTRACT We design a network (Alternative Swift Network) aiming to make cross-border B2B financial transactions be processed in a frictionless, cost-efficient, and faster manner compared to the existing Swift system and related clearing and settlement facilities. The Defi features are implemented in our network to further attract targeted users (B2B business owners and other interested parties) as it empowers them to leverage more financial resources to expand their businesses and/or increase benefits. Our network's Defi features have real-world usage (say, in B2B) compared to many other Defi protocols (which mostly only help users to speculate in the crypto market).

1. BACKGROUND

The Business-to-Business circle is one of ASN's main real-world arenas. Business-to-Business or B2B refers to one business making a commercial transaction with another. It includes but not limited to 1) A business is sourcing materials for their production process for output; 2) A business needs the services of another for operational reasons; 3) A business re-sells goods and services produced by others. (Wikipedia, 2020)

A BBC report indicates that: "In today's ultra-connected online world, businesses of any size in almost any location can become global. Buying and selling is no longer bound by geography, with the internet making it possible to reach new customers

around the world. Yet existing methods for transferring money internationally from one business to another can be complex and inconsistent, impacted by uncertain costs, unpredictable delivery times and insufficient data delivery.” (BBC, 2019)

The B2B cross-border payment systems nowadays still involve fragmented processes causing B2B companies’ unnecessary risks. It would involve six parties, the payer, beneficiary, their respective banks and two correspondent banks.(BBC, 2019).

In cross-border payment area, the most used and mentioned SWIFT system only handles the movement of messages along the payment chains. The banks do the actual debits and credits across accounts based on the messages and help pass the assets (in the form of fiat money) to the beneficiary.

SWIFT stands for Society of Worldwide Interbank Financial Telecommunication. SWIFT, as a network for secure cross border financial transactions or money remittance, has over 45-years history. It dominates the global remittance market. Eevery day, nearly 10,000 SWIFT member institutions send approximately 24 million transactions through SWIFT (Shobhit Seth, 2017).

The SWIFT network is an old and centralized system. It has a multiple tiered hierarchy. For each country, it has a regional or country operator, which collects requested messages of all the registered member institutions/banks (in that region). And then the requests will be sent to the receiver banks. The process of actual payment delivery through this SWIFT hierarchy is quite lengthy.

Also, as mentioned above, usually there are six parties involved in a process of one B2B cross-border transaction. The overall banking system’s operational fee is opaque, so as the SWIFT system that operates upon them. It is not a door-to-door (point-to-point) direct transaction. Thus more overhead would occur. The exchange rate is also an important factor in terms of fees occurring during the process and it is

very changeable. So the fees occurring (including SWIFT messaging, the correspondent bank fee and exchange rate fee) can be different and to the B2B ender users (the Businesses of buying side and the Businesses of selling side), the fees are not transparent and can be expensive.

2. THE ASN SOLUTION

We integrate the payment messaging, clearing and settlement on our single unified network, “Alternative Swift Network (ASN)”, to solve pain points in existing cross-border B2B financial transactions. In other words, within ASN, the messaging flow and the actual fund flow are synchronized. Our network uses distributed ledger technology and crypto tokens to facilitate such transactions.

In one transaction, our network would pass on transaction information and settle the payments simultaneously and almost immediately after remittance request is initiated from the sender. Again, because ASN is both the messaging network and the clearing & settlement network, the remittance time is near real time and the cost can be very low, compared to the traditional way.

In practice, senders (the buying side of the B2B transaction) first need to convert their Fiat currencies into their desired crypto asset. Our network is designed to accept almost all kinds of crypto assets including Ethereum related crypto assets. However, at the beginning of our project, we encourage users to convert their Fiat currencies to stablecoins when using our network, especially the stablecoins (BUSD, GUSD, and PAX) approved by the New York Department of Financial Services (NYDFS) because these stablecoins combat efficiently the volatility of crypto assets by pegging its value to the most accepted Fiat currency (the USD). In addition, the NYDFS’s endorsement is definitely a big plus. Other widely accepted stablecoins, such as USDT and USDC, (although not approved by the NYDFS for the time being) are also welcomed to be used in our network.

The ASN will then almost simultaneously convert sender's stablecoins to ASN network's tokens, the ASN tokens, and the fund will then be sent to receiver via ASN network directly. The ASN token works as a value carrying vehicle inside the network. During this period, the inter ledger protocol inside the ASN will be providing ledger the whole time to keep the risk away and make the process atomically and smoothly. Eventually the receiver's account will confirm through ASN's validator that it receives the ASN token fund and our network will then convert the fund into stablecoins.

The details of all transactions are registered in the ASN for security and purity purposes. There is a permanent and irreversible record of every transaction in ASN for users, auditing bodies, regulatory bodies, and others to review.

3. THE DEFI

To business owners, whether they are in B2B or other business areas, shortage of capital to expanding/investing, or, operating, or, buying raw materials, etc., has always been a common problem. We design a decentralized system, within our ASN network, for business owners (and other users) to frictionlessly borrow crypto assets (including stablecoins), and also enable the proper money market to function.

This decentralized system is a protocol that sets up a money market. It is a capital pool of crypto assets. The business owners, for whatever reasons (expanding their businesses, etc.), want to borrow crypto assets can borrow from the pool. Suppliers (lenders) can be anyone, from B2B business owners to crypto market speculators. They directly interact with the pool, or more accurately, with the protocol (which algorithmically and automatically controls activities within this decentralized system), earning a floating interest rate without having to talk/negotiate with the borrowers. (They will get ASN tokens when they supply crypto tokens to the pool and the ASN token entitles them to an increasing quantity of the underlying asset.)

Unlike other peer-to-peer platforms or centralized exchanges, where a user's crypto assets are matched and lent to another user, the ASN protocol mix all crypto assets supplied by suppliers together. Thus more liquidity is provided compared to traditional direct lending. Suppliers can withdraw their crypto assets instantly without waiting for the ending of the whole loan period because, in this algorithmic and automatic system, such a period does not exist. The relevant interest rate is calculated algorithmically in accordance with the protocol and recorded on the ASN network, transparent and irreversible. Time value is thus added to suppliers as well as borrowers.

To avoid that all the participants (borrowers or suppliers (lenders)) become speculators, the protocol will set a certain percentage, which is a threshold value that will keep it away from the risk that the whole system becomes a market full of speculation. It however will encourage business owners to participate by giving them higher interests if they are suppliers (lenders) and lower interests if they are borrowers. These are generated automatically and algorithmically by the protocol. One typical scenario can be like this: the usage of stablecoins borrowed by the user/borrower (say, a B2B business owner) from the pool in a B2B cross-border financial transaction will be tracked and irreversibly recorded on the ASN network's B2B functions, and all these will be fed into the protocol. Once the cross-border B2B financial transaction is completed, the protocol will rate this business owner with higher points and he/she will then be getting more benefits in future when interacting with the pool, meaning less interests if he/she is going to borrow more assets or higher interests if he/she is going to supply assets into the pool. The more real-world business deals (like cross-border B2B financial transactions) are done by users through the ASN, the more benefits they will be awarded.

4. THE GOVERNANCE OF ASN

We believe that genuine decentralization is the future of finance (and also in other areas) and thus we would like to truly decentralize our project and give a big share of ownership to the ASN community people who make it popular by using it. That ownership would take the form of the Governance token, the Super ASN (or SASN).

SASN is an ERC-20 token that empowers community governance of the ASN network. The token holders can propose, debate, and, eventually, vote on all changes to the ASN network. This arrangement makes it possible that community participants really have a say towards positively controlling and upgrading the protocol.

The total amount of the governance token, the Super ASN (SASN) token, is 50 million, from which 30 million (namely, 60% of the 50 million) is used for distribution/incentivizing purpose. Users' activities (interacting with the pool) or, in other words, "Liquidity Mining" activities, can unlock these 30 million tokens. It will take five years for the protocol giving out all the SASN tokens to users, meaning each day, approximately 16,438 SASN tokens will be distributed to users. 50% of the distribution is earned by suppliers, and 50% by borrowers, providing that both suppliers and borrowers are speculators, not real-world business people. If there are real-world business people, say, borrowers, interacting with the pool, and using borrowed crypto assets in the real-world practice, (for example, making cross-border B2B financial transactions) through ASN network, then the protocol's adjustment mechanism will award them by giving them more SASN tokens.

5. THE HIGHLIGHTS

Nowadays, almost all users of Defi projects down the market are still, to a great extent, doing speculation/gambling. They surely saved time by interacting with Defi projects and gained time value (for example, they don't have to wait for an order to fill and

conduct some off-chain activities) compared to interacting with centralized exchanges/facilities. However, the tokens they (the borrowers) borrowed normally are still limited to the usages of non-real-world scenarios, like, 1) arbitrage; 2) purchasing computing power to increase the capacity for mining certain tokens; 3) financing new ICOs; 4) shorting a token, etc. It's just a zero-sum game within the crypto/cyber/virtual world.

Our project, the ASN network, however, is connecting the blockchain technology to real world and thus is different from projects described above. We cooperate with real B2B platforms (Vertical E-Business website, etc.). We use blockchain technology to facilitate cross-border financial transactions in the B2B industry and thus add real value to real-world businesses.

Our project's Defi features are also designed to prevent the pool from becoming a speculation/gambling arena. We encourage real B2B business owners (and any other business users from other real-world business areas) to interact with our pool and use the funds, obtained from the pool, within our ASN network to facilitate their cross-border and other financial transactions. The funds will be tracked and the users will be awarded (via the adjustment mechanism of Defi activities' interests and also the distribution of the Governance tokens, the SASN). The speculations however will not be totally kept away from our Defi features. It will just be limited to certain percentages algorithmically and dynamically by the protocol. In these ways, the system risk is controlled at certain levels so that the speculation (or gambling) forces won't destroy our whole ecosystem and also our project will constantly benefit the real-world businesses and society and be avoided to becoming a virtual casino.

6. CONCLUSION

We have proposed a trustless and faster decentralized system for participants in B2B (and other business fields) for their financial transactions without relying on existing

opaque Swift system. Our system combines the payment messaging and the clearing & settlement. The processing/remittance time is near real time and the cost (compared to existing system) can be very low. Our system also has Defi features to facilitate crypto lending and borrowing in an arithmetic way. In Defi features, we introduce incentive methods by awarding real-world business people (implementing real financial transaction practices via our system) who interact with the Defi protocol. Thus we can prevent excessive speculation activities which may harm our system. We believe a blockchain system, such as ours, which can be implemented in real-world business scenarios is more meaningful and beneficial to the society than the ones, which gives their full spaces to speculations. The latter cannot be long-lasting.

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